



# ***SECURITY ADVISORY COUNCIL***

*THOMAS R. SUOZZI*  
*County Executive*

*JAMES H. LAWRENCE*  
*Commissioner*

## **DIGITAL VIDEO SURVEILLANCE GUIDELINES**

After considering your basic physical security requirements, such as exterior lighting, locks, alarms, and landscaping, a good digital video surveillance system is the next step in protecting your business and providing your employees with a safe work environment. The following are guidelines offered by the SPIN Security Advisory Council to inform the business community of the type and quality of digital video surveillance systems available in today's marketplace. These security recommendations represent an important step towards developing and implementing a sound overall security plan. This document is not meant to take the place of a security professional but was created to provide businesses with general guidelines for maximizing digital video surveillance.

### **Return on Investment (ROI)**

Video surveillance makes good business sense and is a necessary tool in today's vulnerable business environment. Digital video provides not only security but an easy-to-use management tool. Just think of each camera as a dedicated employee, who works 24 hours a day without taking a coffee break, vacation or sick day. Most of all, your electronic employee has a memory that does not forget, is accurate and provides a true return on investment.

The effective use of digital video surveillance equipment can reduce liability & workers' compensation premiums, fraudulent insurance claims, and may assist in the prevention and apprehension of dishonest employees and customers. Today's technology also provides the ability to watch your business remotely from home or other locations.

There are numerous types of cameras and digital video recorders to fit various applications. Entrance/exit cameras, cash register/counter cameras, interior cameras, exterior cameras and digital recorders are the basic components of a digital video surveillance system.

When designing a digital video recording system, it is better to utilize fewer cameras of higher quality recording at higher resolution than utilizing many lower resolution cameras.

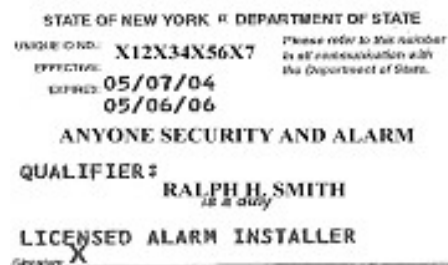
## How much can I expect to spend?

For a basic four camera digital video recording system for a small retail or office type business you can expect to spend at least \$4,500 plus *installation*. Medium, large and enterprise level businesses will spend proportionately more to address their individual security needs.

## Installation

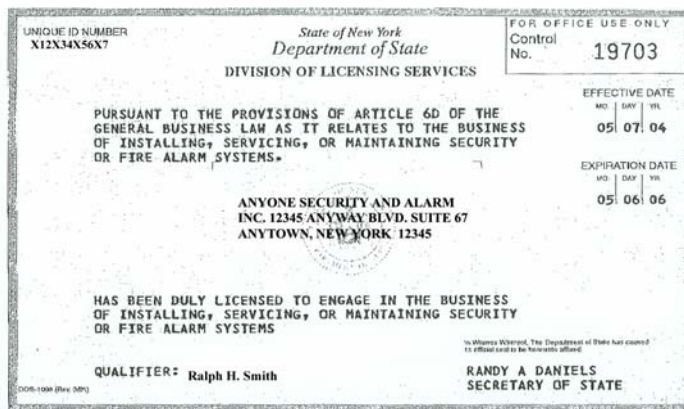
It is important that the installer of your system be licensed by the New York State, Department of State, Division of Licensing Services. In addition, you have the right as a consumer to request a certificate of liability insurance from the security vendor.

(To ascertain whether an installer is licensed, go to <http://www.dos.state.ny.us/> and click on Search for Licensees and Registrants. CCTV installers are listed under Alarm Installers. Once there, you will have the option of searching by name or business name.)



(Sample Wallet License)

Licensed installers will possess a wallet identification card containing the name and title of the installer. The Division of Licensing assigns an unique identification number which consists of eleven numbers and is located at the top left hand corner of the license and wallet identification card.



(Sample License)

## TYPES OF CAMERAS

- The cameras should be in color with minimum lines of resolution (TVL) of 480 to 540 TVL. **Avoid** 320 to 380 TVL black & white or color cameras.
- If any of your cameras face bright sunlight or look into shadows, they should produce clear video of both situations. See the example below showing how technology can make all the difference. There are enhanced technology cameras available that will produce higher quality video in both circumstances.

- If the camera is utilized in day/night conditions, consider choosing a camera that will automatically switch from color to monochrome (black and white) during low light conditions.
- Each camera lens should be auto-iris and vari-focal which allows for manual adjustment of the field of view and automatic adjustment of light contrast in order to provide the best-detailed video of the people entering or exiting your establishment. **Avoid** cameras with electronic iris lenses.

Standard chip camera



Enhanced technology



## **TYPES OF APPLICATIONS**

### **Entrance/Exit Cameras:**

- Consider placing entrance/exit door cameras on the inside of the building directly along side the doors facing inside the building instead of looking out the door.
- Cameras should be placed as close to 6 to 7-feet above the floor at the door frame, instead of on the ceiling.
- To eliminate tampering, an armored housing with a polycarbonate dome is recommended. This helps eliminate camera tampering, moving direction of camera view, cutting of wires and vandalism.
- Video/photo image should capture the head/face and upper torso of individuals entering or exiting the establishment.



### *Important Note:*

*A wide angle view should be avoided here as it renders the image virtually useless for law enforcement identification purposes.*

### Point of Sale/Transaction Cameras

- Point Of Sale (POS) cameras can be used to record sales transactions and deter employee theft.

### Overall View Camera

- May reduce false personal injury and worker's compensation claims, general liability, employee dishonesty, etc.

### Restricted Access Area Camera

- May be useful in critical areas such as inventory rooms, money rooms, communication and IT areas.

### Additional Considerations

- Depending on the type and location of your business, you may consider installing exterior cameras.

## WHY DIGITAL RECORDERS RATHER THAN VCR TAPE RECORDERS?

### Videotape Recorders (VCR):

- Old technology that is being phased out
- Low recording resolution and slow recording speed
- Searching for a specific incident is time consuming
- There is limited availability of parts and support
- Requires constant tape changing and maintenance
- No remote viewing capability from home or office
- Costly long-term storage of video tapes

### Digital Video Recorders (DVR):

- The resolution and speed of frame capture settings on your digital video recorder is critical in the successful capture of digital video evidence. Without these proper settings, the great looking video you see on your monitor will **not** be what is actually recorded.
- Many installation companies tell their clients that they can get 30 days or more out of their digital recorders with four cameras and just a 160-gig hard drive. However, this is only possible if the resolution quality is set to LOW and the record rate is set to SLOW.
- DO NOT LOWER THE RESOLUTION OR SPEED on important cameras (front or main doors, cash register and ATM machines, etc.). Despite the fact that the picture may appear the same on a monitor, it will **not** look the same on playback. Most digital video recorders, when properly configured for high resolution and

speed, will use approximately 5-gigabytes (gigs) or more of hard drive memory space per camera per day for one 24-hour day of digital video. Based on this recommendation you will get approximately eight days of continuously recorded video history and four cameras and a 160-gig hard drive system.

- The recording speed for entrance/exit cameras and cash register/counter cameras should be set at a minimum of 8-Picture Per Second Per Camera (PPS) with a preferred record rate of 12 or more PPS. Other cameras can be set at a lower speed and resolution to save hard drive space for the more important cameras.
- If your unit has motion detection recording capability, make sure each camera is set up with at least 4-seconds of PRE ALARM or PRE EVENT buffer and the same for the POST ALARM or POST EVENT buffer. This is a minimum recommendation; a 10-second buffer is better. This will insure that the recorder will record the incident.
- Setting any digital video recorder at lower than these recommendations may not produce useable quality.
- Digital video recorders should be kept out of sight from employees and patrons.
- Digital video recorders must be kept in a **COOL** and well-ventilated area.
- Test and check your digital video recorder weekly for hard drive operation and video image speed and quality.
- Password protect access to your digital video recorder to eliminate tampering by employees and maintain system integrity.
- In the event of power loss, ensure that your digital video recorder will restart and resume operation without intervention.
- Make sure your digital recorder has the immediate means to OFFLOAD the recorded video without requiring a service call from the installing company. A built-in CD/DVD writer on the unit is easiest; or a unit connected to a PC with a CD/DVD writer can also be utilized.
- Make sure you are trained by your installing company on how to use your system, including off-loading video to a CD/DVD or emailing a video clip.
- It is highly recommended that your digital recorder has an embedded watermark, which prevents video from being tampered with or altered.

## **Conclusion**

These guidelines were developed to assist business owners and managers in navigating the complex world of digital video surveillance. We have taken into consideration the needs of law enforcement, insurance adjusters and the business community to maximize the Return On Investment using digital surveillance systems.



**NASSAU COUNTY SPIN**  
**Security Advisory Council**  
**Mission Statement**

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The Security Advisory Council is a coordinated crime prevention project that seeks to advance public safety and security through public/private partnership and cooperation. Utilizing the expertise of security professionals and police officers, the Council is focused on the establishment of guidelines promoting homeland security, crime prevention and crime reduction techniques, as well as working towards a coordinated response to critical incidents.

SPIN would like to thank the following members of the Security Advisory Council for their contributions in developing these guidelines:

**James F. Adelis**

*President  
Adelis International Security*

**William M. Leahy**

*Sergeant  
Nassau County P.D. SPIN*

**Donald J. Barto**

*Director of Public Safety  
Adelphi University*

**Marty L. McMillan**

*President  
Intelli-Tec Security Services*

**John A. Bush, III**

*Vice President  
Global Safety & Asset Protection  
CA*

**James Romagnoli**

*Director of Security  
North Shore/LIJ Health Systems*

**Mario J. Doyle**

*Chairman, Long Island Chapter  
ASIS International  
Regional Director, BuildingStar Corporate Services*

**Matthew J. Simeone, Jr.**

*Inspector  
Nassau County P.D. SPIN*

**Oksana Farber**

*Law Enforcement Liaison Council  
ASIS International  
Director of Security, Goldman Associates*

**Jerry E. Saltzman**

*Operations Manager, Crisis Management Center  
Citigroup Security and Investigative Services*

**Edward Goller**

*Detective  
Nassau County P.D. Electronics Squad*

**Douglas Sorenson**

*Detective  
Nassau County P.D. Robbery Squad*

**David E. Zeldin**

*Law Enforcement Liaison, Long Island Chapter  
ASIS International  
President, Investicorp, Inc.*

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