Memorandum

MIAMI-DADE COUNTY

EDHS Workshop
Agenda Item No. 2(C)

Date: October 8, 2008

To: Honorable Mayor Carlos Alvarez
Honorable Chairman Bruno A. Barriero
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Report regarding taxicab safety enhancements

The attached report prepared by the Consumer Services Department (CSD) is provided in response to requests made at the July 18, 2007 Economic Development and Human Services Committee meeting for information relating to the installation of security devices in taxicabs. The Miami-Dade County Code does not require or prohibit the installation of such devices in taxicabs.

The CSD is presently organizing a taxicab technology day to familiarize the industry and the community with technology options that are available to enhance taxicab service delivery. Taxicab security systems will also be included in the exhibition, which is tentatively scheduled to take place in December. Additional information will be provided as plans are finalized. It is recommended that a determination on security devices be made after this exhibition occurs. A Code amendment would be required to make security devices mandatory, and CSD recommends that specific technical criteria be developed to ensure a uniform standard.

Please do not hesitate to contact me or CSD Director Cathy Grimes Peel should you have any questions or need further information regarding taxicab security equipment or the taxicab technology exhibition.

Attachments

Denis Morales, Chief of Staff
Alina Tejeda Hudak, Assistant County Manager
Cathy Grimes Peel, Director, Consumer Services Department

Memorandum

MIAMI-DADE COUNTY

Date: October 24, 2007

To: George M. Burgess
County Manager

From: Cathy Grimes Peek, Director
Consumer Services Department

Subject: Report regarding taxicab safety enhancements

This is provided in response to requests made at the July 18, 2007 Economic Development and Human Services Committee meeting for a report regarding the installation of security devices in taxicabs, specifically in-vehicle cameras and driver activated emergency panic buttons. The Miami-Dade County Code does not presently require or prohibit any type of security device from being installed in a taxicab. A Code amendment would be necessary to make security devices a required vehicle standard. It is recommended that a determination on security devices be made after a taxicab technology exhibition takes place, which is tentatively scheduled for December, and that mandatory or optional security devices be required to meet specific technical criteria to ensure a uniform minimum standard.

The Consumer Services Department (CSD) reviewed reports from government and non-government sources. CSD also requested the Miami-Dade Police Department to review their crime statistics and to comment on safety enhancements (Attachment 1).

A 1996 report *Violence in the Workplace*, issued by the National Institute of Occupational Safety and Health (NIOSH), indicates that taxicab services had the highest rate of work related homicides in the three-year period 1990-1992 and were nearly 60 times the national average rate of work related homicides. There have been seven (7) taxicab drivers killed in Miami-Dade County since 1999. A 1998 report by the U.S. Department of Justice found that taxi and livery drivers were also among those with the highest rates of non fatal assault, exceeded only by police and private security guards. A May 2000 fact sheet *Risk Factors and Protective Measures for Taxi and Livery Drivers* by the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) (Attachment 2) identified the following risk factors for taxicab drivers: working with the public, working with cash, working alone, working at night, and working in high crime areas. The fact sheet also lists the following potential safety measures, among others:

- In-car surveillance cameras to aid in apprehending perpetrators
- Partitions or shields to protect drivers from would-be perpetrators
- Silent alarms to alert others in the event of danger

CSD surveyed other jurisdictions in the United States and elsewhere regarding security device requirements. A table outlining the results of the survey is attached (Attachment 3). Based on this research, it was determined that security cameras, shields or partitions, and emergency panic buttons are the prevalent types of safety devices currently in use. Security devices are frequently used in combination, and some jurisdictions make the installation of security devices optional in taxicabs that are 100% owner operated.

Security Cameras

Various cities have begun to require security cameras to be installed in taxicabs, including San Francisco, Seattle, Portland, and New York, as well as many Canadian cities. Images from security cameras can assist in the apprehension and prosecution of perpetrators. Security cameras are image

only devices mounted at the rear view mirror with a view of the passengers and the driver. Warning signs, which are also a deterrent, are posted in the taxicab to alert passengers that security cameras are photographing them. The camera is activated when triggered by events, such doors opening or closing, meter engagement, or by the driver. The images are stored on a digital recorder. Image access is usually restricted to law enforcement personnel in the investigation of an incident.

The manufacturers of security cameras currently being utilized within the industry are VerifEye, Honeywell, and Raywood Communications. The systems differ in their image storage capacity, price, and other features. Prices obtained during CSD's research ranged from $500 to $1,100 per installation. There are presently no authorized distributors or installers of this equipment in Florida.

There are some issues to be considered with regard to camera systems. The system must be able to capture usable images in very low light, so the technical specifications used are important and the most economical system may not have the desired results. The specifications from several jurisdictions are attached (Attachment 4). Drivers in some cities have covered up the cameras because they feel they are being watched or to prevent identification of unauthorized drivers, and some passengers may have concerns of privacy. Additionally, drivers can be subjected to crimes occurring from persons standing outside the vehicle without being photographed.

Emergency light system. A second security device is an emergency light system. This is a simple system where a hidden switch, when activated by the driver, causes lights on the exterior of the vehicle to blink or flash indicating that the driver is in trouble. The expectation is that police officers on patrol will observe the light, recognize that a driver is in trouble, and respond. Additionally, people on the street will see the flashing lights, and call 911. These lights can be incorporated into the taxi light system currently in place on the exterior of all taxicabs. The equipment could be easily installed, by the local taxicab meter shops, with a cost of less than $100 per taxi.

Florida Statutes prohibits the use of certain lights on vehicles, with some exceptions. One of these exceptions relates to warning lights on taxicabs:

> **316.2399 Special warning lights for buses or taxicabs.**--The provisions of s. 316.2397(7) to the contrary notwithstanding, a bus or taxicab may be equipped with two flashing devices for the purpose of warning the operators of other vehicles and law enforcement agents that an emergency situation exists within the bus or taxicab. Such devices shall be capable of activation by the operator of the bus or taxicab and shall be of a type approved by the Department of Highway Safety and Motor Vehicles. Such devices shall be mounted one at the front and one at the rear of the bus or taxicab and shall display flashing red lights which shine on the roadway under the vehicle. A violation of this section is a non-criminal traffic infraction, punishable as a nonmoving violation as provided in chapter 318.

While similar systems are currently in place in a number of jurisdictions, they have required an extensive public education and awareness campaign prior to implementation, as well as continuing education after implementation. The education and awareness campaign should also include law enforcement agencies.

One problem with this type of system is that it may have to rely on involvement from more than one member of the public, especially if the vehicle is in transit when the panic light is activated. In that case, a caller to the police would only be able to report the location of the vehicle and its direction of

travel at that instant. Unless additional information is provided by subsequent callers, the driver's location may not be discovered in time for police to apprehend the suspect or prevent criminal activity. This system works best in combination with GPS to identify the location of the driver. Another problem may be caused by drivers inadvertently activating the emergency light, causing unfounded calls to 911.

Partition or shield. This is a device, installed in the vehicle, which isolates the driver from the passenger. The material is usually composed of a thick clear plastic or other bullet proof material. It is secured to the floor and sides of the vehicle. There are variations that include partitions with sliding panels to allow for the transfer of payment, and partial-partitions that provide protection behind the driver and behind the front passenger but have a large opening in the center for the transfer of payment. Partitions cost approximately $200 to $500.

Partitions are considered to be the most effective form of security. Although the use of partitions has been shown to reduce the instances of crimes against drivers, they do not enhance the cosmetic appearance of the taxicab and could be viewed as unfriendly especially in cities where tourism is important. Some jurisdictions have chosen other security measures for this reason. Additionally, the majority of the taxicab vehicles operating in Miami-Dade County are not specially equipped with air-conditioning systems capable of cooling vehicles with full partitions installed, an obvious problem in our hot climate. Finally, they may pose a danger to passengers in case of a crash. Some surveys have found that drivers do not like partitions because they create a barrier between the driver and the passenger that impairs communication and impacts tips. A partition or shield only works if the driver uses it properly by keeping the partition closed.

GPS, Radios, Credit Cards, Other Safety Mechanisms. In addition to the above measures, driver safety is enhanced with technology such as global position system (GPS) capability, radio or electronic dispatch systems, and the use of debit/credit cards. The ability to accept credit/debit cards reduces the need for the driver to carry a lot of cash, which makes them a less attractive target for robbers. Radios or electronic dispatching provide the driver with a direct connection to a dispatcher who can alert law enforcement in the event of an emergency. Advanced dispatching equipment has silent alarm features that can be triggered by a driver in distress. GPS provides a way to precisely identify the location of the driver in distress. In Miami-Dade County, an estimated 40% of taxicabs are not connected to a radio dispatcher. Drivers are required to have at least a cellular telephone that can be used to call 911 after the fact.

These technology features are used in tandem with cameras, shields, and panic buttons in other jurisdictions to improve driver security. They also improve passenger services. The Taxicab Study that was recently completed concluded that the introduction of technology is necessary to address taxicab service issues in Miami-Dade County. The CSD is currently in the process of organizing a technology exposition to showcase technology currently available in the taxi industry and to provide all stakeholders an opportunity to see the latest equipment and interact with company representatives. Security system manufacturers will be invited to participate. The event is tentatively scheduled for December and further information will be provided.

Finally, an important factor to consider in deciding to require safety enhancements is the cost and how to pay for the equipment. There are presently 2,080 taxicabs in Miami-Dade County; of these, approximately 550 (28%) are owner operated, although some of those taxicabs may have additional drivers. One model, as used in San Francisco, is to require the medallion holder to pay for the security

measure. Historically, any additional fee charged to the medallion owner or passenger service company has ultimately been passed on to the driver through higher daily or weekly lease rates. The challenge would be to develop a method to pay for the enhancements that would have minimal impact on drivers. The panic light system is the most economical approach and could be an acceptable starting point, but a combination of approaches including GPS would be most effective from a driver security perspective.

Another possible funding model could involve the issuance of a series of new medallions that would be sold at auction to the highest bidders with the proceeds utilized for the one-time purchase of the required safety equipment for each taxicab vehicle, and for the purchase of equipment associated with other technological advances in an effort to improve upon the quality of taxicab service provided in Miami-Dade County. Another possible method would be to add a technology surcharge to the taximeter for a defined period of time with the monies collected by the driver utilized to offset the cost of the required equipment; however, Miami-Dade's taximeter rates are already quite high, and a concern is that a surcharge will lose its identification with the intended purpose once it is in place. Other approaches would include accessing another source such as the bed tax, implementing a fee for advertising on the interior or exterior of taxicabs with the proceeds being deposited in a technology or security fund, or borrowing funds to be paid back with industry fees. Grants are another option, although none have been identified.

The technology exhibition that will take place in December will provide industry and staff an opportunity to become more familiar with the security devices that are available in the market.

Attachments

c: Alina Tejeda Hudak, Assistant County Manager

Memorandum

MIAMI-DADE COUNTY

Date: September 10, 2007

To: Cathy Grimes Peel, Director
Consumer Services Department

From: Robert Parker, Director
Miami-Dade Police Department

Subject: Security Cameras and Panic Buttons in Taxicabs

As part of your report to the Economic Development and Human Services Committee you are requesting available statistics concerning crimes against taxicab drivers in Miami-Dade County. You are also requesting our input regarding the installation of security cameras and emergency panic buttons in taxicabs.

The following statistical analysis reflects taxicab crimes that occurred only in the areas served by the Miami-Dade Police Department, and is not representative of taxicab crimes throughout all of Miami-Dade County.

YEAR	ROBBERIES	HOMICIDES
2005	13	0
2006	21	0
2007 (to date)	5	1

During this period 39 taxicab robberies were reported, 32 (91%) occurred between 6:00 p.m. and 6:00 a.m.; 5 (13%) occurred while the driver was outside of the taxicab (at home, pumping gas, etc.); 7 (18%) occurred while the cab was stopped (in traffic, waiting, etc.); 7 (18%) occurred upon arriving at a location to pick up a fare; 19 (49%) occurred at the end of a trip; and, 1 (2%) occurred while en route with a fare.

Based upon a review of the types of taxicab robberies we experience in our jurisdiction, 49% occurred at the end of the trip. It is our opinion that security cameras could serve to be useful through prominent signage, as deterrence to crime and as an investigative tool to identify offenders. The quality of the photographic images would impact greatly on their usefulness as evidence.

You also requested input concerning the use of panic buttons or a 911 panic light system, and a reconsideration of the use of these systems. You specifically mentioned Florida Statutes Section 316.2399, *Special warning lights for buses or taxicabs,* which allows taxicabs to be equipped with driver activated flashing red lights which shine on the roadway under the vehicle, alerting others that an emergency exists. Since the majority of our robberies occur when it is dusk or dark, this system may be useful if the community is educated concerning the significance of this alert system.

The case studies you provided for our review were interesting. Several of the recommendations, such as safety partitions, GPS receivers, and training were considered, again factoring in the types of robberies that typically occur in our jurisdiction. Since a full 36% of our taxicab robberies occur when the driver is picking up a fare or stopped for some reason, we would recommend that driver personal safety training be enhanced, so that taxicab drivers are able to identify risk factors.

We appreciate your efforts to identify workable solutions to reduce crimes against taxicab drivers.

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CONSUMER SERVICES DEPARTMENT
DIRECTOR'S OFFICE

Please keep us abreast of any security measures that may be implemented, so that we capture statistical information for analysis.

Should you have any questions regarding this opinion, please contact Police Legal Advisor Robert L. Diers, at (305) 471-2550.

RP/

Risk Factors and Protective Measures for Taxi and Livery Drivers

U. S. Department of Labor
May 2000

Occupational Safety and Health Adminstration

The Problem

Taxi and livery drivers are 60 times more likely than other workers to be murdered while on the job, according to the National Institute for Occupational Safety and Health (NIOSH).[1] In 1998, 48 taxi and livery drivers were murdered while attempting to earn a living.[2] Although this number has decreased from previous years, these drivers are still at high risk for becoming victims of homicide.

Drivers Murdered: 1992-98[2]						
'92	'93	'94	'95	'96	'97	'98
86	97	87	68	50	74	48

Taxi and livery drivers are also among those with the highest rates of nonfatal assault—183.8 per 1,000—exceeded only by police (306.0 per 1,000) and private security guards (217.8 per 1,000).[3]

The Occupational Safety and Health Administration (OSHA) is concerned about violence against taxi and livery drivers and is issuing this fact sheet to give drivers and their employers information that may help make their jobs safer. This fact sheet identifies risk factors that taxi and livery drivers face along with a list of potential safety measures that might help protect them. It also describes employer responsibilities and employee rights under the *Occupational Safety and Health Act (OSH Act)*.[4]

Risk Factors

A number of factors put drivers at risk, as identified by NIOSH:

- working with the public
- working with cash
- working alone
- working at night
- working in high-crime areas.

There is no "one-size-fits-all" solution. A number of measures may help reduce the risks encountered by taxi and livery drivers. Improving safety for drivers will require the efforts and commitments of vehicle owners, drivers, service providers, law enforcement agencies, regulatory officials, and local government regulators. A number of strategies are being tried, but the deterrent effect of many of these is unknown. Some may not prevent injury but may speed response time when an incident occurs.

Safety Measures

Potential safety measures include, but are not limited to, the following items:

- automatic vehicle location or global positioning systems (GPS) to locate drivers in distress;
- caller ID to help trace location of fares;
- first-aid kits for use in emergencies;
- in-car surveillance cameras to aid in apprehending perpetrators;

[1] U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health, *Current Intelligence Bulletin 57: Violence in the Workplace-Risk Factors and Prevention Strategies*, Publication No. 96-100, Cincinnati, OH, 1996.
[2] U.S. Department of Labor, Bureau of Labor Statistics, *National Census of Fatal Occupational Injuries, 1998*, News Bulletin USDL-99-208, Washington, DC, 1999.
[3] Greg Warchol, Ph.D., "Workplace Violence, 1992-96," in *Bureau of Justice Statistics Special Report*, U.S. Department of Justice, Office of Justice Programs, Washington, DC, July 1998, p. 3.
[4] P.L. 91-596, December 29, 1970; as amended by P.L. 101-552, 3101, November 5, 1990.

- partitions or shields[5] to protect drivers from would-be perpetrators must be used properly to work effectively;
- protocol with police—owners and police need to track high-crime locations and perpetrator profiles;
- radios to communicate in case of emergency—e.g., "open mike switch";
- safety training to teach drivers, dispatchers, and company owners protective measures;
- silent alarms to alert others in the event of danger—e.g., "bandit lights"; and
- use of debit/credit cards—i.e., cashless fare systems—to discourage robbers.

Employer Responsibilities

OSHA citations can only be issued for violations of standards, regulations, and the General Duty Clause. Section 5(a)(1) of the *OSH Act*, or the "General Duty Clause," provides that "Each employer shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees" [29 U.S.C. 654(a)(1)].

This fact sheet is not intended to create legal obligations and will not be used as the basis for an enforcement action brought under Section 5(a)(1) of the *OSH Act*. The failure to implement any potential measure listed in this fact sheet is not in itself a violation of the General Duty Clause of the *OSH Act*.

Taxi and livery companies that only use the services of drivers who are independent contractors are not subject to *OSH Act* coverage. It should be noted, however, that the potential safety measures listed here are likely to help reduce the risk for independent contractors to the same extent as employees.

Employee Rights

Section 11(c)(1) of the *OSH Act* provides: "No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in any such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act" [29 U.S.C. 660 (c)].

Employers are required by law to communicate to employees these rights under the *OSH Act*. Posters containing these and other rights are available free of charge from OSHA's area offices or can be downloaded from OSHA's website—www.osha.gov.

Conclusion

It is the responsibility of employers to take measures to protect the health and safety of their employees; it is also incumbent upon each driver to practice safety. OSHA has provided this list of potential safety measures to help reduce work-related risks. This is not a new standard or regulation. This fact sheet is advisory in nature and informational in content.

Employers and employees alike may find this information useful in making the kinds of changes that may help prevent assaults upon taxi and livery drivers.

For more information, please contact OSHA Office of General Industry Compliance Assistance at (202) 693-1850 or write OSHA at Directorate of Compliance Programs, 200 Constitution Avenue, N.W., Room N-3107, Washington, DC 20210.

See also the following websites for related information: www.osha.gov; www.cdc.gov/niosh; www.taxi-l.org.

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[5] John R. Stone and Daniel C. Stevens, "The Effectiveness of Taxi Partitions: The Baltimore Case," the University of Tennessee Transportation Center, Knoxville, TN, June 1999. The study demonstrated that shields reduce assaults. Drivers of unshielded taxis are more likely to be assaulted than drivers of shielded taxis. The study also showed that shields are cost-effective—i.e., the benefits of reduction in injury and robbery losses substantially exceed the costs of shield installation.

TAXICAB VEHICLE SECURITY SURVEY MATRIX

CITY	CAMERA	PANIC	SHIELD	NOTES
Atlanta, GA.	Not required.	Not required	Not required	Developing legislation to require a panic light system and either security camera or shield.
Austin, TX	Not required	Not required	Not required	
Baltimore, MD.	Not required	Not required	**Required**	Panic lights not required but equipped by taxi companies
Boston, MA	Not required	**Required**	**Required**	
Broward Co., FL	Not required	Not required	Not required	
Chicago, IL	Not required	**Required**	**Required**	Cameras will be required as of Jan. 08. Shields are required in all taxicabs. Exemption for LH w/only one license and operated solely by LH or family member.
Fairfax Co., VA	Not required	Not required	Not required	Cameras voluntarily used by one taxi company
London, UK	Not required	Not required	**Required**	Cameras and panic lights are permitted.
Los Angeles, CA.	**Required**	**Required**	**Required**	Currently in the procurement and installation stage of a 12 month pilot program for cameras to be required in the 200 taxicabs currently exempted by the shield requirement.
Mississauga, CA	**Required**	Not required	Not required	If vehicle equipped w/shield, dual camera system is required
Netherlands	Not Required	Not Required	Not required	Cameras and panic buttons voluntarily by some taxi companies
New York, NY	**Required**	**Required**	**Required**	
Orlando, FL.	Not required	Not required	Not required	
Ottawa, CA	Not required	Not required	Not required	Cameras will be required by March 2008; By December 2008 all taxis will have GPS w/panic system and shields are permitted.
Palm Beach Co., FL	Not required	Not required	Not required	
Pennsylvania	Not required	Not required	Not required	
San Diego, CA	Not required	Not required	Not required	Devices are permitted but not required
San Francisco, CA	**Required**	**Required**	Not required	
Seattle, WA	**Required**	**Required**	Not required	
Tampa-Hillsborough	Not required	Not required	Not required	
Toronto, CA	**Required**	**Required**	Not required	Shields are permitted
Vancouver, CA	**Required**	**Required**	Not required	
Windsor, Ontario	Not required	Not required	Not required	Security cameras will be required in all taxis by August 08
Winnipeg, CA	**Required**	**Required**	**Required**	

ATTACHMENT 3

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(i) Provision shall be made for installing and adequately wiring a roof light of approved design on top of the roof.

(ii) Suitable wiring shall be provided for a pair of auxiliary turn signal lamps to be located adjacent to the roof light. These lamps shall not be activated with the brake lights.

(iii) A taximeter approved pursuant to Rule 3-04 shall be installed in a location which facilitates the driver's operation of it and any passenger's reading of the fare without interfering with the driver's safe operation of the taxi or the passenger's safety and comfort.

(iv) The taximeter shall be sealed with tamper resistant seals. The Commission will designate the type of seal, and will apprise the industry of the required locations for each taximeter approved pursuant to §3-04 of these rules.

(v) If the vehicle is equipped with a pinion gear, such pinion gear shall be sealed. The Commission will designate the type of tamper resistant seal to prevent removal or change of the pinion gear.

(3) *Security.*

(i) An owner shall install a partition that isolates the driver from the rear seat passengers or all passengers of the vehicle, in accordance with section 1-17 of this title. The purpose of the partition shall be to provide protection to the driver while ensuring passenger safety and enabling rear seat passengers to enjoy a clear and unobstructed view of the taxicab driver's license, rate card and front windshield.

(A) The partition shall consist of a transparent portion that shall extend from the ceiling to a point, as recommended by the Chairperson and approved by the Commission, based upon the make and model of vehicle in service, that will provide passengers and drivers with maximum visibility. The transparent portion of the partition shall be constructed of a bullet-resistant material, recommended by the Chairperson

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and approved by the Commission, which is also clear and scratch-resistant.

(B) A protective plate shall join the transparent portion of the partition and extend from the lowest point of the transparent portion of the partition downward to the floor of the vehicle. The plate shall be constructed of a bullet-resistant material recommended by the Chairperson and approved by the Commission.

(C) Notwithstanding the provisions of clause (A) of this subparagraph, all taxicabs, except those that are exempt pursuant to sections 1-17 of this title and 3-03.1(c)(10) of this chapter, when an existing partition is required to be replaced or when a partition is installed (including, but not limited to, at hack-up), shall be equipped with a partition, the transparent portion of which shall be constructed, at a minimum, of a mar-resistant polycarbonate and shall be not less than 0.375 inches thick, that will provide passengers and drivers with maximum visibility.

(1) For a flat partition and a partition for a taxicab with factory installed curtain airbags, the transparent portion shall extend from the ceiling to join or overlap with the protective plate of the partition.

(2) For an L shaped partition, on the side that is behind the driver, the transparent portion of the partition shall extend from the ceiling to join or overlap with the protective plate of the partition, and on the side that extends forward to back between the two front seats, the transparent portion of the partition shall extend from the ceiling to join or overlap with the protective plate of the partition on the right side of the center console located between the two front seats.

(3) The protective plate shall join or be overlapped by the transparent portion of the partition and shall extend from the point that the protective plate joins, or if overlapped by the transparent portion of the partition, the point that would be the point of joinder with the transparent portion of the partition,

downward to the floor of the taxicab. The protective plate shall be constructed of a 0.085 inch thick plate of ballistic steel or its equivalent installed inside and covering the entire back seat rest of the front seat which is exposed to the passenger compartment and, for an L shaped partition, on the right side of center console between the two front seats.

(4) Each partition shall have sufficient padding for the entire protective plate of the partition to prevent injury to any rear-seat passenger in case of an accident or sudden stopping and all surfaces shall be free of sharp and rough edges.

(5) There shall be no opening or gap between the partition and the body of the vehicle larger than one inch, except as set forth in section 1-17(c) of this title.

(6) No partition shall be installed unless it shall have the following features which do not compromise passenger or driver safety:

(A) A means for passengers and drivers to communicate with each other;

(B) The capacity for the passenger(s) to pay fares, either by cash, or by credit card if the taxicab is capable of accepting credit card payments, and for the passenger(s) to receive receipts for payments and transactions, while the passenger is in the rear passenger compartment.

(ii) No vehicle, other than a vehicle which is exempt from the partition requirements set forth in section 1-17 of these rules, may be hacked-up unless a new partition has been installed which complies with these specifications.

(iii) An owner shall equip all taxicabs with a help or distress signaling light system in accordance with the following specifications:

(A) The help or distress signaling light system shall consist of two turn signal type "lollipop" lights.

(B) One light shall be mounted on the front center of the vehicle, either on top of the bumper or forward or behind the grill. A second light shall be mounted on top of the rear bumper, to the left of the license plate.

(C) Each light shall be three to four inches in diameter, have a total rated output of thirty-two candle power and shall be the color amber or have an amber colored lens so that the light output of the device is the color amber at thirty-two candle power.

(D) The activator shall be installed within easy reach of the driver, shall be silent when operating, and shall be fully solid-state.

(E) The lights shall flash between 60 and 120 times per minute.

(F) The wiring shall not affect or interfere directly or otherwise with any wiring or circuitry used by the meter for measuring time or distance.

(iv) A door ajar notification light shall be provided which is located in front of the driver. This light shall turn on only when any door is not fully latched.

(v) When an existing in-vehicle camera system ("IVCS") is required to be replaced or when such system is installed (including, but not limited to, at hack-up), no such system shall be installed in any taxicab unless it meets the following specifications:

(A) The IVCS shall be connected to the vehicle battery, and the fuse for such connection shall be concealed in tamper-resistant housing.

(B) Wiring between the recording unit and camera head shall use registered jack (RJ) style connectors at either end which shall be tamper-resistant.

(C) All electrical connections and wiring shall be protected from spike and dips in vehicle voltage.

(D) The camera head housing and brackets shall be tamper-proof and securely mounted to the right of the rear view mirror. The installation shall provide unobstructed vision for the driver.

(E) The camera's field of view shall include the full face of all occupants seated in passenger seats and facing forward.

(F) Images shall be recorded and stored in a unit separate from the camera head.

(G) The recording unit shall be concealed from view and fastened securely with tamper-resistant hardware.

(H) The IVCS shall provide a visual indication of system status that is located on the lower left portion of the dashboard, and is visible to the driver and law enforcement personnel inspecting the vehicle from outside of the driver door.

(I) The IVCS and components shall be sufficiently shock-resistant to withstand typical vehicle movement and collisions.

(J) The IVCS shall have a RS-232 connection or other means for secure image retrieval.

(K) Images shall be sharp, undistorted and enable the viewer to identify all passengers under all lighting conditions; for example, but not limited to, dark and bright light, daylight and backlight.

(L) Sensor resolution shall be, at a minimum, 510 by 480 pixels.

(M) Storage capacity shall be, at a minimum, 7000 images in an encrypted format, and all access to the storage unit shall result in the storage of an electronic "tag" including the installer identification number and date of the event.

(N) The IVCS shall have connection ports for a minimum of two (2) cameras.

(O) The IVCS shall have an event flag or panic button accessible to driver and located in an inconspicuous location.

(P) The IVCS shall record images and the following information for each image:

(a) Date and time;
(b) Taxicab medallion number;
(c) IVCS serial number; and
(d) IVCS indicator for event flags.

(Q) Image capture shall be linked to the following events: vehicle door openings and closings, meter engagement, event flag button activation and event flag in the test mode when the image(s) is/are recorded for inspection and test purposes. In the event of a panic button activation, systems shall record to protected memory a total of three (3) events that include, at a minimum, the previous 2.5 and subsequent 2.5 minutes immediately prior and subsequent to the button activation, at one frame per second.

(R) Image access shall be provided only to law-enforcement agencies including but not limited to the New York City Police Department;

(S) If the IVCS has a physical port for secure image retrieval it shall be located on the right side of the dashboard or in the trunk in an inconspicuous manner that is accessible to law enforcement personnel.

(T) When memory storage capacity is reached, the IVCS shall overwrite the oldest images as new images are recorded in sequence.

(U) Installations and repairs of IVCS may be done only by authorized installers approved by the manufacturer that are businesses currently licensed by the Department of Consumer Affairs or are taximeter businesses currently licensed by the Commission pursuant to chapter 15 of this title.

(V) Within fourteen (14) calendar days after installation, repair or

modification, a notarized affidavit signed by a manufacturer's authorized installer attesting to the proper functionality of the IVCS shall be provided to the Commission by the authorized installer.

(W) A similar affidavit shall be provided annually by the authorized installer to the Commission and upon any repair to or change of the IVCS.

(4) *Credential Holders.*

(i) A credential holder shall be mounted on the right side of the dashboard, unless in the judgment of the Chairman, a dashboard mounting would be hazardous in a particular model of automobile. A model equipped with dual air bags is a model in which a dashboard mounting would be hazardous, unless in the judgment of the Chairman there is an alternative solution to the requirements of subdivision (ii).

(ii) A vehicle in which a dashboard mounting would be hazardous shall be equipped with a transparent partition and a protective plate, in accordance with §3-02(e)(3)(i), and shall have a TLC-approved credential holder frame mounted on the driver's side of the clear portion of the partition by either rivet and/or screw at least two inches above the frame supporting the clear portion of the partition and centered on the vehicle's steering column and/or the headrest on the driver's seat facing the rear passenger's compartment. The frame shall have a drop-in or slide-in slot accessible only from the driver's compartment for the rate card and the driver's license. The frame shall have sufficient illumination pursuant to Owners Rule 1-12(a). The frame shall be sufficiently padded so as not to cause injury to the driver.

(5) *Occupant accommodation.*

(i) There shall be a hold-open device on each door.

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ule R-6.310.320.S
gital Security Camera Systems.

IC 6.310.320 S provides that, after September 1, 2005, each taxicab must be equipped with an operable digital security nera system approved by the

ector pursuant to specifications provided by rule and adopted by the Director. The requirement for digital security cameras l expire on September 1, 2008, unless the City of Seattle adopts an ordinance to extend the requirement. Access to a cording made by any digital security camera is restricted to law enforcement personnel solely for the investigation and secution of crimes.

ch digital security camera system installed in a Seattle taxicab must meet or exceed the minimum standards established by s rule.

Images. The camera must record sharp, undistorted original still images that are reliable for identification and prosecution of spects seated in any position inside the taxicab and under all lighting conditions including darkness with a strong rear light urce. Images must not be recorded by video and cannot have sound. Printed information shall be displayed at the top of each age showing the time/date, taxicab name/number, trigger source, and recording unit serial number. This printed information all not obstruct viewing of any persons in the images. Image capacity shall be at least 4,000. Images must be recorded in quence and the oldest images shall be automatically overwritten first. Images must be stored on a removable or non-n le flash memory card. The format for image files must be JPEG or convertible to JPEG. Image recording resolution al 640 X 480 pixels (minimum) with 256 Grey Scale. The maximum compression ratio shall be 8:1. Images must be ained on the memory card without the need for a power source.

Software. * Installer software will demonstrate that the camera system is operational, the triggers operate properly, the test age is of the quality required, information associated with the image is accurate, and that the camera lens is properly aimed. tallers must not be able to view or erase images on flash memory cards.

nspector software shall be provided for use by taxicab inspectors assigned to the Consumer Affairs Unit. Two copies of pector software, with upgrades as they become available, shall be provided at no cost to the City of Seattle. Taxicab pector software, shall not allow adjustments to be made, but shall demonstrate that the camera system is operational, the igers operate properly, the test image is of the quality required, information associated with the image is accurate, and that camera lens is properly aimed. Inspectors must not be able to view or erase images on flash memory cards.

iewing software shall be distributed to the Seattle Police Department only. Two copies of viewing software, with upgrades as y become available, shall be provided at no cost to the Seattle Police Department. Viewing software shall provide sharp, distorted original still images that are reliable for identification and prosecution of suspects seated in any position inside the icab and under all lighting conditions including darkness with a strong rear light source. Software tools shall also be provided the Seattle Police Department for enhancing image quality. Software used for viewing images shall be proprietary software d must be password protected or require a hardware key. Images must not be accessible using wireless technology.

Recording (Control) Unit. The recording unit housing and installation brackets must use tamperproof fasteners. The recording it, and all cables, must be installed under the dash board and concealed from view. A download port must be installed inside glove box both for plug-in access to images by the police using viewing software and for system test by the installer or icab inspector using installer or inspector software, respectively. Alternatively, the download cable with USB connection may run to the interior of the trunk, protected from damage, and clearly identified. Camera system status indicator light(s) shall be d so the driver knows whether the camera is functioning properly and when images are being taken.

Camera Head. The camera head must be installed adjacent to the rear view mirror, near the head liner, without obstructing

ver visibility through the front windshield. The camera housing shall have no sharp edges or corners. The camera lens must ovide a wide- angle view so that the full faces of all seated occupants are in view and in focus. Infrared LED lighting shall be ovided for conditions of darkness and/or back lighting. The camera housing mounting brackets must be designed to prevent y stment of camera aim except by certified installers using special tools.

Triggers. There shall be three triggers for camera image sequences: (1) opening or closing of any door, (2) activation of the imeter, and (3) the driver emergency switch. The driver emergency switch shall override all other image sequences. The ver emergency switch and camera system status indicator light(s) shall be installed visible to the driver only. The camera age timing sequences for each trigger must conform to the following:

IGGER	TIMING SEQUENCE
ors	1 image every 5 seconds for 60 seconds then 1 image every 60 seconds for the next 5 minutes.
ximeter	1 image every 5 seconds for 60 seconds then 1 image every 60 seconds for the next 5 minutes then 1 image every 5 minutes while the vehicle ignition is on.
ergency Switch	1 image every second for 60 seconds each time switch is activated.

Installation. The installer of the taxicab digital security camera system shall be trained by the anufacturer on proper installation procedures. The installer shall completely follow all manufacturer structions for installing the security camera system. The installer shall produce a test image with the lowing information: (1) date/time, (2) taxicab name/number, (3) trigger source; and (4) recording unit rial number. In addition, the installer must complete a camera installation report, in the form specified by e Director, that describes the details of the installation and any maintenance or repair work performed.

Testing. Installer. A test image and a camera installation report are required every time an installer performs installation, aintenance or repairs on a camera system or when a taxicab changes association. The test image and camera installation port must be submitted to the Consumer Affairs Unit by the installer immediately following the installation, maintenance or pair work and kept on file with the Consumer Affairs Unit for as long as the digital security camera system is installed in the icab. Consumer Affairs Unit. The Consumer Affairs Unit shall test the digital security camera systems at least annually, using pector software.

ivers. Taxicab for-hire drivers must verify that the security camera system is operating properly by checking the status licator light and recording this on the safety checklist before the start of each shift. A taxicab for-hire driver is prohibited from erating a taxicab unless the security camera system is determined to be operating properly. In the event that the security mera system is determined not to be functioning properly, the taxicab will be removed from service until the digital security mera system is repaired

Signage. A sign must be affixed to the outside of both rear doors, plainly visible to passengers upon entering the taxicab, ating that images of passengers will be made by the taxicab security camera system. These signs shall contain the following rding:

HICLE EQUIPPED WITH SECURITY CAMERA. ALL OCCUPANTS WILL BE PHOTOGRAPHED.

ttering shall not be less than three quarters (3/4) inch in height and the width shall be proportional to the height. The lettering all be in a color which contrasts to the portion of the vehicle exterior where it is placed. No other wording shall be displayed hout approval of the Director.

addition, a privacy notice must be displayed in the rear seating area of the taxicab that contains the following wording:
GITAL CAMERA IMAGES OF ALL PASSENGERS ARE BEING RECORDED IN ORDER TO IMPROVE DRIVER SAFETY.
S TO THESE IMAGES WILL BE LIMITED TO LAW ENFORCEMENT PERSONNEL FOR THE INVESTIGATION OF RIMES. IMAGES ARE PERIODICALLY RECORDED OVER AND ARE NOT RETAINED EXCEPT WHEN USED FOR THE VESTIGATION OF CRIMES.

ttering shall not be less than three quarters (3/4) inch in height and the width shall be proportional to the height. The lettering all be in a color which contrasts to the portion of the vehicle interior where it is placed. No other wording shall be displayed hout approval of the Director.

Protection of Evidence. When a crime is committed, the Seattle Police Department or such other authorized law enforcement ency (law enforcement authorities), will download the images from the recording unit either by: (1) removing the memory card d replacing a new memory card in the recording unit; (2) removing the recording unit; or (3) downloading the image using the wing software. Law enforcement authorities must obtain permission from the driver or owner of the taxicab involved to wnload the images or must obtain legal authority to access the data. Law enforcement authorities will expedite the evidence thering process as much as reasonably possible to ensure that the driver and taxicab may continue to engage in business as on as practicable; provided, however, that the amount of time involved in gathering evidence will be decided on a case-by-se basis by law enforcement authorities, depending on the nature of the crime.

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lent Alarm.

attle Municipal Code Section 6.310.320 T reads as follows: No taxicab or for-hire vehicle licensed by the City may lawfully erate within The City of Seattle unless the following minimum vehicle requirements are met:

The taxicab must be equipped with a monitored silent alarm system approved by the Director pursuant to specifications ovided by rule and adopted by the Director. All taxicabs with computer dispatch systems shall comply with this requirement by later than December 31, 2005. All taxicabs with radio dispatch systems shall comply with this requirement by no later than nuary 1, 2008 (summary suspension and Class B);

e following rule provides guidance for implementing this provision as authorized by the Seattle Municipal Code.

A hidden switch, that can be activated by the driver without the knowledge of passengers, and that sends a silent alarm to the dicab association dispatch office whenever there is an emergency such as a crime in progress against the driver, shall be stalled in each taxicab.

The switch shall be installed so that it is not visible to passengers and so that it minimizes false alarms from accidental tivation by the driver.

The dispatch office for each taxicab association shall continuously monitor the equipment that receives silent alarms. The ulpment must be operational whenever an affiliated taxicab is operating. The taxicab association shall immediately attempt to rify with a taxicab driver that an actual emergency exists and, unless a false alarm is confirmed by the driver, the association all immediately notify the local police. The dispatch office shall assist the Seattle Police Department, and other authorized law forcement agencies, in responding to and resolving silent alarm activations, including but not limited to, utilization of its GPS icking system. Resolution of silent alarms shall have priority over all other work of the taxicab association dispatch office. fective: October 24, 2005

ctober 24, 2005