

General Requirements and Specifications for Video Surveillance Systems (VSS):

I. General Technical Specifications and Conditions on the Use of Recording

Devices:

1. Only digital recording devices must be used.
2. Recorders must have the capability to produce media copies of images and video footage.
3. The VSS must have the capability of live display at high quality of no less than 25 frames per second for each Phase Alternating Line (PAL) –most common standard camera system.
4. Digital recorders must have LAN (Local Area Network) connectivity.
5. Recorders must have the ability of not less than 3 frames per second at 2 CIF (Common Intermediate Format or Common Interchange Format) resolution for each camera.
6. Recorders must have the ability of continuous recording at all times including when motion or alarm is detected.
7. Recorders must provide playback of pre-alarm recording for no less than 2 seconds in motion recording mode.
8. Recorders must have the time and date stamp on the recorded images.
9. Recorders must have the ability to search by time, date and camera.
10. Recorders must be able to resume recording automatically in case of system restart or power recovery after failure.
11. Image and video playback software must be provided and it should be MS Windows Operating System compatible.
12. The operator must keep recorders in a clean and safe location.
13. The operator must have a maintenance contract for the VSS.
14. The operator must have a logbook wherein all digital recordings of Hard Drive backups, CD/DVD and USB copies and backups are recorded with time, date, name and signature of the operator.
15. All cameras in the recording device must be numbered or named as per their location.
16. The operator must have a logbook wherein all maintenance and cleaning of the Security System are recorded with details, date, time, name and signature of the operator.
17. Recorders must be set at no less than 2 seconds of pre-alarm recording in motion recording mode.
18. Recording must be set at no less than 3 frames per second for each camera.
19. All digital recorders must be set to real actual time and date.
20. There must be a dedicated independent LAN network for the VSS.
21. There must be a firewall and a LAN network protection and security system in case the VSS network is connected with another network.
22. All recorder suppliers must provide the operator and the Police Department with an image and video footage playback software through LAN network and on PCs.
23. The employee in charge must be properly trained to run the recorders and produce or load images and video footage on media. They also must ensure the system is properly functioning and report any malfunction to the contracted warranty company.

24. The recording must be set at no less than 75% of the recorder overall quality.

II. Technical Specifications and Conditions for Use of Cameras:

1. The camera resolution must be no less than 420 TVL (fine resolution TV Line) for color.
2. Outdoor cameras must be contained in IP66 (Ingress Protection: This IP Code is an international standard for declaring the level of protection against the ingress of water or foreign materials of a particular enclosure or case enclosures).
3. Variable zoom cameras must not be used in areas of privacy, except with permission from the Police Department.
4. Hidden cameras must not be used except with permission from the Police Department.
5. It is forbidden to install cameras on the building roofs or walls to film/view beyond the establishment perimeters except with permission from the Police Department.
6. Cameras must have special features in the following cases:
 - a. Sites that contain a scene with a different intensity of illumination WDR (Wide Dynamic Range that adjust automatically to brightness and darkness), SDR (Standard Dynamic Range for TV sets that do not employ the greater screen contrast provided by high dynamic range), BMB (Black Masking Black Light compensation that compensates for backlight by enhancing automatic exposure control on the camera).
 - b. Sites where light changes with time Auto Iris
 - c. Sites where it is semi-dark or totally dark Day & Night
 - d. Sites with very fast changing light conditions AES (Automated Electronic Shutter) or BLC (Black Light Compensation)
 - e. Sites where it is totally dark IR (Infrared)
 - f. Sites of very low light Low Lux (Lux is a measure of the amount of illumination in a given area. One Lux is equal to one lumen per square meter).
7. Maps or listings showing all camera locations must be maintained at the establishment.
8. All outdoor and indoor cameras of the establishment must be periodically cleaned to provide clear images at all times.

III. Technical Specifications of Object Viewing in VSS:

1. Definitions:
 - a. Camera View: A scene captured by the camera and displayed on the monitor screen.
 - b. Object View: A view of 1.6 m height human body fully displayed on the monitor screen
 - c. License Plate View: View of a vehicle license plate with dimensions of 330x160 mm
2. View Classification:
 - a. Identification View: Ability to identify any unknown individual for the first time in a view where his body is displayed on 120% of the monitor screen.
 - b. Recognition View: Ability to distinguish a known individual from other known individuals in a view where his body is displayed on 50% of the monitor screen.

- c. Detection View: Ability to detect any moving object/body on the screen and recognize the body in a view where it is displayed on 10% of the monitor screen.
- d. Monitoring View: Ability to monitor general activities in a view where anybody is displayed on 5% of the monitor screen.
- e. License Plate Reading View: Ability to read clearly the numbers and letters on the license plate in a view where the license plate is displayed on 20% of the monitor screen.

IV. Technical Specifications for Lighting in VSS Covered Areas:

1. There must be white bright lighting in locations covered by long distance cameras for monitoring and detection views.
2. There must be infra-red illuminators for dark locations covered by medium distance cameras for identification and recognition views.
3. There must be sufficient lighting in all locations covered by cameras as necessary or as per camera light sensitivity.
4. There must be permanent or motion activated lighting in all locations.

V. Technical Specifications for Connections and Electrical Power:

1. All wires and electrical connections must be concealed so it is difficult to cut or tamper with them. All wires must be contained in metallic conduits in apparent and easy-to-reach areas.
2. High quality cables must be used.
3. Digital recorders and management systems must be powered from a stabilized independent electrical supply. There must be a spare 25% of total power load.
4. The mains and backup power sources of the VSS must be independent and secured.

VI. Technical Specifications for Display Monitors and Conditions for Use:

1. Display monitor must be no less than 15" for spot view or sequence view.
2. Display monitor must be no less than 17" for multiple view of no more than 16 cameras.