

# CHAPTER 15

## SECURITY MEASURES FOR A METRO SYSTEM



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## Chapter -15

# SECURITY MEASURES FOR A METRO SYSTEM

## 15.1 INTRODUCTION

Metro is emerging as the most favoured mode of urban transportation system. The inherent characteristics of metro system make it an ideal target for terrorists and miscreants. Metro systems are typically open and dynamic systems which carry thousands of commuters. Moreover the high cost of infrastructure, its economic impotence, being the life line of city high news value, fear & panic and man casual ties poses greater threat to its security. Security is a relatively new challenge in the context of public transport. It addresses problems caused intentionally. Security differs from safety which addresses problems caused accidentally. Security problems or threats are caused by people whose actions aim to undermine or disturb the public transport system and/or to harm passengers or staff. These threats range from daily operational security problems such as disorder, vandalism and assault to the terrorist threat.

## 15.2 NECESSITY OF SECURITY

It is well known that public transportation is increasingly important for urban areas to prosper in the face of challenges such as reducing congestion and pollution. Therefore, security places an important role in helping public transport system to become the mode of choice. Therefore, excellence in security is a prerequisite for Metro system for increasing its market share. Metro railway administration must ensure that security model must keep pace rapid expansion of the metro and changing security scenario.

## 15.3 THREE PILLARS OF SECURITY

Security means protection of physical. Human and intellectual assets either from criminal interference, removal of destruction by terrorists or criminals or



incidental to technological failures or natural hazardous events. There are three important pillars of security as mentioned under:

- (i) The human factor;
- (ii) Procedures; and
- (iii) Technology

Staff engaging with the passengers create a sense of re-assurance which can not fully be achieved by technology. For human factor to be more effective staff has to be qualified, trained, well equipped and motivated. They should be trained, drilled and tested. The security risk assessment is the first step for understanding the needs and prioritizing resources. The organization of security should be clear and consistent. Security incidents, especially major ones, often happen without warning. Emergency and contingency plans must be developed, communicated and drilled in advance.

There are a number of technologies which can be used to enhance security e.g. surveillance systems. The objectives of the security systems are to differ i.e., making planning or execution of an attack too difficult, detect the planned evidence before it occurs, deny the access after a plan of attack has been made and to mitigate i.e. lessen the impact/severity as the attack by appropriate means.

## 15.4 PHASES OF SECURITY

There are three phases of security as under:

### **(i) Prevention**

These are the measures which can prevent a security incidence from taking place. These can be identified by conducting a risk assessment and gathering intelligence. Prevention begins with the daily operational security -problems. Uncared for dirty, damaged property is a breeding ground for more serious crime.

### **(ii) Preparedness**

Plans must be prepared to respond to incidents, mitigate the impact. Train staff accordingly and carry out exercises. The results of the risk assessment give a basis for such plans.



### (iii) Recovery

Transport system must have laid down procedures/instructions for the quick recovery of normal service after an incident. Recovery is important for the financial health of the operation, but it also sends a clear message to public, it reassures passengers and gives them confidence to continue using the system. Communication is key to the quick restoration after such incidents. Restoration should also include an evaluation process for the lessons learnt.

## 15.5 RESPONSIBILITIES AND PARTNERSHIPS

Security is a sovereign function and hence is the responsibility of the state. Security in public requires clear governance. Responsibility should be clearly defined. In the present scenario, this is the responsibility of the Central Government/MHA in Delhi to ensure secured travelling to the public including Delhi Metro. In other states security would be the responsibility of the concerned state govt.

CISF has been entrusted with the job of providing security to Delhi Metro and law & order/ prevention & detection of crime are under the domain of Delhi Police.

## 15.6 PROPOSED PROVISIONS FOR SECURITY SYSTEM

1. CCTV coverage of all metro stations. With a provision of monitoring in the Station Security Room as well as at a Centralized Security Control Room with video wall, computer with access to internet TV with data connection, printer and telephone connection (Land Line and EPBX) for proper functioning, cluster viewing for stations. Cost of this is included in Telecom estimate.
2. Minimum one Baggage Scanners on all entry points (1 per AFC array). Additional requirement of baggage scanners at heavily crowded stations i.e at interchange may also be required. Cost of one baggage scanner is Rs. 15.0 Lacs approximately, on 2013 prices.
3. Multi-zone Door Frame Metal Detector (DFMD) minimum three per entry (2 per AFC array). The number can increase in view of the footfall at over



crowded stations. Cost of one Multi-zone DFMD is Rs 2.15 Lacs approximately.

4. Hand held Metal Detector (HHMD) as per requirement of security agency, minimum two per entry, which varies from station to station with at least 1.5 per DFMD installed at the station. Cost of one HHMD is Rs 6000/- approximately at 2012 prices.
5. Bomb Detection Equipments with modified vehicle as per requirement of security agency. One BDS team per 25 - 30 station will be required at par with present criteria of DMRC. Cost 1.25 crores including vehicle.
6. Bomb Blanket at least one per station and Depots. Cost is Rs. 50,000/- per bomb blanket.
7. Wireless Sets (Static and Hand Held) as per requirement of security agency.
8. Dragon light at least one per station and vital installation.
9. Mobile phones, land lines and EPBX phone connections for senior security officers and control room etc.
10. Dog Squads (Sniffer Dog), at least one dog for 4 metro stations which is at par with current arrangement of Delhi Metro. Cost of one trained sniffer dog is Rs 1.25 Lacs approximately. Dog Kennels alongwith provision for dog handlers and MI room will also be provided by metro train depot administration including land at suitable places line wise.
11. Bullet proof Morcha one per security check point (i.e. AFC array) and entry gate of metro train depot administration metro station.
12. Bullet proof jackets and helmets for QRTs and riot control equipments including space at nominated stations. One QRT Team looks after 5-6 metro stations as per present arrangement. One QRT consist of 5 personnel and perform duty in three shifts.
13. Furniture to security agency for each security room, and checking point at every entry point at stations. Scale is one office table with three chairs for security room and office of GO and one steel top table with two chairs for checking point.
14. Ladies frisking booth - 1 per security check point (AFC Arrey)



Wooden Ramp  
points.

- 1 per DFMD for security check

15. Wall mounted/ pedestal fan at security check point, ladies frisking booth and bullet proof morcha, as per requirement.
16. Physical barriers for anti scaling at Ramp area, low height of via duct by providing iron grill of appropriate height & design/concertina wire.
17. Adequate number of ropes. Queue managers, cordoning tapes, dragon search lights for contingency.
18. Iron grill at station entrance staircases, proper segregation of paid and unpaid by providing appropriate design grills etc.
19. Proper design of emergency staircase and Fireman entry to prevent unauthorized entry.