SUBWAY SAFETY:

PROTECTING OUR CITIZENS

OCTOBER 2008

CITY OF PHILADELPHIA

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October 31, 2008

Honorable Michael A. Nutter
Mayor, City of Philadelphia
Room 215 City Hall
Philadelphia, PA 19107

Mr. Joseph M. Casey
General Manager, SEPTA
1234 Market Street – 10th Fl.
Philadelphia, PA 19107-3780

Dr. Arlene C. Ackerman
Superintendent of Schools
440 North Broad Street
Philadelphia, PA19130

Dear Mayor Nutter, Mr. Casey, and Dr. Ackerman:

The Controller's Office, assisted by Keystone Intelligence Network, Inc., conducted a performance audit to assess the state of security of the city's subway system. A synopsis of the results of our work is provided in the executive summary to this report.

We have discussed our findings and recommendations with members of city and SEPTA management at an exit conference, and we have included their responses to our comments as part of this report. The School District did not attend the exit conference and did not submit a response. Our recommendations have been numbered to facilitate tracking and follow-up in subsequent years. We believe that, if implemented by management, these recommendations will improve subway security and public confidence in the transit system.

We would like to express our thanks to the management and staff of SEPTA, the School District of Philadelphia, the First Judicial District, and the many city departments and private and public agencies that gave generously of their time to assist us with our work.

Very truly yours,

ALAN BUTKOVITZ
City Controller

cc: Honorable Anna C. Verna, President,
and Honorable Members of City Council
Honorable Kevin M. Dougherty, Administrative Judge, Family Court
Camille Barnett, Ph.D., Managing Director
Everett A. Gillison, Deputy Mayor of Public Safety,
and Other Members of the Mayor's Cabinet

SUBWAY SAFETY: PROTECTING OUR CITIZENS

EXECUTIVE SUMMARY

Why The Controller's Office Conducted the Examination

The Controller's Office, with the assistance of Keystone Intelligence Network, Inc., conducted a performance audit to assess the state of security in the Market-Frankford Subway, the Broad Street Subway, Suburban Station, Market Street East Station, and the adjacent concourses, and to determine what can be done to reduce security risk in these areas. This engagement was initiated in response to a fatal beating that took place on March 26, 2008, in the westbound Market Street concourse, at the 13th Street El stop. Five truant high school students were arrested and charged with murder and conspiracy.

What The Controller's Office Found

The state of transit security is undermined by youth crime and homelessness. Security could be enhanced by a more efficient use of personnel, better crime reporting, improved automation, and enhancements to and more extensive use of security equipment, particularly on the part of the city.

YOUTH CRIME AND HOMELESSNESS ARE SIGNIFICANT SECURITY CHALLENGES

- Youth crime is one of SEPTA's most pressing problems. Fifty percent of serious crime on the transit system is perpetrated by youths. However, despite the connection between youth ridership and crime, certain policies and procedures of SEPTA and school officials may actually be fueling crime. The Weekday Student Pass provides greater access to the transit system, which translates into more time spent on the system and more opportunity to get into trouble. Some program decisions by school officials are made without regard to transit safety, needlessly placing at-risk students on the transit system. Fifteen thousand students are truant every school day, and some of these students are a risk to transit riders. Yet, it is unclear what is being done to stem the tide of truancy.

- In the last three years, 59 percent of all the incident reports prepared by SEPTA police were homeless related. During the first quarter of this year, officers escorted 17,000 homeless people from the transit system. Homelessness is a social problem that is the responsibility of the city. To the extent the city does not effectively deal with it, SEPTA police are monopolized removing homeless from the transit system, when they could be fighting crime. Security officials in New York told us that homelessness is not considered a significant problem on the New York transit system.

OPPORTUNITIES EXIST FOR MORE EFFICIENT AND EFFECTIVE USE OF PERSONNEL

- SEPTA has no memoranda of understanding (MOUs) with the other police agencies with whom it shares adjoining or overlapping responsibilities, most notably, the Philadelphia Police Department. MOUs are designed to eliminate duplication of effort and to avoid gaps in coverage, particularly in the event of emergencies.

- SEPTA management has indicated it will expand the size of the authority's police force; however, the size of the force has never been systematically evaluated. Comparative statistics suggest the number of officers is already relatively large. Before officers are added, management should consider supplementing the existing force with non-sworn personnel, a strategy employed by other transit agencies to extend the reach of security at a lower cost.

CRIME REPORTS COULD BE MORE COMPREHENSIVE AND TIMELY, AND AUTOMATION COULD ASSIST WITH REPORT-WRITING AND DEPLOYMENT

- Summary reports of serious crime (Part I crime) do not always present the clearest picture of crime on the subway/elevated system. Summary reports of less serious crime (Part II crime) are prepared only once a year, even though these crimes occurred at 35 times the frequency of Part I crime and were much more likely to influence decisions on transit use by the riding public. Personal Digital Assistants (PDAs) and a new Computer-Assisted Dispatch (CAD) system could streamline incident-report writing, and crime-mapping could assist deployment decisions.

CITY SECURITY EQUIPMENT HAS IMPROVED BUT CHALLENGES REMAIN

- At the start of our study, the emergency phones deployed by the city in the subway concourses and adjacent tunnels provided little protection to the riding public due to their poor condition. Recently installed tamper-resistant call boxes have significantly improved the operating condition of the individual units, but system weaknesses remain. The city has no surveillance cameras in the subway concourses or adjacent tunnels, and has no plan to deploy any there. However, because research suggests that security kiosks can deter crime, the city should consider deploying kiosks in the subway concourses.

SEPTA SECURITY EQUIPMENT SHOWS GREAT PROMISE BUT A CONTINUING EFFORT WILL BE NECESSARY TO ENSURE FULL BENEFIT

- SEPTA continues to embrace and devote significant resources to current technology with its Smart Stations Project. At completion, every subway/elevated station will be equipped with surveillance cameras, audio-visual public address systems, intrusion alarms, and fire detection and suppression equipment. While this project will greatly benefit SEPTA and its ridership, recent research indicates that surveillance camera systems can sometimes fall short of expectations if the public is not constantly reminded that the cameras are present in the stations.

What The Controller's Office Recommends

The Controller's Office has offered a number of recommendations to improve security. Among the most significant are returning to tokens and paper transfers for students until a new fare system is installed that can limit rides; exploring smart cards that can track student activity; limiting the time students spend on the transit system; compiling effort-and-accomplishment statistics on truancy; developing an effective and comprehensive plan to deal with homelessness on the transit system; conducting a formal workload analysis before adding any additional SEPTA police officers; using non-sworn personnel to enhance the efficiency of police; and improving crime-reporting procedures. These and other recommendations are discussed in the body of the report.

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OBJECTIVES, SCOPE, AND METHODOLOGY

The Controller's Office, with the assistance of Keystone Intelligence Network, Inc. (KIN), conducted a performance audit to assess the state of security in the Market Frankford Subway, the Broad Street Subway, Suburban Station, Market Street East Station, and the adjacent concourses, and to determine what can be done to reduce security risk in these areas. This engagement was initiated in response to a fatal beating that took place on March 26, 2008, in the westbound Market Street concourse, at the 13th Street El stop. Five high school students were arrested and charged with murder.

Staff of the Controller's Office and KIN interviewed representatives of the Southeastern Pennsylvania Transportation Authority (SEPTA) (management, technical staff, and line police officers); the city administration (chiefly, the Mayor's Office of Information Services and the Department of Public Property); the School District of Philadelphia; Family Court; the Center City District; the Metro Transit Police Department (Washington, D.C.); the Transit Bureau of the New York City Police Department; the Regional Transportation Commission of Southern Nevada (Las Vegas, Nevada); the Regional Transportation District (Denver, Colorado); the Los Angeles County Metropolitan Transportation Authority (Los Angeles, California); the security departments of Temple University, the University of Pennsylvania, and Drexel University; Wakenhut Security (Miami-Dade Transit); ABM Security (the Reading Terminal and the Pennsylvania Convention Center); the Guardian Angels; and the Reserve Police Officers Association. Among the subjects discussed were staffing, deployment, crime-prevention strategies, security technology, data collection and reporting, truancy and student transpasses.

In addition to our interviews, we also analyzed SEPTA's incident data base, tested the authority's crime-reporting process, observed truancy sweeps, tested the student transpass, reviewed documentation on and visually inspected the city's emergency phones and call boxes, inspected the city's subway stations and concourses, and reviewed pertinent literature on transit security in both the United States and Great Britain.

Our work was conducted in accordance with Generally Accepted Government Auditing Standards and was performed from March 27, 2008, through June 13, 2008, our last day of fieldwork.

BACKGROUND

SEPTA was formed by an act of the Pennsylvania General Assembly in 1964 in order to provide public transportation services to the five-county region that includes Bucks, Chester, Delaware, Montgomery, and Philadelphia counties. SEPTA is governed by a board of directors with 15 voting members. Two members are appointed by each of the five participating counties; the remaining five are appointed by the governor and state legislature.

SEPTA is the sixth largest transit system in the United States. It is the country's largest multi-modal system (buses, subways, high-speed rail, trackless trolleys, regional rail, and paratransit). The authority's City Transit Division (CTD), which serves the city of Philadelphia, operates 72 bus routes, 6 light rail lines, and 2 subway/elevated lines. The CTD's operating budget for fiscal 2008 was $684.8 million, 67 percent of the authority's entire outlay. The CTD served 865,000 riders on an average weekday, 83 percent of the authority's entire weekday ridership. The city was also served by the authority's Regional Rail Division.

SEPTA's 2008 budget was funded by operating revenues (40 percent) and a combination of federal, state, local and other grants (60 percent).

For fiscal 2008, the authority's transit police (the SEPTA Transit Police Department or STPD) consisted of 260 personnel, 248 sworn and 12 civilians. The STPD's operating budget was $14.5 million. The department primarily patrols the stations and vehicles of the Market Frankford Line, the Broad Street Line, and the underground portion of the subway-surface (trolley) lines. In addition, officers patrol the city's two commuter rail stations: Market Street East and Suburban Station. Patrol of the Center City subway concourses is performed by both the STPD and the Philadelphia Police Department (PPD).

In April 2005, the STPD received the prestigious accreditation of the Pennsylvania Law Enforcement Accreditation Commission (PLEAC). The department's RIOS System (Radio Inter Operability System) was featured in a cover story in the July 2007 edition of *Law and Order* magazine. RIOS enables communication among diverse radio systems, thus permitting the STPD to communicate with other public-safety agencies at the federal, state, and local level.

SEPTA is currently in the process of converting its elevated, subway, and trolley stations to Smart Stations, facilities with state-of-the-art surveillance cameras, audio-visual equipment, public address systems, intrusion alarms, and fire-detection and suppression systems. This $100 million project is expected to be completed in 2011.

In the summer of 2007, the city and SEPTA entered into contracts with the Center City District (CCD) for custodial services in the subway concourses and train platforms. The CCD's efforts have led to a noticeable improvement in the cleanliness of these areas, and their team of 59 cleaners and 14 supervisors has established a uniformed presence in the underground that enhances the sense of security and well being.

Youth crime is one of SEPTA's most pressing problems. Fifty percent of serious crime (e.g., assault, robbery) on the transit system is perpetrated by youths. The impact of youth crime is clearly evident by the spike in serious crime at school dismissal time (see figure 2). But despite the connection between youth ridership and crime, certain policies and procedures of SEPTA and school officials may actually be fueling crime. The Weekday Student Pass provides greater access to the transit system, which translates into more time spent on the system and more opportunity to get into trouble. Some program decisions by school officials are made without regard to transit safety, needlessly placing at-risk students on the transit system. Fifteen thousand students are truant every school day, and some of these students are a risk to transit riders. Yet, it is unclear what is being done to stem the tide of truancy.

CERTAIN POLICIES AND PROCEDURES MAY ACTUALLY BE FUELING YOUTH-RELATED TRANSIT CRIME

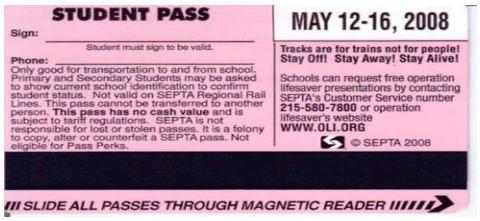
Student Pass Program

Last summer the Commonwealth of Pennsylvania agreed to subsidize free transportation on SEPTA for all city students who met the following criteria: students had to be enrolled in grades seven through twelve, and students had to live more than one and one-half miles from school.

Free transportation is provided through the distribution of weekly transit passes that replace the metal tokens and paper transfers previously used by students. The old fare system, which allowed for limited travel on SEPTA bus, trolley, and subway/elevated lines, and did not permit travel on the regional rail trains, enabled students to commute between home and school. The number of trips that a student could make was limited by the number of tokens provided.

In contrast, the new student fare instrument, called a Weekday Student Pass (see figure 1), is valid for multiple trips on SEPTA bus, trolley, and subway/elevated lines between the hours of 6:00 a.m. and 7:00 p.m., on weekdays, when school is in session. These Student Passes are serially numbered and magnetically encoded fare instruments. In the city, the School District of Philadelphia administers the Student Pass program for SEPTA.

FRONT



BACK

Figure 1. Weekday Student Pass

Serious Crime on Subway/Elevated Lines and in Center City Regional Rail Stations
by Time of Day
January 1, 2005 through April 17, 2008

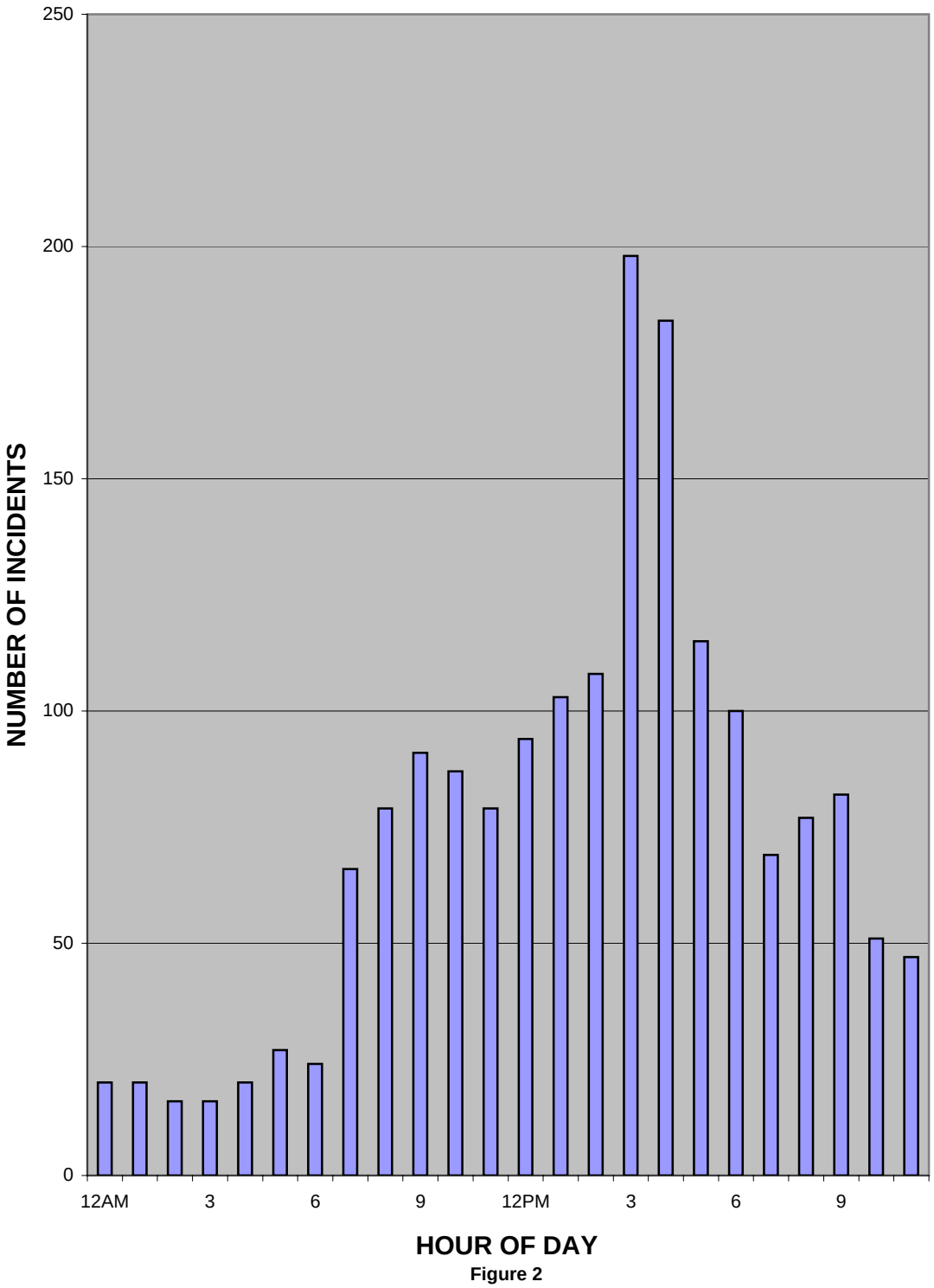


Figure 2

Due to limitations of SEPTA's current fare system (the hardware and software that control and monitor system access), there are some drawbacks to the Student Pass system. These include:

- The system cannot limit the number of rides allowed on Student Passes,
- The system does not allow for narrower periods of time when Student Passes can be used.

The School District of Philadelphia does not track the distribution of Student Passes to individual students by serial number. Failure to do this precludes SEPTA from analyzing Student Pass use or misuse.

Individual SEPTA Transit Police Officers, Philadelphia Police Officers, and other security officials, have been almost universal in their criticism of the multiple, unlimited travel provision of the Weekday Student Passes. Their concerns focus on the fact students now:

- Have access to the transit system for thirteen hours a day,
- Can go anywhere in the city, and
- Can exit a subway/elevated station, and then reenter the same station after waiting a brief period of time.

SEPTA officials maintain that they have seen no pattern of students spending the day "riding the system"; however, they admit that the potential exists for such activity.

Student Passes are not accepted for travel on SEPTA's regional rail lines; however, any student can upgrade a Student Pass to a regular weekly TrailPass, which is accepted. The student must request this upgrade at a regional rail train station, where the student surrenders his or her Student Pass, receives a credit of $15.65, and pays a modest amount, depending on the fare zone, towards the purchase of a weekly TrailPass.

This upgrade provision effectively converts a Student Pass into an adult weekly TrailPass, which does not have the same travel restrictions imposed on a Student Pass. The weekly TrailPass can be used twenty-four hours a day for a one week period on SEPTA bus, trolley, subway/elevated lines, and regional rail trains.

While the original intent of the Student Pass program was to provide free transportation for eligible students to attend school, failure to recognize the unintended consequences of the program created a situation where students now have unrestricted access, between 6:00 a.m. and 7:00 p.m., Monday through Friday, to SEPTA's City Transit Division. (Students who upgrade to a TrailPass, have access 24 hours a day, seven days a week, to the City Transit Division and Regional Rail System.) Police personnel with whom we spoke believe the Student Pass program may have contributed to an increase in truancy, juvenile crime and misbehavior on the transit system. (SEPTA officials maintain they have seen no such increase.) One security official summed-up his impression of the consequences of the Student Pass program when he stated, the student transpass program isn't school transportation, "it's a ticket to Disneyland."

SEPTA recently indicated it intends to replace its aging fare collection system. Until SEPTA has a new fare system which can limit the number of rides on a student fare instrument, we recommend that SEPTA return to using student tokens and paper transfers. [410708.01]

While SEPTA is considering a new fare system, we recommend that SEPTA explore smart card technology that would allow the tracking of student fare instruments (linking a smart card to a specific student), the restriction of their use (limiting the number of rides per day and the times of day), the analysis of their use (where and when, proper or improper), and the reporting of any misuse to School District officials. [410708.02]

School Policy Created Unnecessary
Risk on Public Transportation

The School District of Philadelphia has contracted with Community Education Partners (CEP) to provide an alternative education program for "disruptive, violent" students at three locations in the City. The purpose of the program is to improve the behavior, attendance, and academic performance of these "at-risk" students. CEP students must meet the same requirements as established for the School District students, including the gym requirement set by the state.

The CEP-Allegheny School has no gym facilities, so the administration decided to have its male students meet the gym requirement at a city recreation center. According to the principal, female students were allowed to barbeque and play in the school parking lot to satisfy the gym requirement. Thirty to thirty-five male students rode public transportation two to three times per week to a recreation center, escorted by chaperones. At the end of the gym period, the students were dismissed from the center.

Rather than use another CEP school's gym facilities or a nearby city recreation center, the administration directed students to travel 4.3 miles across town to the Kendrick Recreation Center in Roxborough. Even though the students needed to take two buses to get to the center, the principal stated that Kendrick was used because one of the CEP staff had a part-time position there.

According to Recreation staff, the students were out of control and poorly supervised. Staff members informed CEP management that the students were no longer welcome at the recreation center.

CEP administration exhibited poor judgment in allowing students with behavioral problems and special needs to travel such a distance on public transportation. Prudence dictates that every effort be made to limit travel time, not increase it. CEP's own program description of a safe school environment emphasizes the need for "limiting student movement throughout the school day." When behavior, attendance, and academics are all serious issues, why would you have students spending 45 minutes or more of their school day riding public transportation?

In one March 2008 incident, two CEP-Allegheny students were victims of a "brutal assault" (one received a fractured forearm) in the Allegheny Station of the Broad Street Subway by six other CEP-Allegheny students on their way to the recreation center. Apparently, the six boys managed to slip away from their chaperones, enter the subway, attack the two students, exit the subway, and return to their group for the bus trip to the recreation center. Clearly, a better policy and better monitoring were needed.

To reduce the risk associated with students traveling on public transportation, we recommend that the School District take the following actions:

- Emphasize to administrators, in regular and alternative schools alike, the need to limit the amount of time students spend on public transportation, and the need to effectively supervise them, if travel on public transportation is required. [410708.03]

- Require alternative school providers to have gym class conducted on-site or at the closest School District location. [410708.04]

- Transport students by yellow school bus if an alternative location is needed for gym class or any other school activity. [410708.05]

TRUANCY REMEDIATION EFFORTS ARE UNCLEAR

Research and experience have shown a strong correlation between truancy and crime. According to a report compiled by the Los Angeles County Office of Education, chronic absenteeism is the most powerful predictor of delinquent behavior.[1] Closer to home, the March 26, 2008, murder of Sean Conroy on the steps leading to the 13th Street El Station was allegedly perpetrated by truants.

Truancy figures for the Philadelphia Public Schools are dismaying. On an average day, 15,000 students are absent from school without an excuse (7 percent of enrollment). Through March 2008, the School District referred 47,000 chronic truants (8 or more unexcused days) to the city's Department of Human Services for outreach programs of some kind.[2] Approximately 27,000 of these students were subject to referral to Truancy Court (the remainder were either too old or too young). The following absences were reported for the group subject to court referral:

Table 1

CHRONIC TRUANTS: GRADES 4 - 10		
2007/2008 SCHOOL YEAR		
FIGURES THROUGH 3/31/08		
Days of Unexcused Absence	Number of Students	
8 - 15	14,567	55%
16 - 60	11,088	42%
61 - 125	847	3%
	26,502	100%

NOTE: Family Court reported considerably lower figures: 22,887 cases referred of which 18,704 proved to be cases requiring court action.

In the last school year, the number of truants detained by police increased 4.1 percent over the previous year. In the last two academic years, the number of students removed from the transit

[1] "L.A. School Truancy Exacts a Growing Social Price," Los Angeles Times, June 28, 1995, sec. A, P. 12.

[2] We present figures through the end of March because we were only able to obtain detailed information through the end of March. However, according to the School District, the number of chronically truant students through the end of the school year was 74,000 or 37 percent of the district's entire enrollment.

system in truancy sweeps increased at an average annual rate of nearly 8 percent. Truants *do* use the transit system.

In Pennsylvania, chronically truant students cannot be sentenced to juvenile detention because truancy is not a delinquent act. Students can be referred for outreach services through the Department of Human Services and can be assigned community service. Community service can be time spent working in a library or removing graffiti, or it can be time spent being tutored. When we asked Family Court how many students had been referred to the various types of community service and how many had completed the service stipulated, we were informed that 90 percent were assigned community service of some kind and most completed the service assignment. However, this statistic was not documented.

The last option available to the court for chronically truant students is removal of the student from his or her home and placement in foster care. According to the Department of Human Services, this happens in less than 1 percent of cases.

Parents of chronically truant children can be, among other things, fined or jailed. For the 2007/2008 school year, 50 parents were fined. For the 2006/2007 school year, the number was 73. No figures were available on the number of parents incarcerated.

Given the seriousness and the enormity of the truancy problem and its effect on transit safety, it is imperative that all agencies involved in the remediation process (the School District, DHS, and the Family Court) have comprehensive statistics on what is being done and the resulting outcomes. Statistics would allow policy makers to know if the current program is successful, and how successful; whether the current program needs to be more aggressively enforced; or whether stronger measures need to be adopted.

We recommend that all three responsible agencies begin compiling comprehensive statistics on the specific efforts and specific accomplishments of the truancy program. [410708.06]

HOMELESSNESS IS AN EXTRAORDINARY DRAIN ON SEPTA'S SECURITY RESOURCES

SEPTA's Transit Police spend a significant portion of their deployment time dealing with the city's homeless population who are found loitering in the subway/elevated system and the regional rail stations. This substantial effort interferes with other crime prevention and patrol responsibilities.

SEPTA's passengers have every reason to expect a clean, safe and pleasant travel environment. Unfortunately, their expectations are sometimes in conflict with homeless individuals who congregate in SEPTA's subway/elevated and regional rail stations, and the underground public concourses that connect these facilities.

Homelessness is an unfortunate social problem which Philadelphia and other major American cities face on a daily basis. While being homeless is not a crime, certain types of behavior by some of the city's homeless - aggressive panhandling, sleeping in public transit facilities, public urination and defecation - are quality-of-life crimes. SEPTA's Transit Police Department attempts to control the system's homeless problem by enforcing existing vagrancy and loitering laws.

Our analysis of crime incident reports compiled by SEPTA for the past three years (see figure 3) shows that 59 percent of the incident reports prepared by SEPTA's Transit Police were for loitering by the homeless. Due to the magnitude of this problem, most incident reports for loitering do not cite an individual, but report the number of homeless persons removed from the system. On a daily basis, approximately twenty Transit Police Officers spend part of their day ushering the homeless from SEPTA's transit facilities.

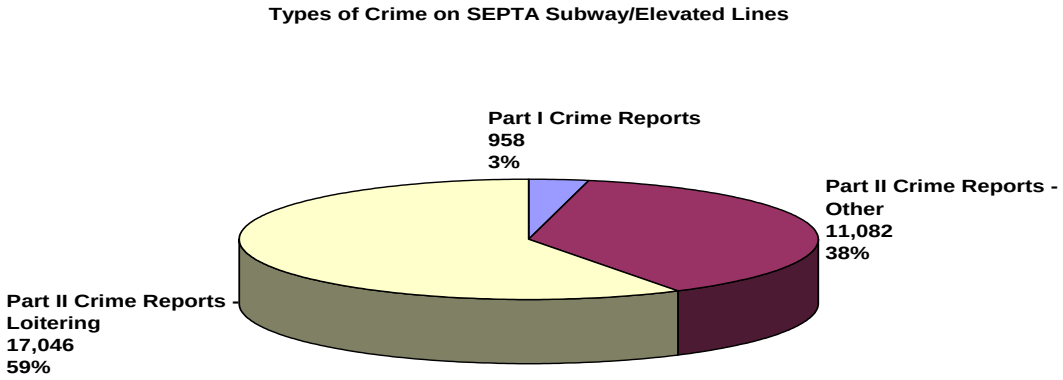


Figure 3

While SEPTA Transit Police Department assigns officers to control homelessness in all seven patrol zones of the Broad Street and Market-Frankford Lines, the Center City transit facilities, along with the underground concourses, are the major homeless centers. The two Center City regional rail stations—Suburban Station and Market East Station—are "open" stations, with many entrances, and where a paid fare is not required to enter the station to wait for a train. We were told by police officers that several features of these facilities appeal to the homeless. These include:

1. SEPTA passengers, who shop at the various businesses that are part of the stations, are targeted by the homeless for handouts, and

2. Transit facilities, that are relatively warm in winter and cool in summer, provide some comfort to the homeless, along with protection from inclement weather, and a sense of security.

On one occasion our staff observed efforts by SEPTA Transit Police to usher a homeless individual from Suburban Station. This process, which was respectful, involved physically escorting the homeless person out of the station, and taking the individual to the street level above the train station where the individual was released. We observed, however, that same individual eventually returned to Suburban Station. Recidivism of this nature is a constant and staggering problem. Our review of the transit authority's incident reports for the first quarter of this year disclosed that SEPTA Transit Police prepared 1,643 incident reports for loitering where they removed nearly 17,000 homeless individuals from the transit system. On a daily basis, transit police officers escort an average of 157 homeless individuals from SEPTA's transit facilities.

The above approach—escorting a homeless person to street level—differs from the methodology used in the New Your City subway system, where homelessness in not considered a significant problem. In New York it is a standard practice to place a homeless person in a shelter after the person has been escorted from a transit facility.

A representative from the Center City District has stated to us that homelessness is the number one problem affecting the quality of life in Center City Philadelphia.

There are consequences to uncontrolled homelessness. For example, any toleration of aggressive panhandling and other unacceptable behavior by the homeless discourages the public from using SEPTA's subway/elevated service and riding the regional rail lines. The homeless situation also negatively impacts on plans to develop retail areas around the two center city train stations. Finally, SEPTA Transit Police personnel spend valuable patrol time dealing with a social problem which city government has not been able to resolve.

Recommendations

The city government, along with assistance from social service agencies, needs to develop an effective and comprehensive plan to deal with homelessness on the transit system. [410708.07]

Until the city has such a plan in place, SEPTA should considering hiring non-sworn personnel to discourage individuals from entering transit facilities when stations are closed, and from loitering in the subway/elevated system and the Center City regional rail stations during operating hours. The use of non-sworn personnel would free up police officers for other patrol-related duties. [410708.08] [NOTE: The use of non-sworn personnel is discussed at greater length in the report section entitled “SEPTA Transit Police Force.”]

SEPTA management has indicated it will expand the size of the authority's police force; however, the size of the force has never been systematically evaluated. Comparative statistics suggest that the number of officers may already be relatively high. Before officers are added, management should consider supplementing the existing force with non-sworn personnel, a strategy employed by other transit agencies to extend the reach of security at a lower cost. In addition, management should consider drafting memoranda of understanding (MOUs) with other police agencies, most notably, the Philadelphia Police Department. MOUs help avoid duplicated effort and gaps in coverage, particularly in the event of emergencies.

SIZE OF THE SEPTA POLICE FORCE

During a recent City Council hearing, a SEPTA board member indicated that the authority was looking to hire 50 additional officers. However, our discussions with management disclosed that the department has made no workload measurements, no formal analysis of staffing based on identified need, and no study to assess the appropriateness of its current force—248 sworn officers.

Inquiries of other transit agencies disclosed that the SEPTA Transit Police Department's staffing may already be relatively high.

Table 2
RELATIVE SIZE OF TRANSIT SECURITY FORCE

Transit System	Officers per 10K Riders	% of BART
Bay Area Rapid Transit (BART)	4.17	100.0
MTA - New York City	5.15	123.5
D.C. Metro Area Transit Authority	5.25	125.9
SEPTA	6.19	148.4

Any decision to hire additional officers should be based on an in-depth workload assessment as well as a careful consideration of all available options.

Non-Sworn Personnel

SEPTA could increase the coverage and effectiveness of its police department by using non-sworn personnel for tasks not requiring the skill of a police officer or for tasks not currently performed by police due to lack of manpower.

During our discussions with the security directors of several local universities, they stressed that their approach to security was holistic, that is, it included a host of measures that, in combination, produced the desired result: a safe and secure environment. Even the law-enforcement piece of their operations had its components, ranging from sworn police officers to in-house guards and contract guards. The key was to match the skills set to the specific task to ensure that the most effective use was made of the most highly skilled personnel. This approach is similar to that being employed in the healthcare industry, where physician's assistants, nurse practitioners, and licensed practical nurses appear with increased frequency.

Various resources could be used to *supplement and enhance* SEPTA's current police force. Among these are the following:

Contract guards. The annual cost of a contract guard varies, depending on the type of guard retained. A high-end guard could cost 95 percent as much as a police officer, while a low-end guard might cost half as much. [Additional savings result from higher productivity: the contracting agency does not pay for leave time or overtime required to cover positions vacated by personnel on leave.] SEPTA could use a combination of guards to address the variety of security tasks, from the detention of suspects, to patrol and observation. In this way, the authority would not pay for a higher level of skill than was necessary. Transit systems in Miami, Denver, Portland, and Las Vegas utilize contract guards in some capacity.

In-house guards. The Los Angeles County Metropolitan Transportation Authority (LA Metro) depends primarily on the Los Angeles County Sheriff's Office for law enforcement. However, in addition to the sheriff's deputies, LA Metro also employs 100 contract guards and 100 in-house guards (Metro Security). The idea is have the guards concentrate on security functions and have the deputies concentrate on law enforcement, that is, to match the skills set to the tasks required. LA Metro stresses that Metro Security is a supplement to the sheriff's deputies, not a replacement for them. [Note: Metro Transit Police in Washington D.C. are also supplemented by in-house guards.]

The rationale for using in-house guards in addition to contract guards is twofold: (1) in-house guards are with you longer and are, therefore, more familiar with your operations; (2) management has more control over in-house guards. Generally, management will assign security functions to its in-house guards that require a higher level of skill and a greater degree of trust.

Customer service representatives (CSRs). The Center City District currently deploys CSRs on the streets of Center City to serve as goodwill ambassadors. Their responsibilities include both hospitality (information and direction) and public safety (serving as a uniformed presence in radio contact with the Philadelphia Police). There is no reason why CSRs could not be deployed in the subways and concourses to supply both direction and reassurance to the riding public.

Reserve officers. Three hundred and eighteen jurisdictions in forty-nine states currently make use of reserve officers (auxiliary police) to supplement their police departments. Reserve officers are a group of volunteers who serve at no cost to the sponsoring jurisdiction (other than uniforms, radios, and limited training) and assist the police by serving as the department's eyes and ears in the field. The police departments in both New York City and Washington D.C. make use of reserve officers.

Recommendations

To provide the broadest coverage in the subway system, reduce crime, grow ridership, and increase earned revenue, we recommend that SEPTA management consider the following actions:

- Conduct a formal workload analysis before adding any additional police officers. [410708.09]

- Identify those tasks currently performed by SEPTA Transit Police (or not performed due to manpower shortages) that could be performed by non-sworn personnel. [410708.10]

- Determine the appropriate mix of non-sworn personnel (high-end, low-end, and mid-range contract guards; in-house guards; CSRs; and reserve officers) to address the tasks identified. [410708.11]

- Deploy non-sworn personnel during periods of increased activity, such as the early morning hours and school dismissal, to free up police personnel. [410708.12]

NO MEMORANDA OF UNDERSTANDING WITH OTHER POLICE AGENCIES

SEPTA has no memoranda of understanding (MOUs) with the other police agencies with whom it shares adjoining or overlapping responsibilities, most notably, the Philadelphia Police Department. MOUs are designed to eliminate duplication of effort and to avoid gaps in coverage, particularly in the event of emergencies. In the case of transit operations, MOUs can also avoid injuries to police officers who are not "track trained."

In his April 17, 2008, testimony before City Council, Philadelphia Police Commissioner Charles Ramsey said the following concerning cooperation between his department and the SEPTA Transit Police:

> [W]hat we've tried to do is deploy our people in a way that's consistent with the kind of complaints [we're getting] and also working very closely with SEPTA to make sure we're not wasting resources by doubling efforts.

While this is certainly a desirable goal, it is difficult to understand how it can be practically realized without a formal agreement setting forth respective responsibilities.

SEPTA management has told us they believe more can be accomplished with a handshake than with a formal agreement. The SEPTA Transit Police Department has MOUs with a number of agencies governing the use of its radio interoperability system, but none governing the use of personnel.

The Metropolitan Transit Police Department (Washington, D.C.) has MOUs with each of the police agencies that share or adjoin its jurisdiction. MTPD's management believes that MOUs are critical to coordinating efforts between agencies.

Recommendations

To avoid duplication of effort, gaps in coverage, particularly in the event of emergency, and possible injuries to officers, we believe that SEPTA management should solicit, negotiate, and execute MOUs governing operational and command issues with the Philadelphia Police Department and the School District of Philadelphia Police, as well as with the various university police departments, Amtrak Police, and the police departments of the communities where SEPTA provides public transportation. [410708.13]

SEPTA's summary reports of serious crime (Part I crime) do not always present the clearest picture of crime on the subway/elevated system. Summary reports of less serious crime (Part II crime) are prepared only once a year, even though these crimes occur at 35 times the frequency of Part I crime and are, therefore, much more likely to influence decisions on transit use. Personal Digital Assistants (PDAs) and a new Computer-Assisted Dispatch (CAD) system could streamline incident-report writing, and crime-mapping could assist deployment decisions.

MORE EFFECTIVE USE COULD BE MADE OF CRIME DATA

Clearer Picture Needed of Subway/Elevated Crime

Summary reports of crime by zone (see table 3 for zone descriptions) do not always present a clear picture of crime on the subway/elevated system because they sometimes exclude crimes directly adjacent to the system or because crimes are sometimes misclassified as to zone.

Exclusion of crime by definition. During the April 17, 2008, City Council testimony on transit safety, there was discussion about the recent level of serious crime (Part I crime – see table 4 for crime defintions) on the subway/elevated system. The year-to-date figure quoted was 90 Part I crimes. This figure, however, excluded nine Part I crimes committed in the Center City commuter rail stations, locations directly adjacent to the subway/elevated system. The problem is one of definition. A report on the "subway/elevated system," by definition, excludes crimes committed in the commuter rail stations, even though these stations are directly adjacent to the Market-Frankford subway. The report may be accurate as defined, but it fails to provide the clearest picture of crime in the subway area.

Exclusion of crime by practice. Auditors found other cases where incidents in the immediate vicinity of the subway/surface lines were coded "Zone A" (not part of the subway/elevated system). For example, earlier this year a passenger was slashed with a razor while on board a Route 36 trolley at the 40th Street portal to the subway/surface line. The crime was coded Zone A. In another incident, an assault and robbery on a trolley within feet of the subway/surface tunnel entrance at 36th and Ludlow Streets (see figure 4) was coded Zone A.

Figure 4. Subway/surface line tunnel entrance at 36th and Ludlow. An assault and robbery on a trolley just outside this entrance was coded "Zone A," i.e., not a subway-system crime.

Table 3
SEPTA TRANSIT POLICE DEPLOYMENT ZONES

Zones	System	Coverage
I	Market-Frankford Line	69th Street Terminal to 46th Street Station
II	Market-Frankford Line & Subway-Surface Trolleys	40th Street to 15th Street Stations
III	Market-Frankford Line	13th Street to York-Dauphin Stations
IV	Market-Frankford Line	Huntingdon Station to Frankford Transportation Center
V	Broad Street Line	Walnut-Locust to Pattison Stations
VI	Broad Street Line w/ Ridge Avenue Spur	City Hall to North Philadelphia Stations, and Fairmount, Chinatown, and 8th Street Stations
VII	Broad Street Line	Allegheny Station to Fern Rock Transportation Center
VIII	Regional Rail	Suburban and Market East Stations

Table 4
FEDERAL BUREAU OF INVESTIGATION
UNIFORM CRIME REPORTS
CRIME CLASSIFICATION

Part I	Part II*
Homicide	Simple assault
Rape	Receiving stolen property
Robbery	Vandalism
Aggravated assault	Weapons offenses
Burglary	Prostitution
Theft	Drug law violations
Vehicle theft	Public drunkenness
Arson	Disorderly conduct
	Vagrancy/loitering

*List is not comprehensive.

Auditors found eight other incidents, principally at the Frankford Transportation Center, where robberies or thefts, in restrooms or in nondescript areas, were coded Zone A. Clearly a line must be drawn delineating what is, and what is not, a subway crime; however, drawing the line too close to the subway tracks, that is, excluding crime just beyond the platform area, could undermine the usefulness of crime reporting.

Exclusion of crime by error. In still other cases, auditors found crimes that were excluded from the subway/elevated count because they were coded Zone A in error. Table 5 summarizes 17 such cases.

Table 5
MARKET-FRANKFORD LINE CRIMES
IMPROPERLY RECORDED AS ZONE A CRIMES

	2005	2006	2007	Total
Robbery				
Frankford Transportation Center		1	1	2
Allegheny Station	1		1	2
Total	1	1	2	4
Theft				
Frankford Transportation Center	4	1	3	8
Allegheny Station	2	3		5
Total	6	4	3	13
Robbery and theft totals	7	5	5	17

The rate of serious crime reported for the subway/elevated system for 2007 was quite low, and even if all of the serious crimes recorded in SEPTA's database were attributed to the subway/elevated system, the crime rate would still be quite low (the odds of being the victim of a serious crime would still be 100,000 to 1). Still, it is imperative that public discussions of transit crime address a complete and accurate picture of the problem.

Important Information Sometimes Omitted

The Controller's Office found that incident reports (manual reports by on-scene officers) sometimes omit important information. In the incident at 36th and Ludlow described above, auditors could not determine from the incident report whether the trolley was leaving or heading toward Center City. It took several days to get the answer. The problem was that the incident-report template did not include vehicle direction, and the direction was not clear from the narrative accompanying the template entries. Data excluded from the report template is effectively lost to analysis because it is the template entries that are used to build the summary analyses, not the report narratives.

Part II Crimes – No Timely Analysis

Part II crimes (see table 4) are lesser offenses, although they still impact the public's comfort with using the transit system. Part II crimes include, among other things, assault (without serious bodily injury), disorderly conduct (fighting; noisy, disruptive behavior; using obscene language), public drunkenness, vandalism, criminal mischief, drug-law violations, vagrancy, loitering, smoking on trains or station platforms, public urination, prostitution, defiant or criminal trespass, fare jumping, and curfew violations.

From the standpoint of ridership preservation and growth, Part II crime is more significant than Part I crime because members of the riding public are far more likely to be victims of, or witnesses to, a Part II crime, and they are far more likely to encounter repeat occurrences. (In 2007 there were 35 times as many Part II crimes as Part Is.) And it is public perception of safety and desirability that affects ridership, not crime classification. A rider is unlikely to care whether the assault he witnesses is a simple assault or an aggravated assault, or whether unruly behavior by a group of teenagers is dangerous or simply threatening. If the rider forms a negative impression, he may look for another mode of transportation.

But despite the significance of Part II crimes to ridership, SEPTA Transit Police only prepare summaries of Part II crimes once a year (as opposed to monthly, for Part I crimes). On a day-to-day basis, commanders rely on the Daily Control Logs. For May 21, 2008, the Daily Control Logs was a 110-page report of Part I and Part II crimes and other activity. Most of the pages contained 47 data fields plus narrative. Using such a document to deploy personnel would be a formidable task.

No Crime Mapping

SEPTA Transit Police do not perform any crime mapping – plotting crimes with colored shapes on a patrol-area map to show the location, type, and frequency of incidents. When we questioned management about crime mapping, they told us they didn't see the need for it: they knew where crimes were taking place from their existing crime reports.

Though it is quite possible that management could form an accurate geographic impression of crime from a review of narratives and number tables, it is quite possible that the impression drawn is somewhat wide of the mark. Given the Philadelphia Police Department, the police departments of several local universities (Penn, Temple, and Drexel), and transit police in New York City do crime mapping, and the D.C. transit police hope to adopt it, we conclude that this technique would be useful to SEPTA Transit Police as well.

Recommendations

To make the most effective use of crime data, we recommend that management

- Include crimes committed in the areas adjacent to the subway/elevated system as subway/elevated crimes. [410708.14]

- Exercise greater care in the coding of crimes by zone to ensure that all subway/elevated crimes are associated with the subway/elevated system. [410708.15]

- Review the incident-report template to ensure that it includes all information of use in crime analysis, for example, vehicle direction. [410708.16]

- Begin preparing Part II crime reports monthly. [410708.17]

- Investigate crime mapping. [410708.18]

ADDITIONAL EFFORT NEEDED TO ENSURE THE ACCURACY OF EXTERNAL REPORTING

For calendar 2006, the National Transit Database, the compilation of transit crime maintained by the Federal Transit Administration, reported four fewer Part I crimes for SEPTA than were shown on SEPTA's Monthly Crime Reports, a discrepancy of 0.6 percent.[3] For calendar 2007, the National Transit Database reported thirty-seven fewer Part I crimes for SEPTA than were shown on the authority's Monthly Crime Reports, a discrepancy of 5 percent. Auditors were unable to determine the reasons for these discrepancies.

We recommend continued vigilance on management's part to ensure accurate external reporting of crime statistics. [410708.19]

CAD IS OUT OF DATE

SEPTA's crime-reporting database (its Computer-Assisted Dispatch or CAD) is out of date. The system cannot produce management reports, and it cannot send or receive incident information via computer interfaces to other police authorities, that is, it lacks interoperability. Interoperability is recommended for CAD systems by the Law Enforcement Information Technology Standards Council (LEITSC).

Though we understand that SEPTA has purchased a new CAD and that implementation has been delayed while bugs are being ironed out, it is unclear, until such time as the new system is brought online, whether the new CAD will remedy the shortcomings of the old.

We recommend that the new system be implemented as soon as is feasible and, if it cannot provide report writing and interoperability, that it be modified to include these critical functions. [410708.20]

AUTOMATION WOULD STREAMLINE REPORT WRITING AND PROVIDE ACCESS TO INFORMATION IN THE FIELD

SEPTA's incident-report writing process is not as efficient or effective as it could be. The process requires phone relays, transcriptions and multiple reviews.

Officers prepare manual reports in the field and phone in the details to a dispatcher. The dispatcher notes the information down and then enters it into SEPTA's incident database. Phone relays and data transcriptions take time and are prone to error.

Incident coding is reviewed in the database by the radio room sergeant, and in the manual reports by both the radio room sergeant and the patrol sergeant. The detective sergeant establishes the population of crimes to be pursued by detectives by reviewing both the database and the manual reports.

Automating the report-writing process with personal digital assistants (PDAs) would eliminate phones relays, data transcription, dispatcher input, and reviews of manual records. It would also reduce the risk of transcription error. PDAs would provide foot-patrol officers with the kind of

[3] The Federal Transit Administration relies on self-reporting by transit agencies.

information access that is commonly available to mobile officers via laptop computers, for example, NCIC checks for outstanding warrants or headquarters bulletins on such things as early school dismissals or activities of interest in the area.

To streamline the report-writing process and provide better data access to officers in the field, SEPTA should consider issuing PDAs to foot-patrol officers. Management should

- Identify system requirements and the suitability of any off-the-shelf products. [410708.21]

- Implement the system on a test basis after training is provided to a select group of officers. [410708.22]

At the start of our study, the emergency phones deployed by the city in the subway concourses and adjacent tunnels provided little protection to the riding public due to their poor condition.[4] Recently installed tamper-resistant call boxes have significantly improved the operating condition of the individual units, but system weaknesses remain. The city has no surveillance cameras in the subway concourses or adjacent tunnels, and has no plan to deploy any there. However, because research suggests that security kiosks can deter crime, the city should consider deploying kiosks in the subway concourses.

CITY'S EMERGENCY PHONE SYSTEM IS BETTER BUT WEAKNESSES PERSIST

Condition of Phones and Phone Inventory

During concourse tours, auditors found missing phones (figures 5 and 6), damaged phones (figures 7 and 8), and wires not enclosed in conduit. In some cases, exposed wires were also dangling (figures 9 and 10). Dangling wires and exposed wires are highly susceptible to vandalism.[5] A number of the phones were not conspicuously marked and would be virtually impossible to find in an emergency. Some we couldn't find even with a written description of their location.

On April 14, 2008, the Controller's Office obtained an inventory of the city's emergency phones. Table 6 details their type and condition:

Table 6
EMERGENCY PHONES AND CALL BOXES
SUMMARY OF 4/14/08 INVENTORY

TYPE OF EQUIPMENT			BROKEN?			
Phones	Call Boxes	Total	Yes	No	Unknown	Total
53	10	63	16	11	36	63
84.1%	**15.9%**	**100.0%**	**25.4%**	**17.5%**	**57.1%**	**100.0%**

Out of the 63 phones on inventory, 25 percent were listed as broken, that is, the phone had no dial tone. It is interesting to note that the phone depicted in figure 7 was not among the broken. Only 10 of the units were listed as tamper-resistant call boxes. Based on our examination, two of the units listed as call boxes were actually phones, and one of the phones was actually a call box. Some of the call boxes were not tamper-resistant because their lead wires were exposed (figures 11 and 12) or their conduit was not securely fastened to the box.

At the time of our fieldwork, a six-person unit maintained the city's emergency phones. This unit also maintained 15,000 phones in the various city offices and the city's entire e-mail and data-cabling systems. One of the six individuals was due to retire shortly. (The city has, in recent years, had difficulty in hiring skilled labor due to noncompetitive salaries.)

[4] It is important to note that the emergency phones and call boxes in the concourses and tunnels are maintained by the city. The units on the subway platforms are maintained by SEPTA.

[5] The wires of the call boxes maintained by SEPTA (those on the subway platforms) are fully enclosed in metal conduit. See figure 22.

Figure 5. Missing phone

Figure 6. Missing phone

Figure 7. Damaged phone

Figure 8. Damaged phone

Figure 9. Dangling wire – no conduit

Figure 10. Dangling wire – no conduit

Figure 11. Call box with exposed wire

Figure 12. Call box with exposed wire

The condition of 57 percent of the emergency phones was unknown at the time the April 14 inventory was prepared. Officers from the Philadelphia Police Transit Unit used to check phone condition weekly, but that practice was discontinued when the Transit Unit was disbanded in February 2003. [We understand that the Police Department has recently resumed periodic phone inspections.]

When a phone is activated (that is, the receiver is lifted or the call-box button pushed), the caller is connected to a 911 operator. It is critical that the operator know the phone's location because some of the phones are in nondescript areas (for example, the middle of a tunnel). Five of the phones on the April 14 inventory made reference to the City Hall Annex, one to the Western Savings Bank, and another to the Central Penn and Fidelity banks. The City Hall Annex has been a hotel for years, and all three banks changed names long ago. The Western Savings Bank was bought out in 1982. The city has informed us that they are in the process of updating the location descriptions.

During the course of our study, the city began replacing 52 of the existing phones with tamper-resistant call boxes. The purchase price of the new units would be approximately $30,000. (Installation and cable work, if any, would be extra.). The new phones will not be "self-reporting," that is, they will have to be manually checked on a periodic basis to ensure that they still have a dial tone. The downside of this is that an active phone may be inactive an hour after it is checked.

Some of the new phones are still not tamper resistant because their lead wires are exposed. Some of the phones still have no fluorescent-paint backing (see figures 16 and 17), or have a backing that is faded or does not extend around the pole on which the phone is mounted.

Public Awareness of the Phone System

The primary functions of an emergency phone are deterrence, reassurance, and response: the prospective criminal must believe that the risk exceeds the benefit; the prospective rider, that the benefit exceeds the risk; and both that a summons will lead to a quick response. To deter criminals and reassure riders, people must be constantly aware that the emergency phones are present and readily available. The devices must advertise their presence.

During our inspections of the concourses, some of our auditors couldn't find the emergency phones, even with the aide of an inventory list. The phones were difficult to find because many were nondescript (they looked like plumbing or electrical fixtures – figure 13); were poorly marked ("emergency" labels were illegible from more than a few feet away – figure 14); had no fluorescent-paint backing, backing that was worn or faded, or backing that did not extend around all four sides of the pole on which the phone was mounted (that is, you couldn't see the phone unless you were facing it dead-on – figure 15).

Many people suffer from what psychologists call inattentional blindness and inattentional amnesia, that is, the inability to see what does not engage their attention or to remember what does not make a vivid impression.[6] Because of sensory overload, people tend to ignore what does not grip their attention or discard what does not strike them as critically important. If the success

[6] Siri Carpenter, "Inattentional Blindness," *Monitor on Psychology* 32, no. 4 (April 2001).

Figure 13. Emergency phone is mounted on the 5th pole. Plumbing fixtures are mounted on the 1st and 7th poles.

Figure 14. “Emergency” label is illegible, even from this distance.

Figure 15. Recently installed call box is mounted on the rear of the first pole. Note that the pole is not marked in any way whatsoever.

Figure 16. New box with no backing.

Figure 17. New box with no backing.

of a security device depends on its being seen and remembered, it has to seize the attention and leave an indelible imprint.

Studies of the London Underground have made clear the phenomena of inattentional blindness and amnesia. To ensure the success of the surveillance cameras, authorities placed the monitoring screens inside information centers at the station entrances. The objective was to make sure that people saw the camera monitoring every day, as they entered the station. But when asked about the level of reassurance the information centers provided, members of the riding public often confessed they hadn't noticed them at all.[7]

For the city's emergency phone system to be effective, phones must be noticed and remembered. If the devices fail to make their presence known, or if the announcement is received and forgotten, perpetrators will not be discouraged, public fear will not be allayed, and emergencies may not be addressed. Public fear could result in decreased ridership; the inability to summon help could result in death.

Recommendations

To ensure that the city's emergency phones in the subway concourses and adjacent tunnels provide the intended level of security and safety, we recommend that the city administration take the following actions:

- Enclose all phone wires in metal conduit. No portion of the wire should be left exposed. [410708.23]

- Move to self-reporting phones. [410708.24]

- Consider outsourcing phone maintenance to ensure that emergency phones are kept in working order. [410708.25]

- Conspicuously mark *all* emergency phones with a fluorescent red-and-yellow background. If the background is faded, repaint it. If the phone is mounted on a pole, extend the background around the pole. [410708.26]

- Label the phones "EMERGENCY" in letters large enough to be read from a distance. [410708.27]

- Add a flashing light to each phone so that the device is less likely to be ignored or forgotten and more likely to be located in an emergency. [410708.28]

- Make sure the phone inventory is kept accurate, complete, and up-to-date. Make location descriptions specific and easy to follow. [410708.29]

[7] Barry Webb and Gloria Laycock, "Reducing Crime on the London Underground – An Evaluation of Three Pilot Projects," London: Home Office 30 (1992): pp. 12 and 22.

NO CAMERAS IN THE CONCOURSES OR ADJACENT TUNNELS

Though SEPTA has surveillance cameras in six subway stations and is in the process of installing them in the remaining stations, the city has no surveillance cameras in the subway concourses or adjacent tunnels, and has no plan to deploy any there.

This state of affairs would be troubling, even if crime-prevention were the city's only concern; but given the risk of terrorist attack and the proximity of the concourse and tunnels to major structures along Market Street, the absence of a surveillance system should heighten the level of concern.

While cameras are not the sole solution to the city's security problems, experts agree they are a key component. Both Washington, D.C. and New York City have camera systems, and security personnel from both cities extolled their value. In New York, staff showed auditors from the Controller's Office examples of camera footage of criminals in the act.

Recommendations:

To improve security in the subway concourses and adjacent tunnels, and to improve public confidence in the transit system, we recommend that city management take the following actions:

- Develop a plan for the installation of surveillance cameras in the subway concourse and adjacent tunnels. The plan should include input from the Philadelphia Police, SEPTA Police, and transit-security experts both here and around the country. [410708.30]

- Include in the installation plan requirements for strobe lights, effective signage, and an ongoing media campaign to remind the public that the cameras are in place. [41078.31]

- Explore the availability of federal funding for a surveillance system, particularly from the Department of Homeland Security. [410708.32]

UNDERGROUND COMMUNICATION REMAINS PROBLEMATIC FOR CITY POLICE AND FIRE PERSONNEL

Radio communication underground remains a problem for city police and fire personnel because the city's radio system is not designed to operate underground. The problem has been partially mitigated by issuing SEPTA radios to city personnel, but there is a limit to what a human being can tote around on patrol. An officer commonly carriers a weapon, bullet clips, handcuffs (sometimes two sets), keys, mace, flashlight, nightstick, cell phone, bulletproof vest, and a city radio. Asking him to carry a second radio on top of this is somewhat unrealistic.

At the time the city's radio system was constructed (1999/2000), the estimated cost of providing subway coverage was $22 million. The current estimate is $39 million. The city plans to pursue limited coverage in Center City. This plan, which would cost $7.9 million, would provide coverage for the Broad Street Subway from the Walnut-Locust Station to the Race-Vine Station. The city is pursuing grant funding and anticipates completion within two years.

There are several workarounds available for subway communication. The Fire Department can communicate radio-to-radio using analog channels. The problem with running analog is that Fire Dispatch cannot monitor these transmissions, including "panic-button" deployments. Both police and fire personnel should be able to use cell phones on the Market Frankford Line, now that ATT has established cell-phone service in that tunnel. However, the system can only handle so many calls at once. If there were an accident in the subway tunnel and commuters decided to use their cell phones, police and fire personnel might not be able to use theirs.

Until a financial solution can be found to the underground problem, subway communication for police and fire personnel will remain problematic.

CONSIDER SECURITY KIOSKS FOR MARKET STREET AND BROAD STREET CONCOURSES

Security personnel could be made more visible to the public and prospective perpetrators through the use of security kiosks. A study conducted at Temple University concluded that the placement of kiosks on the university campus (see figures 18, 19, 20) reduced crime in the vicinity by 80 percent, and did not displace crime to nearby areas.[8] In addition to discouraging crime, a highly visible kiosk could serve as a prominent point for aid in an emergency. It is not surprising that the victim of a recent transit-related attack made her way to a cashier's booth for assistance: the booth is essentially a kiosk for fare collection.

While the city concourses provide convenient thoroughfares for pedestrians and commuters to move about, that convenience is lost if people fear using them. Designed without the benefit of modern crime-prevention strategies, the concourses are a connected series of long, winding tunnels, punctuated with sharp turns and alcoves where criminals can hide. During off-peak hours, there is very little foot traffic. Strategically placed kiosks would serve as friendly beacons along the vacant stretches of tunnel. CSRs from the Center City District (considerably cheaper than Philadelphia Police) could staff the kiosks providing information and directions as well as public safety.

In order to enhance the safety of the subway concourses and to make these thoroughfares more inviting to commuters, visitors, and tourists, the city administration should consider the following actions:

- In consultation with the Center City District, SEPTA Police, and Philadelphia Police, identify strategic spots for the deployment of security kiosks in the Market Street and Broad Street concourses. [410708.33]

- Discuss with the Center City District the use of CSRs for staffing the kiosks. [410708.34]

[8] G. Rengert, M. Mattson and K. Henderson, *CAMPUS SECURITY: Situational Crime Prevention in High-Density Environments*, (Monsey, NY: Criminal Justice Press, 2001).

Figure 18. Temple Station Kiosk

Figure 19. Temple Station Kiosk: Interior View

Figure 20. Temple Kiosk: 11th & Berks

SEPTA's Smart Station Program will significantly enhance security and safety on the transit system, but a continuing effort will be necessary to ensure that the full benefit of the new equipment is realized. SEPTA's emergency phones are tamper resistant, self-reporting, and considerably easier to find than the city's phones, but visibility could still be improved.

SEPTA'S LAUNCH OF SMART STATIONS PROJECT SHOWS GREAT PROMISE

SEPTA continues to embrace and devote significant resources to current technology with its Smart Stations Project. At completion, every SEPTA station on the Market Frankford Line (MFL), the Broad Street Line (BSL), and the Subway-Surface (Trolley) Line (SSL) will be equipped with surveillance cameras, audio-visual/public address systems, intrusion alarms, and fire detection and suppression equipment. Improving the lighting at all stations is nearly complete. The cost of the project will be approximately $100 million.

The Cecil B. Moore station on the BSL is the only completed Smart Station. SEPTA notes the two-phase project is on schedule, with 21 stations expected to be completed by January 2009, and the remaining stations by mid 2011. Fiber optic cables will be used to transmit voice and data, which will allow SEPTA to view images from any of the cameras covering the subway system at their Command Center in real time. It is important to note, however, the main use of the almost 1,100 cameras[9] will be to record activity—live monitoring would generally occur only if SEPTA became aware of a problem. SEPTA plans to use signage to inform the public that they are being filmed.

While this project will greatly benefit SEPTA and its ridership, recent research indicates that surveillance camera systems sometimes fall short of expectations.

London has more surveillance cameras in place than any other major city in the world, and Great Britain's Home Office has spent $300 million in studies to ascertain their effectiveness, concluding they do not deter crime.[10] The research indicates the beneficial effect wears off shortly after the installation of the cameras.[11]

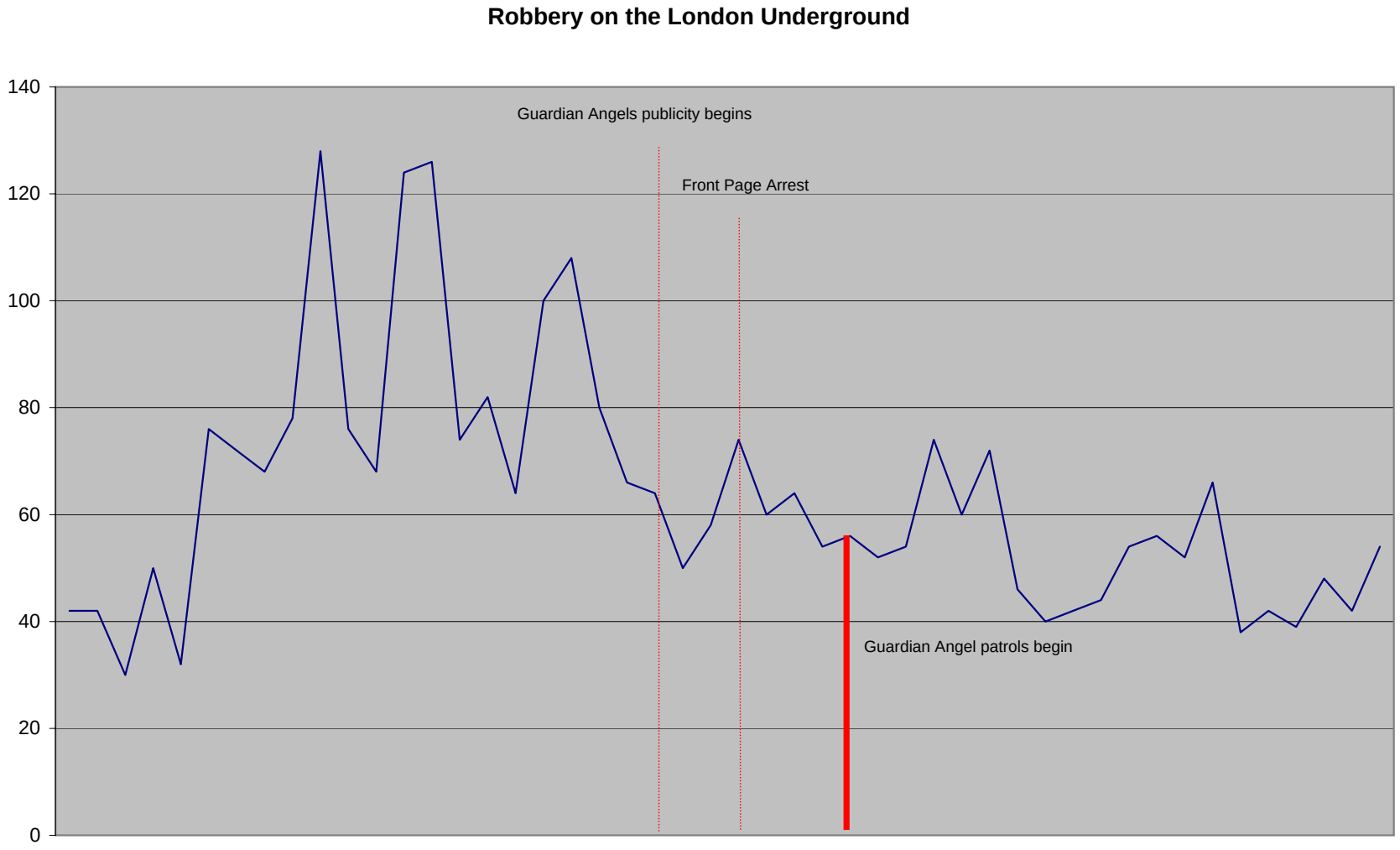
The problem appears to be one of awareness and retention. In a study of crime on the London Underground, researchers noted a significant drop in subway crime when the British media announced that the Guardian Angels would begin patrolling the transit system.[12] Crime dropped before the Angels deployed a single individual. However, as the notion of the Guardian Angels began to fade from collective consciousness, crime began to climb back up to its prior level, until publication of a front-page story showing the Guardian Angels making an arrest on the underground. Criminal behavior was influenced more by the publicity surrounding the Angels' deployment than by the deployment itself (figure 21).

[9] A combination of fixed and point-tilt-zoom cameras will be used to cover the stations.

[10] Steve Stecklow, Jason Singer, and Aaron O. Patrick, "Watch on the Thames: Surveillance Cameras Monitor Much of Daily Life in London, May Help to Identify Bombers," *The Wall Street Journal Online*, 8 July, 2005.

[11] Webb and Laycock, "Reducing Crime on the London Underground – An Evaluation of Three Pilot Projects." 15.

[12] Ibid., 10 – 11.



Figures 21. Effect of Publicity on Crime: London Underground

The results of this British study are consistent with the concept of situational crime control. In short, the concept asserts that to deter crime one must raise the perceived difficulty or risk of committing crime. Surveillance cameras can do this, but only if the potential offender is aware of their presence.

Recommendations:

To ensure the preventive benefit of the surveillance system, we recommend that SEPTA constantly remind the public about the cameras via an ongoing media campaign. [410708.35] We also recommend strobe lights on the cameras to prevent their fading into the landscape furniture. [410708.36] And, finally, we recommend bold, terse signage as a reminder that the stations are under constant surveillance. To be effective, the signs must be announcements that can't be missed or overlooked (e.g. "Smile: you're on surveillance camera"). [410708.37]

SEPTA EMERGENCY CALL BOXES ARE ADEQUATELY MAINTAINED BUT VISIBILITY COULD BE IMPROVED

Throughout the subway system, SEPTA has installed push-button, emergency call-boxes so that riders in need can obtain aid. SEPTA's call boxes are bright yellow, and the push buttons make them more tamper-resistant than a phone. There is no receiver to be smashed, no cord to be cut, and lead wires are encased in metal conduit along their entire length (figure 22). The boxes are self-reporting, meaning the devices "report in" that their connection is active.

The importance of being able to locate and access an emergency call box when in crisis can not be understated. To maximize the likelihood that aid is reached in time, call-box locations should be obvious and emphasized. Moreover, the preventive and reassurance functions of the call box are lost, if the public is unaware that the box is present.

While SEPTA does consistently place emergency call boxes at both ends of every station platform (consistent positioning is essential for quick location), even regular riders may be unaware of this convention. The numerous pillars in many of the stations could make it difficult to notice the boxes at the platform extremes. We observed no instances where the pillars holding the call boxes were marked "emergency" on all four sides, and we noted none that were marked with strobe lights to advertise and reinforce their presence. Lastly, there are very few call boxes outside the platform areas, that is, in most locations, customers have to first pay their fare and enter the platform before getting access to a box (figure 23).

Recommendations:

In order to maximize the likelihood that riders in need will reach aid in time, and to maximize the preventive and reassurance benefits of the call-box system, we recommend SEPTA consider the following actions:

- Paint all four sides of the pillars supporting the emergency call boxes with fluorescent "EMERGENCY" labels. [410708.38]

- Add strobe lights to the call boxes to make them easier to find and to advertise and reinforce their presence to the riding public and would-be perpetrators. [410708.39]

Figure 22. SEPTA call box. Note announcment light and metal conduit.

Figure 23. Announcement: No call box outside paid area.

- Add emergency call boxes outside the fare-collection turnstiles. (PATCO's emergency phones are mounted literally back-to-back inside and outside the collection turnstiles.) [410708.40]

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Southeastern Pennsylvania Transportation Authority
Courtesy • Cleanliness • Communication • Convenience

October 31, 2008

The Honorable Alan Butkovitz
City Controller
1230 Municipal Services Building
1401 John F. Kennedy Boulevard
Philadelphia, PA 19102-1679

Re.: SEPTA response to City Controller's Report on Subway Safety

Dear Mr. Butkovitz:

SEPTA appreciates the review of security of its below-ground facilities in Center City by the Philadelphia Office of the Controller. The report identifies many key security issues SEPTA is presently addressing, some of which have been ongoing challenges for many years.

In the aggregate, the report correctly identifies youth crime and homelessness as the challenges which occupy the majority of the attention of the SEPTA Transit Police Department.

Youth Crime

Truancy is an ever-present problem in Philadelphia, and SEPTA has devoted considerable police resources, on a daily basis, for many years, to work with school security officials and Philadelphia Police to identify truants and return them to school authorities.

In 2007, SEPTA and the Philadelphia schools replaced an antiquated token distribution system with a new student fare instrument, a Weekday Student Pass. SEPTA provides the passes to the schools, which are responsible for distributing them to qualified students.

The report cites anecdotal commentary inferring wide-spread misuse of the Student Pass by truants. SEPTA has seen no evidence of significant mis-use of the passes, or any correlation of pass mis-use with crime on the system. Indeed, a recent dip in truancy may be partially attributable to the effectiveness of the still-new Student Pass system.

Crime statistics showing a spike in crime at about 3 p.m. weekday afternoons (school dismissal times) have not changed since the implementation of the student passes, indeed these statistics have changed very little in recent years.

Homelessness

Homelessness is a vexing problem that impacts myriad aspects of urban life. The scope of the problem in Philadelphia is well recognized, but effective solutions have been few. In many respects, SEPTA, by its very nature, finds itself at "ground zero" in this dilemma. The transit system's numerous Center City stations and concourses were designed to be free access to the public. For the homeless these locations are warm when it's cold, cool when it's hot and dry when it's wet. With no where else to go, the homeless understandably flock to sheltered SEPTA facilities.

The City Controller's report correctly indicates that SEPTA spends a disproportionate amount of police time and funding simply coping with the homelessness - within the tight parameters of the law.

SEPTA is pleased with the Nutter Administration's determination to address the homeless problem in an effective manner, and we are anxious to be a partner with the City in finding an eventual solution.

SEPTA Transit Police are highly trained and experienced in managing the often difficult and sensitive issues of the homeless, and we believe that until a solution is enacted, assigning this task to non-sworn and less experienced personnel raises the possibility of more risk than benefit.

Page 3

Size of the SEPTA Police Force

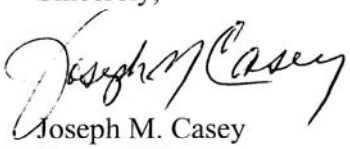
The deployment plans of the SEPTA Transit Police Department are regularly reviewed and adjusted, based upon two primary factors: changes in transit ridership patterns and changes in crime patterns. The on-going installation of state of the art technical systems, such as security cameras on SEPTA vehicles and facilities, are also reflected in assessments of personnel needs.

CAD System

SEPTA is presently testing a new Computer-Assisted Dispatch (CAD) system with the goal of placing the system on-line in January 2009. This state of the art crime reporting database will be interoperable with the Philadelphia Police Department, as well as other local police and security departments, such as Temple University and University of Pennsylvania.

Once again, SEPTA appreciates your review of security in the SEPTA subway system, and we look forward to working with your office to address the challenges of the future.

Sincerely,



Joseph M. Casey
General Manager

CITY OF PHILADELPHIA

Municipal Services Building
1401 John F. Kennedy Blvd., 14th Floor
Philadelphia, PA 19102-1683

EVERETT A. GILLISON, Esq.
DEPUTY MAYOR OF PUBLIC SAFETY

October 27, 2008

Alan Butkovitz
City Controller
Office of the Controller
1230 Municipal Services Building
1401 John F. Kennedy Boulevard
Philadelphia, PA 19102

Dear Mr. Butkovitz:

This is in response to your letter of October 21, 2008, requesting comments from the City of Philadelphia on the Controller's Office report: Subway Safety - Protecting Our Citizens – October 2008

We reviewed the report carefully, and I have prepared the following responses to the report's recommendations.

City Problem of Homelessness is Now a SEPTA Problem

Recommendation
City government, along with assistance from social service agencies, should develop an effective and comprehensive plan to deal with homelessness on the transit system.

Response
The City acknowledges that the presence of homeless individuals on our streets is a problem for Philadelphia, as it is for other major American cities, and that there are a number of homeless people who spend time it the transit system, particularly in the winter months. While there has been a reduction in the number of homeless individuals congregating in the transit system, particularly in underground concourses, the City's goal is to reduce the need for any citizen to live on the streets of Philadelphia.

The Office of Supportive Housing will collaborate with social service agencies to develop a comprehensive plan to deal with homelessness on the transit system. Included in the planning effort will be the continued use of proven strategies such as street outreach teams;

immediate access to low-demand entry points into the system such as overnight café or a Safe Haven bed and long term residential treatment programs that help individuals stabilize. Planning efforts will also include an outreach to SEPTA and the Center City District to join in the planning effort.

Recently, the Mayor announced revival of the "Real Change" program that is a public information campaign to encourage citizens to a give to eight area organizations that provide real help to those in need. This campaign is part of a larger comprehensive effort supported by the Mayor to address homelessness in Center City. This effort involves deployment of specially-trained personnel who provide direct outreach and assistance to help get the homeless off the street and out of the subway concourses and connected with appropriate services.

Police Agency Memorandum of Understanding

Recommendation
To avoid duplication of effort and gaps in coverage, SEPTA management should solicit, negotiate, and execute MOUs governing operational and command issues with the Philadelphia Police Department and the School District of Philadelphia Police, as well as with the various university police departments, Amtrak Police, and the police departments of the communities where SEPTA provides public transportation.

Response
A reasonable degree of cooperation already exists between SEPTA and the various police districts throughout the City. This is based on the relationship of the individual district commanders and the transit assets that exist within the respective district. However, formalizing this relationship city-wide through a MOU is a good idea since it will create a consistent level of understanding and cooperation between SEPTA and the Police Department. As expressed in the recommendation, the goal here would be to avoid duplication of effort and gaps in coverage between SEPTA and the Police Department. Accordingly, we will approach SEPTA for the purpose of establishing a MOU that governs operational and command issues.

City's Emergency Phone System

Recommendations
The City administration should take action regarding the emergency phones in the subway concourses and adjacent tunnels to provide the intended level of security and safety.

- **Enclose all phone wires in metal conduit. No portion of the wire should be left exposed.**
- **Move to self-reporting phones.**
- **Consider outsourcing phone maintenance to ensure that emergency phones are kept in working order.**

- **Conspicuously mark *all* emergency phones with a fluorescent red-and-yellow background. If the background is faded, repaint it. If the phone is mounted on a pole, extend the background around the pole.**
- **Label the phones "EMERGENCY" in letters large enough to be read from a distance.**
- **Add a flashing light to each phone so that the device is less likely to be ignored or forgotten and more likely to be located in an emergency**
- **Make sure the phone inventory is kept accurate, complete, and up-to-date. Make location descriptions specific and easy to follow.**

Response
We concur with the recommendation that the City needs to take action to improve maintenance of the emergency phones in subway concourses and also improve visibility so that these phones will provide the intended level of security and safety. Accordingly, we will inspect all emergency phones and take action to ensure that phone wires are encased in metal conduit. In addition, we will take steps to improve the overall maintenance and administrative programs for the emergency phones. This will include ensuring the phone inventory is complete, has an accurate description of phone location that is easy to follow, and has provisions for updating all aspects of the inventory as changes occur. We have evaluated outsourcing emergency phone maintenance, and have concluded that at this time it is more cost effective if the City retains responsibility for the emergency phone maintenance program.

A consistent scheme for identification of emergency phones is essential if people in need are able to readily identify emergency phone locations. Accordingly, we will take steps to ensure all emergency phones are consistently marked with a fluorescent red-and-yellow or equivalent highly-visible background, and extend the marking around the mounting pole where appropriate. Also, the phones will be marked "EMERGENCY" in letters large enough to be read from a distance. We will evaluate further enhancing the visibility of emergency phones by installing flashing lights; however, due to current fiscal constraints it is unlikely that we would implement this enhancement unless there is a clearly identified need.

We will explore the option of moving to self-reporting phone as an enhancement to the existing emergency phone system in the subways and concourses. However, based on the current climate of fiscal restraint, it is unlikely that this upgrade would be implemented in the near future.

Cameras in the Concourses and Adjacent Tunnels

Recommendation
City administration should take action related to camera surveillance to improve public confidence in the transit system.

- **Develop a plan for the installation of surveillance cameras in the subway concourse and adjacent tunnels. The plan should include input from the**

Philadelphia Police, SEPTA Police, and transit-security experts both here and around the country.

- **Include in the installation plan requirements for strobe lights, effective signage, and an ongoing media campaign to remind the public that the cameras are in place.**
- **Explore the availability of federal funding for a surveillance system, particularly from the Department of Homeland Security.**

Response

The city has recently received its FY 2008 UASI federal grant that includes a provision for video surveillance. The amount of the award that could be dedicated to deploying camera surveillance in subway concourses and adjacent tunnels has not been determined relative to other homeland security video surveillance needs throughout the city. Any action taken by the City related to transit system camera surveillance would be dependent on the availability of funding from the UASI grant for this purpose.

Installing a camera surveillance system in the subway concourses and tunnels is a costly undertaking. Give the current budgetary constraints being experienced by the City, it would not be possible to consider providing such a program solely with City funding. If funds are made available for this purpose based on distribution of the UASI grant, we would then evaluate the feasibility of implementing the camera surveillance program based on the amount of federal funding made available.

Security Kiosks for Market Street and Broad Street Concourses

Recommendation

City administration should consider the following actions to make concourse thoroughfares more inviting to commuters, visitors, and tourists.

- **In consultation with the Center City District, SEPTA Police, and Philadelphia Police identify strategic spots for the deployment of security kiosks in the Market Street and Broad Street concourses.**
- **Discuss with the Center City District the use of CSRs for staffing the kiosks.**

Response

Based on the experience of Kiosk usage in the vicinity of Temple University, we agree that the deployment of Kiosks could make concourse thoroughfares more inviting to the public at large. However, the costs associated with deploying, staffing and maintaining these kiosks can not be justified based on the current fiscal constraints that exist within the City.

The Philadelphia Police Department and Office of Supportive Housing (OSH) will continue to work together with SEPTA, and the School District where appropriate, to help ensure an increased level of public safety in the City Subway System. The issues raised in the report identify the need to continue the already considerable efforts of OSH to address the issue of homelessness, particularly in the transit system.

The Police Department will focus on formalizing its current working relationship with SEPTA to optimize command and operational coordination. In addition, the City will take steps to improve the emergency phone system and maintenance and visibility. This will help to ensure a reliable emergency phone system, easily identifiable by anyone that may have a need to use the system.

Thank you again for the work of the Controller's Office and for the opportunity to review and respond to the report.

Sincerely,

Everett A. Gillison, Esq.