

Traffic Engineering and Highway Safety Division

Policy for the Design and Operation of Closed-Circuit Television (CCTV) in Advanced Traffic Management Systems

September 4, 2001

I. Introduction.

The New York State Department of Transportation ("Department") has and is installing closed-circuit television systems ("CCTV systems") along certain state roadways as part of its Intelligent Transportation Systems ("ITS") program. The ITS program includes the use of technology to address transportation needs. The CCTV system is an element of Advanced Traffic Management Systems ("ATM Systems") that allow the Department to manage its roadway system in a manner that maximizes the efficiency of the existing facilities. This is critically important in congested urban areas where it may not be possible or desirable to add roadway capacity.

ATM Systems use technologies such as CCTV systems, traffic detectors and electronic message signs to monitor and collect information on traffic conditions, manage traffic, quickly detect incidents, dispatch the proper response and provide motorists advance notice of congestion, reducing the possibility of secondary accidents and allowing motorists to consider alternate routes, modes or travel times. These systems are run from Transportation Management Centers ("TMC") where managers and operators analyze the input from the field devices, manage traffic via the ATM system elements and coordinate the fastest and best response to the incident.

The use of CCTV cameras are an integral part of these systems in New York State as well as throughout the country. The CCTV systems are a valuable source of data, specifically, traffic conditions, and/or traveler information to be provided to the public. Traffic or traveler information is provided to the traveling public to alert them to roadway conditions, incidents ahead or on adjacent roadways, anticipated travel times, congestion, detour recommendations, and advance notice of future roadway condition changes anticipated as a result of special events or roadway construction activities. Accordingly, the Department shares the data with media and traveler information service providers for the purpose of distributing information to the widest audience possible. In this context, CCTV systems are data/information-collecting tools. They must be utilized in a consistent manner that strives to uphold the public's expectation of privacy, while serving their function as a traffic management and traveler information tool.

II. Applicability.

This policy establishes the manner in which the public's reasonable expectation of privacy is

protected where the Department deploys Closed-Circuit Television Systems as elements of Advanced Traffic Management Systems. This Policy provides principles which will be followed by the Department in the management of Traffic Management Systems.

III. Definitions.

A. "Closed-Circuit Television System ("CCTV system")" shall mean a video camera system and/or network used to collect, transmit and monitor data electronically via a data stream and project such data onto a video monitor, television screen or other monitoring equipment. The CCTV system is a closed circuit in that it has limited access and all elements are directly connected and controlled by authorized operators of the system. Directly connected in this context includes systems linked by microwave, infrared beams, electric wiring, etc.

B. "Advanced Traffic Management Systems ("ATM Systems")" shall mean technologies such as CCTV, traffic detectors and electronic message signs to collect information, manage traffic, quickly detect incidents, dispatch the proper response and provide motorists advanced notice of congestion, reducing the possibility of secondary accidents and allowing motorists to consider alternate routes, modes, or travel times.

C. "Transportation Management Center ("TMC")" shall mean the central station site for monitoring, analyzing and using the data collected by the Advanced Traffic Management System.

D. "Data" shall mean information collected by a CCTV system, including a live feed or any recording from such, from the Advanced Traffic Management System closed-circuit television system.

E. "Entity" shall mean a private corporation or other private organization, including media or other information service provider, which is duly authorized under an agreement with the Department consistent with this policy to receive Advanced Traffic Management System data.

F. "Incident" shall mean an activity that occurs on the road, roadway, right-of-way or in proximity to it, such as a vehicular accident, flat tire, fire, or similar situation that has or could have a roadway safety or congestion impact on travel conditions on such roadway.

G. "Personal Identifier Information" shall mean any data that

- i. identifies an individual, drivers or passengers
- ii. identifies license plate of vehicles
- iii. identifies contents of the enclosed interior of passenger vehicles
- iv. tracks the individual travel pattern of a specific vehicle

H. "Public Partner" shall mean any public agency, government, municipality, authority, accredited academic institution or coalition of such bodies that enters into an agreement with the Department for

the use of CCTV data consistent with the provisions set forth in this policy.

I. "Mine/Mining" shall mean any process wherein data containing personal identifier information is collected, manipulated, enlarged, enhanced, analyzed, and/or otherwise used.

IV. Principles.

The planning, design, deployment, operation and maintenance of all CCTV systems deployed by the Department, as elements of ATM System shall conform to the following principles:

A. Privacy.

The individual's right of personal privacy shall be respected and protected. The Department shall consider the protection of personal privacy in all aspects of system planning, design, deployment, operation, and maintenance and shall not collect or disseminate any personal identifier information, except as set forth herein. CCTV systems shall be used only as needed to perform necessary transportation planning, traffic management and traveler information functions as defined in this policy and shall not be used to monitor persons or private property, except as provided for in VI. A. 1 of this policy. In addition, CCTV systems shall not be used to monitor individuals or groups in a discriminatory manner contrary to applicable state law. The Department shall provide for a level of privacy consistent with reasonable expectations and the requirements of using CCTV systems for traffic management and traveler information purposes.

For purposes of this policy, the Department defines providing for a "reasonable expectation of privacy" as implementation of CCTV systems design and management and operational procedures, which do not include the collection of personal identifier information as defined in this policy, except as specifically provided for herein. This means that the Department shall take all reasonable efforts to ensure that CCTV systems shall not be used to collect personal identifier information consistent with this policy.

CCTV systems may collect this personal information, on an exception basis, only when such is needed to provide for the safety of the public and/or to perform necessary traffic planning and management functions such as zooming in on an incident to determine accident severity and appropriate emergency response, or where all personal information is subsequently removed from the data which is then used in an aggregated fashion, such as for the development of origin and destination data for transportation planning purposes.

B. Visibility.

ATM Systems shall be built in a manner visible to pedestrians, individuals and motorists. The public shall be made aware of projects to initially deploy or significantly expand CCTV systems on a facility, in

a corridor or throughout a region either through the requirements of the project design process, i.e. design report, public hearing, SEQRA process or through specific advisement via the local media and/or municipality, except where such advisement is not practical such as in the case of a temporary installation for purposes such as short term traffic management, construction or data collection, or where the installations are an element of routine-type maintenance activities. The Department shall disclose to the public information on these projects including location of cameras, the type of camera views that will be monitored, how information is collected, how the information shall be utilized and how such information shall be distributed. The Department shall provide timely public notice and consider public input in the planning and design of each of the systems in accordance with the State Environmental Quality Review Act (“SEQRA”) process and this policy. If the installation of CCTV systems is such that the installation may result in a significant erosion of the public's reasonable expectation of privacy, as defined in this policy, on or in the vicinity of the highway, roadway and adjoining property, then such action shall be reviewed as an action having an effect on abutting properties or established human activities. Accordingly, the Department shall prepare an environmental assessment of such an action in accordance with 17 NYCRR section 15.6. Furthermore, the public shall be invited to observe the functioning of the CCTV systems from within the TMC, or other central gathering site for traffic information.

C. Security/Integrity.

Data security shall be designed into each CCTV system at the system architecture level. For the purpose of protecting personal identifier information, CCTV systems shall make use of hardware and software security technology, and audit procedures. ATM Systems shall use operational, technological and administrative safeguards to assure that access to personal identifier information is restricted to duly authorized individuals. Cameras shall be operated in a wide angle view that does not collect personal identifier information. When it is necessary to zoom a camera in a way that personal identifier information may be collected, dissemination of such data shall be discontinued until such time as the camera is returned to a view where personal identifier information is not being collected except as provided in VI. A. 2 and VI. A. 6 of this policy. Data shall be protected from improper alteration, manipulation or improper destruction. Security software and hardware will be consistent with the state of the art within the industry, as feasible for upholding the principles set forth in this policy.

The use of technology based privacy solutions is preferred, except where impracticable. The Department shall conduct a pilot project in Region 8 as set forth in the attached Addendum, in a timely manner, to examine and assess such technology-based solutions in an operating ATM system. The Department shall produce a pilot project evaluation report assessing the privacy solutions based on a number of factors including technological and operation considerations and cost. The Department shall conduct a study or studies assessing the feasibility of implementing the privacy solutions used in Region 8 in each of the other Department Regions. The study or studies shall include an analysis and recommendation for implementing such solutions in each of the Department Regions. Nothing shall restrict the Department from implementing such technology based solutions at an earlier date.

D. Extent/Use

CCTV systems shall be aimed and focused to collect only the minimum amount of information as necessary for transportation planning, traffic management and traveler information purposes. CCTV data shall only be used for the specific purposes set forth in this policy and with prior disclosure to the public. The Department may share CCTV views with other public partners to achieve common transportation objectives in improving transportation planning, traffic management and traveler information.

Data sharing in accordance with statewide regulations and this policy will be done to promote the performance of those functions, and only pursuant to written agreements that provide for the protection of personal privacy consistent with this policy. The agreements shall limit use of CCTV data to prescribed purposes, shall restrict the ability to record, retransmit, enhance or mine data from the CCTV systems and further preclude knowingly distributing any data that may contain personal identifier information. The Department shall discontinue the dissemination of data to any entity if the privacy protections set forth herein are not followed.

The Department may also distribute CCTV data directly to the public via the internet or other means for the purpose of providing traveler information. The Department shall take all reasonable efforts to ensure that any CCTV data disseminated in this manner shall not provide personal identifier information as previously defined in this policy. The sole purpose of providing such data shall be for the dissemination of traveler information to facilitate traffic management and the efficient balancing of transportation infrastructure demand and supply and all such uses and dissemination shall be consistent with statewide regulations, and this policy.

E. Access/Accountability/Retention.

Internal access to data shall be available only to authorized personnel. Authorization of access will be based on a work-related need and will include Department traffic operations personnel, agents of the Department involved in ATM system management, operations and maintenance, and duly authorized public partners. This will not preclude internal distribution to the general employee population within the Department of the same data as is available to the public for traveler information purposes via the internet, media or traveler information service providers. Visits by members of the general public to TMC shall be permitted.

Access to CCTV and ATM systems shall be controlled by pre-determined administrative and supervisory policies based on design and operational considerations and shall be tracked for adherence to procedures. Disciplinary procedures shall be established to address improper access, data manipulation, mining or data disclosure, as well as for assessment of procedural security. Procedures shall be developed to ensure appropriate training of personnel with access to CCTV systems and other

instrumentation with respect to the requirements of this policy.

Data shall not be recorded except in accordance with this policy.

In all cases, recording shall be done in accordance with this policy and shall be retained only for the minimum possible time frame after use of the archived data for its intended purpose, in accordance with the applicable Record Retention Authorization. Recorded data shall not include personal identifiers unless absolutely necessary to accomplish the intended purpose. Routine archiving of CCTV data shall not be part of the operational procedures and any recorded data shall be addressed in accordance with the Record Retention Authorization. Public access to any temporarily archived CCTV data shall be in accordance with applicable state law.

F. Commercial Use.

CCTV data may be shared with other entities for commercial use in order to provide for the widest distribution of the information to allow travelers to make informed travel decisions. For this purpose, the entity shall be regularly involved in the distribution of traveler information for commercial purposes and provides significant value to the Department in providing for widespread dissemination of traveler information to the public.

The Department shall take all reasonable efforts to ensure that any CCTV data as disseminated to these entities, shall not provide personal identifier information. The sole purpose of providing such data to these entities shall be for the dissemination of transportation information to facilitate traffic management and the efficient use of the transportation infrastructure and all such uses and dissemination shall be consistent with this policy. Dissemination of data shall only be done by written agreement containing privacy protection language consistent with this policy. The agreement shall limit the entities use of the CCTV data to prescribed purposes, shall prohibit their ability to enhance, mine, analyze and utilize personal identifier information from the data, shall restrict their ability to record, resell or retransmit the video and further preclude them from knowingly distributing any data that may contain personal identifier information as defined in this policy. Any agreements entered into by the Department with any other entity shall expressly provide that such agreement will be void if the entity fails to adhere to the privacy protections set forth in this policy. The Department shall discontinue the sharing of data if the privacy protection criteria are not adhered to.

G. Enforcement.

CCTV systems should be designed and used primarily for the traffic management and traveler information purpose for which they were installed and for which the public would reasonably expect. Enforcement agencies play an important public safety role in incident management activities. Accordingly, the Department partners and sometimes co-locates at TMCs with enforcement agencies to provide for the best incident management service to the public. As a result, enforcement agencies

may have access to CCTV data directly or remotely through TMCs for the purpose of coordinating incident management and incident-related public safety activities, and such is not provided for routine or regular monitoring for enforcement purposes. The ongoing sharing of data with enforcement agencies shall be documented by written agreement containing privacy protection language consistent with statewide regulations and this policy. Enforcement agencies shall be responsible for ensuring that any use of the CCTV systems is done in accordance with statutory authority, appropriate legal process, or emergency circumstances as defined by law.

V. Design and Operations Guidelines.

The following principles and guidelines shall apply to the Department's use of CCTV systems on its roadways:

A. TMC Policy Implementation.

1. Each region with an ATM system which includes CCTV systems shall designate a person responsible for the implementation and ongoing compliance with this policy including monitoring of local system design and operation to accommodate system and technology changes consistent with this Policy.
2. Such person shall be at least a grade level SG 24 and should be either the Regional Traffic Engineer, the Assistant Regional Traffic Engineer or the TMC manager.
3. Such person shall be responsible for monitoring research of the latest hardware and software technology for CCTV systems which are consistent with the design of the system, the policies set forth in this Policy, and shall implement into the local CCTV systems such feasible technologies necessary for upholding the principles set forth in this Policy.

B. Deployment of CCTV.

1. The public shall be made aware of projects to initially deploy or significantly expand CCTV systems at a facility, in a corridor or throughout a region in accordance with applicable requirements of this Policy.

C. Location of CCTV System Cameras.

1. Cameras shall be placed to provide the best available viewing of the roadway section, taking into account existing physical restrictions and topography.
2. Cameras should generally be installed in areas of traffic safety concerns and/or traffic congestion.

3. CCTV systems should generally be installed in conjunction with other ATM system elements including variable message signs, highway advisory radio, traffic detectors, etc. to provide for transportation planning, traffic management and traveler information needs.
4. CCTV system cameras shall not be concealed and shall be installed at locations which provide an open view of the camera from the roadway, except as necessary and in response to accommodating public concern with roadside aesthetics.

VI. Operation of CCTV Systems.

A. CCTV Operations

1. No CCTV system shall monitor persons or private property, provided however, this provision shall not prohibit such monitoring on or adjacent to the roadway or right-of-way where it is not practical to avoid such monitoring during CCTV operation as provided in this policy, and this provision shall not prohibit such monitoring in the event of a public health danger or safety emergency, and this provision shall not prohibit the viewing of traffic-related conditions in plain view only as necessary for the Department to perform its traffic management activities as provided in this policy.
2. Personal identifier information data shall not be collected by the CCTV system, except that such data may be collected to provide for the safety of the public, respond to incidents, and the performance of necessary traffic and planning management functions.
3. CCTV systems shall operate in a wide-angle view mode which shall enable operators to view a large segment of the roadway without providing the ability to view any personal identifier information except as provided in Section IV. A. 2 or otherwise provided herein.
4. CCTV systems shall have physical and/or software controls which shall restrict the viewing area to the extent practical to that required for the intended traffic/incident management function.
5. CCTV systems shall only be used in a zoom mode where personal identifier information may be being collected on an exception basis, as defined in this policy. CCTV systems shall be returned to a view not containing personal identifiers when the need for such zooming has been met.
6. In the event of a public health danger or safety emergency, the Department may provide personal identifier information to such other public partner and/or entities as may be necessary to prevent, limit or mitigate such emergency.

B. Recording of CCTV System Video.

1. Except as provided for in this policy, CCTV data shall not be recorded and all data disseminated from CCTV systems shall be transferred in a real time or limited time delay data feed. In all cases, recording shall only be done in a manner that protects the privacy of the public in accordance with this policy.
2. CCTV data shall only be recorded in response to a specific need where a review of the data would contribute to improving safety and/or future traffic operations procedures or system planning and performance including:
 - i. review of a traffic operations or safety problem;
 - ii. provision of a training review for future operator training;
 - iii. research activities that will improve future technology or operations;
 - iv. post-incident review of a particularly complex incident and emergency response for the purposes of improving operational procedures and response;
 - v. demonstrating or testing equipment or system functions; or
 - vi. collection of data for transportation planning management purposes where personal identifier information is subsequently removed from the data.
3. If a recording is made, it shall be retained in a specifically designated and secure location with access restricted by supervisory level personnel.
4. CCTV system data which have been recorded shall be retained only for the minimum possible time after use of the archived data for its intended purpose in accordance with the applicable Department Records Retention Authorization.

C. Training and Accountability.

1. All operators shall be trained and certified in the proper operation of the CCTV systems according to the policy and principles set forth in this policy. Such certification shall be required before operators are allowed to operate CCTV systems. Operator training shall be maintained as an evolving, continuous process.
2. Each TMC shall have a written procedures manual for operation of CCTV systems. This manual shall include the principles and policy set forth in this policy, and may either be a part of an overall TMC Operations Manual or a specific CCTV system Operations Manual.
3. All TMC personnel authorized to operate the CCTV system shall be provided with a copy of the operations manual, and verify in writing that they have received it, reviewed it and agree to follow the procedures in the manual.

4. Disciplinary criteria shall be established for personnel who knowingly violate the established CCTV system operations procedures and principles or policy set forth in this policy, regardless of the agency or entity by whom they are employed. Department personnel shall be disciplined in accordance with appropriate personnel procedures. Any contracts with firms involving the operation of CCTV for the Department shall include appropriate language requiring conformance with this policy and identifying an acceptable disciplinary procedure. The disciplinary procedures shall be a part of the TMC or CCTV system operations manual.

VII. Agreements

The Department shall not provide CCTV data containing personal identifier information to any public partner except for the purposes set forth in VI. A. 2 and VI. A. 6 of this policy, or to a private entity except for the purposes as set forth in VI. A. 6 of this policy at any time, provided, however that the Department may provide such data, consistent with this policy, to consultants retained by the Department in the performance of Department functions. The sole purpose of providing such data shall be for the dissemination of transportation information to facilitate traffic management and the efficient use of the transportation infrastructure and all such uses and dissemination shall be consistent with this policy.

- A. No data shall be shared or otherwise disseminated except in accordance with this policy.
- B. Any agreement entered into by the Department with any public partner or entity, except as otherwise provided in this policy, shall provide that there shall be no dissemination of data containing personal identifier information to any third party without written agreement containing privacy protection language consistent with this policy. Such agreement shall limit the use of the CCTV data to prescribed purposes consistent with this policy, and shall prohibit the mining of such data.
- C. Any agreements entered into by the Department with any public partner or entity shall expressly provide that the party to such agreement shall no longer receive data if the entity fails to adhere to the privacy protections set forth in this policy.
- D. The Department may terminate any agreement or execution of such agreement that does not conform with the provisions of this regulation.
- E. Agreements entered into under this policy shall provide the Department with complete authority and retain control over the CCTV systems data that is provided to other public partners, entities and the public, including when it shall be made available. Such agreements shall provide that when CCTV systems collect personal identifier information, data feed to any entity shall be discontinued until such time as the CCTV systems is returned to a mode where personal

identifier information is not being collected except as provided in VI. A. 2 and VI. A. 6 of this policy.

- F. Agreements entered into under this policy shall provide that entities receiving data shall not have the right to re-transmit, enhance for personal identification, mine or otherwise modify data containing personal identifier information.
- G. All agreements between public partners or entities and third parties for receipt of CCTV data shall be consistent with the privacy restrictions and policies of this policy.

Addendum

Design Guidelines for Lower Hudson Valley CCTV/ATM System

I. Introduction

The Department's Hudson Valley Region (Region 8) is currently designing and deploying an ATM system to manage traffic and provide traveler information in the Lower Hudson Valley. The ATM system will include a CCTV subsystem. The Region will incorporate in the ATM system design, deployment and operations a technology-based approach to monitoring and/or controlling the collection and distribution of CCTV camera data to further supplement and enhance the Department's ability to operate CCTV systems in a manner consistent with the Statewide *Policy for the Design and Operation of Closed-Circuit Television (CCTV) in Advanced Traffic Management Systems*.

II. Applicability

The system will be used by the Department as a pilot to demonstrate and assess the ability of various available technologies and design approaches. The pilot system will be evaluated based on a number of factors including technological considerations, operational success and cost, and to the extent determined successful and feasible in all or in part, will be incorporated into other Department ATM systems as they are initially designed and/or as existing systems undergo major upgrading.

III. Design and Operational Concept:

A. Overall Approach:

1. The CCTV system design and operation shall be in accordance with the statewide Policy.
2. The system shall incorporate in its design, deployment and operations a technology-based approach to monitoring and/or controlling the collection and distribution of CCTV data to further supplement and enhance the Department's ability to operate CCTV systems in a manner consistent with the Statewide regulations and Policy.

B. Definitions:

1. "Preset Mode" shall mean an operational design constraint in the closed-circuit television system that sets camera angles and camera movements for each closed-circuit television system camera so that entities or the general public receives data that only allows such users to see

roadway conditions without personal identifier information, and that sets pixel density of such data so that it cannot be mined to provide any personal identifier information.

2. "Zoom mode" is any closed-circuit television system camera angle or position that is not the preset mode of the closed circuit television system camera.

C. Design and Operation Parameters for the CCTV Camera System:

1. The CCTV system will be designed with preset and zoom modes as defined above.
2. Cameras shall only be used in a zoom mode where necessary for traffic/incident management purposes and in accordance with the Statewide CCTV Policy.
3. When a camera is moved into the zoom mode, the system shall automatically discontinue the data feed that is being distributed to non-Department of Transportation entities for commercial purposes or directly to the public until such time as the camera is returned to a preset mode.
4. Cameras will be returned to the preset mode when the need to zoom has been met.