REPORT OF STANDING FIRE ADVISORY COUNCIL (SFAC) ON ASSESSMENT OF REQUIREMENTS OF FIRE FIGHTING AND RESCUE EQUIPMENT, APPLIANCES AND ORGANIZATIONAL STRUCTURE OF FIRE AND EMERGENCY SERVICE IN THE CITIES WITH POPULATION MORE THAN ONE MILLION.

STANDING FIRE ADVISORY COUNCIL (SFAC) RECOMMENDATION

1. DGCD (Fire Cell) has prepared and submitted the Scale to the NDMA and also discussed in the 33rd meeting of Standing Fire Advisory Council. Members have adopted the same scale for upgradation of Fire & Emergency Services in the cities having population of more than one million.

2. Standing Fire Advisory Council (SFAC) in its various meetings has suggested the norms and scale to provide Fire and Rescue Cover in different profiles of fire hazards besides Fire Service Set up in the States/UTs. As recommended by the 13th Finance Commission, States have to formulate a project proposal regarding setting up of effective Fire and Emergency Services for the cities of more than one million populations. Since the recommendations for the cities of population more than one million are not readily available, need has been felt to formulate the guidelines on the same to support Fire and Emergency Services in the country. With a view to bring about uniformity in the organisation of Fire & Emergency Services all over the country and also with a view to achieve the minimum desirable standard of efficiency in the Fire & Emergency Services, the Standing Fire Advisory Committee makes the following recommendations.

3. Considerations:-

3.1 Fire Service setup is mainly based on Population, Response Time and Risk Hazard Analysis. In absence of Risk Hazard Analysis viz-a-viz the requirement of specific equipments, the general scale based on Population and Area in addition to traffic congestion is adapted for calculation of Fire Station and Fire Appliances. The ideal requirement based on above is given at Annexure “A”.

3.2 In the city’s population more than one million, the type of hazard is either:-

a) High Hazard
   OR

b) Moderate Hazard

3.3 In the areas of high fire risk, the scale and type of Fire Station and additional fire fighting and rescue equipment should be determined by an actual survey of the area by the Fire Experts.

3.4 To cater to the requirements of fire cover for type A and B fire hazard, one fire station should be available for every 10.36 Sq. KMs of the area to be covered.

3.5 The City will have Headquarters, Division HQ and below Fire Stations.

3.6 The communication system will be supported by the Telephone, Telefax, Computer Recorded Audio and Video facilities (voice logger), GIS, HAM Radio, Wireless, Static and Mobile sets on two or three frequencies (Channels), Satellite and Computer Operational Systems, etc at Central Control Room, Division Fire Stations and Area Fire Station.

3.7 The HQ will have specialized equipment and appliances. Division HQ will be provided with the basic fire fighting and rescue, medical first responder equipment in addition to specific specialized equipment based on the availability of the existing risks. Fire Stations will be provided with the fire fighting and rescue equipment, medical first responder equipment in addition to specific specialized equipment based on risk.
3.8 Fire & Emergency Services will act as an All Hazard Response Unit in man-made and natural disasters. It will respond to emergencies such as Fire Fighting, Rescue, Medical First Aid, Nuclear Biological & Chemical (NBC) Emergencies, etc.

3.9 The City Fire Brigade will issue No Objection Certificates (NOC) for various occupancies as per National Building Code (NBC) requirements and applicable building bye laws in addition to provide Fire Emergency Cover and other duties as entrusted by the Governments.

3.10 Fire Service will focus on Mass Awareness to reduce to fire accidents.

3.11 The specifications of the equipment, buildings (Fire Station, Communication HQ, etc), etc. will be attached to this report for the basic support. State Governments can adapt higher specifications for the appliances and Fire Station buildings, etc.

3.12 The suggested scale is prepared with the assumption that there are no facilities / fire service available in the city. The cities can reduce the number of available equipments and Fire Station building to work out the deficiencies and requirements for funds.

3.13 Fire Stations should be so located that a maximum of 3 minutes’ response time would be achieved in all high hazard and closely built up areas and a response time of not more than 5 minutes would be achieved for all other areas (this does not include rural areas). Fire appliances should actually be run during peak hours to determine the approximate locations of fire stations from where the area allotted to them can be covered within the above time limits.

4. **SCALE for Fire Station Building and Equipment**

4.1 **State Headquarters (SHQ) for Fire and Emergencies Services**

<table>
<thead>
<tr>
<th>SL. No</th>
<th>EQUIPMENTS</th>
<th>SPECIFICATION</th>
<th>AUTH. NOS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Turn Table Ladder</td>
<td>50 Mtrs.</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>2</td>
<td>Hydraulic Platform</td>
<td>45 Mtrs.</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>3</td>
<td>Hazmat Van</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>4</td>
<td>Advance Rescue/ Emergency Tenders</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>5</td>
<td>Water Bouser</td>
<td>10,000 Ltrs.</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>6</td>
<td>Hose Laying Lorry</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>7</td>
<td>Lighting Van</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>8</td>
<td>Control Post Van</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>9</td>
<td>Canteen Van</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>10</td>
<td>Mobile Workshop for repair of Fire Appliances</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>11</td>
<td>Mobile Workshop for telecommunication equipments</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>12</td>
<td>Breakdown Van</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>13</td>
<td>Disaster Response Van</td>
<td>-</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>14</td>
<td>High Capacity Pumps</td>
<td></td>
<td>02 Nos.</td>
</tr>
</tbody>
</table>
### 4.2 Divisional Head Quarter (DHQ) for Fire and Emergencies Services

<table>
<thead>
<tr>
<th>SL</th>
<th>EQUIPMENTS</th>
<th>SPECIFICATION</th>
<th>AUTH. NOS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hydraulic Platform</td>
<td>45 Mtrs.</td>
<td>01 No.</td>
</tr>
<tr>
<td>2</td>
<td>Hazmat Van</td>
<td>-</td>
<td>01 No.</td>
</tr>
<tr>
<td>3</td>
<td>Advance Rescue/ Emergency Tender</td>
<td>-</td>
<td>01 No.</td>
</tr>
<tr>
<td>4</td>
<td>Water Bouser</td>
<td>10,000 Ltrs.</td>
<td>01 No.</td>
</tr>
<tr>
<td>5</td>
<td>Hose Laying Lorry</td>
<td>-</td>
<td>01 No.</td>
</tr>
<tr>
<td>6</td>
<td>Lighting Van</td>
<td>-</td>
<td>01 No.</td>
</tr>
<tr>
<td>7</td>
<td>High Capacity Pump</td>
<td></td>
<td>01 No.</td>
</tr>
<tr>
<td>8</td>
<td>Water Tender With High and Low pressure pump</td>
<td></td>
<td>02 Nos.</td>
</tr>
<tr>
<td>9</td>
<td>Ambulance</td>
<td></td>
<td>01 No.</td>
</tr>
<tr>
<td>10</td>
<td>Mini Water Tender</td>
<td>1 Ton</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>11</td>
<td>Motor Cycle Based potable water mist system</td>
<td></td>
<td>04 Nos.</td>
</tr>
</tbody>
</table>

### 4.3 Fire Stations

<table>
<thead>
<tr>
<th>SL</th>
<th>EQUIPMENTS</th>
<th>SPECIFICATION</th>
<th>AUTH. NOS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Water Tender With High and Low pressure pump</td>
<td></td>
<td>02 Nos.</td>
</tr>
<tr>
<td>2</td>
<td>Rescue Tender</td>
<td></td>
<td>01 No.</td>
</tr>
<tr>
<td>3</td>
<td>Ambulance</td>
<td></td>
<td>01 No.</td>
</tr>
<tr>
<td>4</td>
<td>Mini Water Tender</td>
<td>Mini</td>
<td>01 Nos.</td>
</tr>
<tr>
<td>5</td>
<td>Motor Cycle Based potable water mist system</td>
<td></td>
<td>02 Nos.</td>
</tr>
</tbody>
</table>

### 4.4 Water Tender Based on Population

<table>
<thead>
<tr>
<th>SL</th>
<th>POPULATION</th>
<th>WATER TENDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50,000</td>
<td>01 No.</td>
</tr>
<tr>
<td>2</td>
<td>1,00,000</td>
<td>02 Nos.</td>
</tr>
<tr>
<td>3</td>
<td>3,00,000</td>
<td>06 Nos.</td>
</tr>
<tr>
<td>4</td>
<td>* Additional 1 lacs.</td>
<td>01 Nos.</td>
</tr>
</tbody>
</table>
4.5 **Fire Station**

<table>
<thead>
<tr>
<th>SL</th>
<th>GEOGRAPHICAL AREA</th>
<th>NO. OF FIRE STATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10.36 Sq. KMs</td>
<td>01 No.</td>
</tr>
</tbody>
</table>

4.6 **Divisional Fire Station**

<table>
<thead>
<tr>
<th>SL</th>
<th>DIVISIONS</th>
<th>NO. OF FIRE STATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01 Division</td>
<td>06 No.</td>
</tr>
</tbody>
</table>

4.7 **Headquarters Fire and Emergency Service**

<table>
<thead>
<tr>
<th>SL</th>
<th>HQ FIRE STATION</th>
<th>NO. OF HEADQUARTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Each State</td>
<td>01 No.</td>
</tr>
</tbody>
</table>

4.8 **Training Centre**

<table>
<thead>
<tr>
<th>SL</th>
<th>TRAINING CENTRE</th>
<th>NO. OF TRAINING CENTRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Each State</td>
<td>01 No.</td>
</tr>
</tbody>
</table>

5 **Manpower**

5.1 **General Scale**

<table>
<thead>
<tr>
<th>SL</th>
<th>DESIGNATION</th>
<th>NO. OF POSTS</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Director Fire &amp; Emergency Services</td>
<td>01 No.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Chief Fire Officer</td>
<td>4:1</td>
<td>4 DCFO</td>
</tr>
<tr>
<td>3</td>
<td>Deputy Chief Fire Officer</td>
<td>4:1</td>
<td>4 DO</td>
</tr>
<tr>
<td>4</td>
<td>Divisional Fire Officer</td>
<td>1:1</td>
<td>Each Dist.</td>
</tr>
<tr>
<td>5</td>
<td>Asstt. Divisional Fire Officer</td>
<td>3 Station : 1 (ADFO)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Station Officer</td>
<td>1 (FS) : 1(STO)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Asstt. Station Officer</td>
<td>1 (Shift) : 1 (ASTO)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Leading Fire Man</td>
<td>1 (Vehicle) : 1 (LFM)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Fireman Driver</td>
<td>6</td>
<td>Please see details below</td>
</tr>
</tbody>
</table>
5.2 Man Power for various types of Appliances:

<table>
<thead>
<tr>
<th>SL</th>
<th>NAME OF APPLIANCE</th>
<th>Asst. Station Officer</th>
<th>Leading Fireman</th>
<th>Fire Man Driver</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Turn Table Ladder</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Hydraulic Platform</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Hazmat Van</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Advance Rescue/ Emergency Tenders</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Water Bouser</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Hose Laying Lorry</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Lighting Van</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Mobile Control Van</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Canteen Van</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Mobile Workshop for repair of Fire Appliances (Technical Personnel)</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Mobile Workshop for telecommunication equipments (Technical Personnel)</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Breakdown Van</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Disaster Responce Van</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td>High Capacity Pumps</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>Water Tender</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>16</td>
<td>Rescue Tender</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>17</td>
<td>Ambulance</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>Mini Water Tender</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>Motor Cycle Based potable water mist system</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

5.3 Manpower Requirements at Station Level

The manpower requirements for fire stations varied according to the types of fire fighting appliances to be manned, the number of fire engines at the station, the duty system - continuous or shift duty and the extent of other duties, inspection of hydrant and water resources, type of communication system etc. Based on above factors, the committee recommended the following strength:-
[a] Station Officers and Sub-Officers

The scale of Station Officers and Sub-Officers at Stations should be as under :-

<table>
<thead>
<tr>
<th>Size of Station</th>
<th>Strength of Officers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pumping Unit-01</td>
<td>1 Station Officer or 1 Asst. Station Officer</td>
</tr>
<tr>
<td>Pumping Units-02</td>
<td>1 Stn. Officer &amp; 1 Asst. Station Officer</td>
</tr>
<tr>
<td>Pumping Units-03</td>
<td>1 Stn. Officer &amp; 2 Asst. Station Officer</td>
</tr>
<tr>
<td>Pumping Units-04</td>
<td>2 Stn. Officers &amp; 2 Asst. Station Officer</td>
</tr>
<tr>
<td>Pumping Units-05</td>
<td>2 Stn. Officers &amp; 3 Asst. Station Officer</td>
</tr>
<tr>
<td>Pumping Units-06</td>
<td>2 Stn. Officers &amp; 4 Asst. Station Officer</td>
</tr>
</tbody>
</table>

**Note 1**: Where the extent of fire risk may justify Asst. Station Officer may be replaced by Station Officers.

**Note 2**: Reserve Staff :-

[a] 50 per cent reserve of total staff of Station Officers and Asst. Station Officer on duty, to be provided for periodical relief to enable the officers to avail 24 hours off after every 48 hours on duty.

[b] 10 per cent of the total staff on duty and periodical relief to be provided as training reserve.

[c] Leave reserve of 15 per cent on the total staff on duty, periodical relief and training reserve to be provided as replacement for all types of leave.

[b] Leading Fireman

There should be one Leading Fireman per fire appliance and one for station and outdoor duties at all times.

[c] Firemen Driver

The scale of Firemen Driver will be six per fire appliance apart from one fireman for fire-alarm duties, two firemen for hydrant and water resources inspection and one fireman for dispatch duties per station.

**Note 1**: There should be a reserve of 25 per cent of the total number of leading Firemen and Firemen Driver worked out according to the above scale to serve as Training Reserve and Leave Reserve.

**Note 2**: Where two shift system is in vogue, the number of Leading Firemen and Firemen Driver will be double.

**Note 3**: Where there shift system is in vogue, the number of Leading Firemen and Firemen Driver will be three times the scale mentioned above.

[d] Watch Room Operators

Four watch room operators for each station to be provided, one to be on duty for every 8 hours and the fourth man to be spared for relief-work. In addition, an overall reserve of 25% for the service as a whole to be provided.

[e] Clerks
Where the station functions as an independent unit and has its own cash and store work, one clerk may be provided.

[f] Sweepers

This class of employees should be provided at the scale of one per 5000 Sq. Ft. of covered area and one per 7000 Sq. Ft. of open area, subject to a minimum of one at each station.

[g] Gardeners

One gardener for every half acre of land required to be maintained as a garden. At places having more than one station where headquarters of city fire brigades exists, the staff required should vary from place to place depending on the strength of the crew. The following general observations may serve as a guide: -

**Officers**: The scale of officers with relation to their responsibility or command should be fixed as per recommendations made by this Committee under item No.10 of its 4th meeting held in March 1958. It is however considered necessary that there should be an Equipment Officer of the rank of Deputy Chief Fire Officer, Divisional Officer, Assistant Divisional Officer, Station Officer or Sub- Officer, depending upon the size of the Brigade.

**Training Staff**: A minimum of one Station Officer one Asst. Station Officer, one and six Firemen Driver should be provided if there is a full fledged training school attached to the service.

**Ministerial Staff**: A store-keeper, a Stenographer and an Accountant must be provided for the Fire service. However, where considered necessary assistant should be provided as per actual requirements.

**Headquarters/Control Room**: A Mobilizing Officer holding a rank from a Divisional Officer to a Sub-Officer depending on the size of the Fire Service should be provided to hold charge of the Control Room. In addition, an adequate number of watch room operators working on three shift system should be provided.

**Fire Aides**: One Fireman Aide for each Officer above the rank of Station Officer should be provided.

**Office Orderlies**: These requirements for offices should be worked out separately as per scales laid down.

**General**: In addition to above, the staff required for maintenance of hose, for arranging supply of water for fire fighting and for fire prevention work should be engaged as per actual requirements. The scale of staff required for manning the Fire Service Workshop would depend on the size of the Service and the number of motor vehicles and fire appliances and therefore will have to be worked out separately. The Committee would have no objection to work these details in one of their subsequent meetings.

5.4 The manpower at each fire station may comprise:-

- Station Officer - 1
- Asstt. Station Officer - 1
- Leading Fireman (watch room duty) - 1
- Crew for the appliances - As per scale given above

5.5 For the control rooms at Fire Service Headquarters and the Command and Divisional Headquarters, the following manpower is recommended:-
Central Control Room - 1 Divisional Officer, 4 Station Officers one per watch and one reserve) and 8 Assistant Station Officers (2 per watch and 2 reserve)

Command Control Room - 1 Assistant Divisional Officer, 4 Assistant Station Officers (1 per watch and 1 reserve) and 8 Leading Firemen (2 per watch and 2 reserve)

Divisional Control Room - 4 Station Officers, 4 Asstt. Station Officers (one per watch and one reserve) and 8 Leading Firemen (2 per watch & 2 reserve)

Note: For above duties the officers to be designated out of sanctioned Permanent Establishment (PE).

6 Legislation

The State Government may enact Legislation on the following:-

(a) Organisation of Fire & Emergency Services and

(b) Fire Prevention, covering all aspects of fire safety, including enforcement of Codes of practice and the National Building Code of India.

7 Funding

Planning Commission

Finance Commission

State Budget

Levy of Fire Tax

License Fees etc

8 Organisation Structure

8.1 Organisation Structure at Different Level

(a) State Fire & Emergency Service Headquarters
(b) Divisional Fire & Emergency Service Headquarters
(c) Fire Station
(d) Rural Fire Posts

8.2 For the purpose of fire protection each State should be divided into several Zones, each Zone being termed as a “Fire Service Command”. Each Fire Service Command should be commanded by a Director who should be assisted by a Chief Fire Officer, a Deputy Chief Fire Officer, At the Division level, the Officer-in-charge of a Division should be of the rank of Deputy Chief Fire Officer and he should be assisted by Divisional Fire Officer and Assistant Divisional Fire Officer. Each fire station should also be equipped with a motor cycle. Each officer of the rank of Divisional Fire Officer and above should be provided with a car and each Assistant Divisional Fire Officer and Station Officer should be provided with a Jeep etc.

9 Besides the structure given in the foregoing para for the operational wing of the Fire Service, establishment of other bureau is necessary for handling other aspects of the Service.

The following bureaus are recommended :-
(a) Headquarter Bureau.
(b) Communication and alarm Bureau.
(c) Fire Prevention Bureau
(d) Community Relations Bureau.
(e) Training Bureau
(f) Research and Development Bureau.

9.1 The Structure, intended purpose and justification for each of these bureaus are given below :-
(a) **Headquarter Bureau** – This bureau should be headed by a Principal Staff Officer who should be an uniformed officer of the rank of chief Fire Officer. The Headquarters bureau should have six divisions, under it as follows :-

(i) Administration
(ii) Finance
(iii) Planning
(iv) Provisioning
(v) Technical
(vi) Workshops

9.2 Each of the above divisions should be headed by an uniformed officer of the rank of Deputy Chief Fire Officer and Should have its own Sub-divisions and Sections, as necessary. Functions of various Divisions in Headquarters are given below :-

(i) **Administration** – This division will look after the general administration of the Fire Service, lay down and execute all plans and programmes under the guidance of the Director, handle all matters connected with recruitment, personal records, promotion, retirement, etc. and such other functions as may be assigned to it.

(ii) **Finance** – The recurring and non-recurring expenditure for any State Fire Service will be substantial. At the same time, enforcement of the fire prevention Legislation will also result in abnormal increase of work and accounting for the fees etc. which will be recovered on various items. A full fledges Division for handing all Financial Matters, will, therefore, be necessary.

(iii) **Planning** – It is necessary that execution of all schemes for future development of various aspects is planned in a systematic manner. This includes the design of future fire stations, appliances and equipment, other building for the department and so on. A separate Division is, therefore, necessary for planning, which will work in close coordination with Technical Division and Research and Development Bureau.

(iv) **Provisioning** – A large quantity of appliances, equipment, uniform clothing and spare parts for fire appliances and general purpose stores will be required for the Fire Services. It is essential to create a separate Division forecasting future requirements and taking necessary action for procurement, proper storage and distribution of stores and equipment.

(v) **Technical** – Before the appliances, equipment and other stores could be purchased, it would be necessary to lay down specifications for the guidance of the Provisioning Division. It
would also be necessary for the Fire Services to actively participate in the preparation of national standards and building codes, keeping in view the interests of the Service. The Technical Division would look after this work, so as to relieve the other Divisions of this responsibility and to achieve better coordination and result.

(vi) **Workshops** – Prompt repair and maintenance of all Fire Service equipment is of utmost importance. It is specialised, job and must be attended to by specially trained staff. A Workshops Division should, therefore, be created in each Fire Service. This Division should have two Sub-divisions – a centrally located workshop and a fully equipped mobile workshop and a fully equipped mobile workshop for each Fire Service Division.

(b) **Communications and alarm Bureau** – Means of communications and fire alarm system are essential for the operational efficiency of any well organised Fire Service. With a large number of control rooms and watch rooms, it will be necessary to maintain substantial quantities of communication equipment in a serviceable condition at all times. Functions of the communications and alarm bureau will embrace not only the maintenance of equipment, but also planning and provisioning of the equipment and its installation. Each State Fire Service should have one central control room in the Fire Service HQ, one control room in each Command HQ, one control room in each Fire Service Divisional HQ and a watch room at every full time and retained fire station. The communication and fire alarm bureau should be headed by a Chief Fire Officer, assigned by a Deputy Chief Fire Officer. It should have three main Divisions and nine Sub-divisions as given below :-

(i) **Operations Division** – Sub Divisions under this Division should be :-

One central control room. Command control rooms at the scale of one per Command, Divisional control rooms at the scale of one per Division and fire station watch rooms at the scale of one per full time & retained fire station.

(ii) **Maintenance Division** – Its Sub divisons should be :-

Installation, central tele-communication workshop and mobile telecommunication workshops (at the scale of one per Division)

(iii) **Administration Division** – Sub-divisions under this Division should be:-

Establishment, tele-communication, planning and tele-communications provisioning.

(c) **Fire Prevention Bureau** – Consequent to the enactment of fire prevention Legislation, it would be necessary to set up an efficient machinery for its enforcement. It would also be necessary for the Fire Services to scrutinize all plans for new buildings within the municipal limits of each city / town in the State from fire safety angle and to inspect such buildings, when ready with a view to recommend the issue of occupancy certificate. In addition to the enforcement of fire prevention Legislation and other duties connected with inspection of buildings, etc the Fire Services would also have to launch a means campaign from the prevention of fire all over the State, including both, the urban and the rural areas. To enable the Fire Services to discharge these functions, it is suggested that a Fire Prevention Bureau should be established in each State Fire Service. Such a bureau should have a limited number of highly trained personnel on its staff. Whose functions should be clearly demarcated. They should function with the assistance of operational staff at the fire stations for routine work only. The community Relations Bureau, which is being recommended later, would also play a very important role, in assisting the Fire Prevention Bureau in the achievement of their objective. The Fire Prevention Bureau should be headed by a Chief Fire Officer, assisted by a Deputy Chief fire Officer. It should have three Divisions under it, each of which should be headed by a Divisional Fire Officer assisted by an Assistant Divisional Fire Officer and supported by such other staff as may be necessary. Its Divisions should be :-

(j) Individual Building Division

(ii) Fire Licences for ware houses Division
(iii) Fire licences Division
(iv) Renewal of Occupancy Certificates Division
(v) Other miscellaneous Inspections Division
(vi) Complaints Division
(vii) Inspection Division
(viii) Prosecution Division

(d) Community Relations Bureau – With the increase in fire prevention activities on a State wide level, it would be necessary to prepare and disseminate simple and educative literature, on fire prevention measures and to arrange talks to different groups of people in various units of life, so as to arouse fire consciousness. In brief to make the task of the Fire Services easier and more readily acceptable to general public, it would also be necessary to provide a machinery for improving the image of the Services in the mind of the common man. Community Relations Bureau is therefore, suggested for this purpose. This bureau should also be headed by a Chief Fire Officer assisted by a Deputy Chief Fire Officer and should have the following Divisions under it :

(i) Publications Division
(ii) Public Relations Division
(iii) Audio Visual Division
(iv) Photography Division

Other Divisions may be added as and when the need arises. Each of the above Divisions should be headed by a Divisional Fire Officer, assisted by an Assistant Divisional Fire Officer and such other staff as may be necessary.

(e) Training Bureau – The head of the Training Bureau should be an officer of the rank of Chief Fire Officer who should be assisted by a Deputy Chief Fire Officer and such other uniformed and non-uniformed staff as may be necessary to handle the various training activities. The bureau should have 7 Divisions under it as follows:-

(i) Administration Division
(ii) Library & Documentation Division
(iii) Junior Course Division
(iv) Senior Course Division
(v) Specialised Courses Division
(vi) Training & Visual Aids Division
(vii) Sports & Welfare Division

(f) Research & Development Bureau – This Bureau should also be headed by a Chief Fire Officer, assisted by a Deputy Chief Fire Officer. It should have six Divisions under it as given below :-

(i) Data Processing Division
(ii) Research into Technical Literature & Documentation Division
(iii) Operational Research Division

(iv) Evaluation of new equipment Division

(v) Development of new equipment Division

(vi) Testing of new equipment before acceptance Division

9.3 Each of these Divisions should be headed by a Divisional Fire Officer, assisted by an Assistant Divisional Fire Officer and such other staff as may be necessary.

10. **Duty System**

10.1 It is recommended that a standard 3 watch duty systems should be introduced in Fire Services, in which the first watch should be on duty for 24 hours at a stretch. On being relieved by the second watch, the first watch should be on 24 hours off duty and again come on duty for 8 hours on the third day. Similarly, the second watch, on the third day andesine. This system would appear to be more expensive, but considering the fact that extra manpower would be required for fire prevention duty, water sources inspection and maintenance. It is actually more economical, because the personnel of the day watch will be available in addition to the watch on normal operational duty tan could be employed for fire prevention water sources inspection and other miscellaneous duties, thereby economizing on manpower and utilizing them to the maximum advantage.

10.2 One-third of the total strength of each rank-except Chief Fire Officer and above should be provided as leave/ training reserve. The need for this reserve is obvious.

11. **Training**

11.1 Capacity Building is the prime responsibility of any organization for the smooth functioning of the services. Capacity Building is very important for Fire & Emergency Services, as Fire & Emergency Services personnel are required to act on odd situation and in front of public for saving life and property. Any wrong decision not only could endanger the life of fireman but public also. To transform Fire & Emergency Services personnel to act as an First Responder in all man-made as well as other disasters and emergencies, it is essential that they should also train in following training programme :-

a) Fire Related Courses:-
   a) Fireman Drivers Course
   b) Leading Fireman Course
   c) Sub-Officers Course
   d) Station Officers Course
   e) Division Officers Course
   f) Chief Fire Officers Course
   g) Management Courses, etc.

b) Rescue Techniques in various emergency situations and following disasters :-
Fires

Flooding

Tropical Storms and Hurricanes

Extreme Winter Weather

Radiation Emergencies

Building Collapses and Explosions

Chemical Spills, Hazards and Emergencies

Terrorism

c) Medical First Aid Course
d) Specialised response to NBC and Hazmat Emergencies.
e) Handling of Road / Rail Accidents
f) Handling Water related accident
g) Collapsed Structure Search & Rescue
h) Incident Response System Course
i) Fire Prevention Course.

To train Fire & Emergency Services personnel in these courses, there is an urgent requirement to set up a State Fire Service Training Centre. State may take immediate action to open training centres in these cities if there is no State Level Fire Service Training Centre in the State.

In addition to the training of Fire & Emergency Service personnel the public should also be given First Aid training in Dos and DONTs in case of such emergencies, besides from educating them through issue of advertisement in electronic and print media, publication & distribution of broachers and conducting outside test drills. The training centre people will work out the detailed plan to train, School Children, Teachers, College Students, NCC, NYK, NSS cadets, NGOs, Social Organisations, etc. in Dos and DONTs and evacuation procedure in the event of emergencies.

11.2 In addition to the above courses, the following assessment should also be carried out by the Training Bureau :-
11.3 If any serving member of the operational staff fails to qualify in the assessment of his technical proficiency and physical fitness, he should be told about it and recalled for a check to the training school after three months.

11.4 Asstt. Station Officers and above should also be detailed for appropriate courses at the National Fire Service College, Nagpur.

11.5 Besides the courses of instruction and assessment of technical proficiency and physical fitness, field training of all operational ranks should be arranged through conduct of field exercises in different types of occupancies. Such exercises may be arranged at least once a week at fire station level and at least once in three months at Divisional level.

11.6 An exercise involving various Divisions in each Command should be conducted by the Chief Fire Officer of the concerned Command once every six months.

11.7 A major exercise involving all operational Commands and communications and Alarm Bureau should be conducted by the Director once a year.

11.8 The field exercise will go a long way in familiarizing all operational ranks with the procedures and operational techniques and will at the same time enable the officers to find out shortcomings, if any, and to take timely remedial action to prevent recurrence of mistakes/shortcomings.

11.9 Planned tours of the area covered by each fire station should be arranged periodically with a view to make all station personnel familiar with topography, sources of water supply and special hazards in their area.

11.10 All operational personnel should be given special training in map reading. A large size map of the Division and the town where the fire station is located should be displayed in the watch room of each fire station and a smaller version of the same should be provided on watch room console and near the seat of the officer-in-charge on each fire appliance. This will ensure more efficient mobilization of fire appliances.

12 Communications and Alarm System:

12.1 The following minimum facilities are recommended for each State Fire Service:-

(a) A Central Control Room at the Fire Service Headquarter.

(b) A Command Control Room in each Fire Service Command Headquarter.

(c) A Divisional Control Room in each Fire Service Divisional Headquarter.

(d) A Watch Room in each Fire Station.

(e) Mobile Station on each Fire Appliance.

(f) Walkie-Talkie. R/T sets on each Fire Appliance.

12.2 The equipment which should be provided at and the functions of each of the above facilities are given below:
(A) **Central Control Room:** - This control room will be a monitoring and information centre for the entire Fire Service. The Main purpose of this control room will be to keep the Director of Fire Services posted of the operational position in all Commands under him and to enable him to mobilize the resources of any or all Commands for dealing with a serious emergency which may be beyond the resources of any particular Command.

The following equipments are recommended for the Central Control Room:-

(i) At least two auto-telephones.

(ii) A set of automatic recorders for recording all communications which may be transmitted/received from/at the central control room, either over the line communication system or over the radio telephone network.

(iii) A separate PBX for internal communication within the headquarters, with direct lines to the fire services command control room in Police Department and the concerned Secretary to the Government.

(iv) A high frequency 100 W radio telephone set for instant communication with each command control room, place as identical reserve set.

(v) A transistorized radio receiver, operating on batteries, on the same frequency at the H.F. radio telephone set.

(vi) A large size wall map with lights to indicate all fire stations in the state each of this lights should be capable of being controlled individually from the central control.

(B) **Command control Room**  :- The purpose of the command control room is to provide a monitoring and information facility to the Chief Fire Officer of the command, so as to keep him informed of all fire and other emergency incidents within his command, to mobilise the resources of any or all divisions within his command, if the incidents cannot be controlled by the resources of any single Division. The following equipments is recommended for each command control room. –

(i) A three position communication line between the command control room and each of the 3 fire service divisional control rooms within the command.

(ii) At least two auto-telephones.

(iii) A set of automatic recorders for recording all communications which may be transmitted/received at/from the command control room either over the line communication system or over the radio telephone system.

(iv) A separate PBX for internal communication within command Headquarters and direct lines to each of the 3 fire service divisional controls within the command and the police department.

(v) A 100 W high frequency radio telephone set, operating on the same frequency as the central control room set alongwith an identical reserve set.

(vi) A transistorised radio receiver, operating on batteries, on the same frequency as the high frequency radio telephone set.

(vii) A large size wall map of the area under the command with lights to indicate all fire stations, within the command, similar to the one in central control room.
Fire Service Divisional Control Room: This will be a monitoring and information centre for the Division so as to keep the Divisional Fire Officer informed about the fire and other incidents within his division and to enable him to utilise the resources of any or all fire stations within his division as may be necessary. The following equipments recommended for each fire service Divisional Control Room:

(i) At least two auto-telephones.

(ii) A set of automatic recorders for recording all communications which may be transmitted/received from/at the Divisional Control Room.

(iii) A separate PBX for internal communication within the Divisional Headquarters and for all non-operational communications.

(iv) A 100 W high frequency radio telephone set operating on the same frequency as the H.F. radio sets.

(v) A PBX for instant communication with the Police Department, Water works, other essential services and internal communications.

(vi) A large size wall map of the area covered by the Division and other adjoining Divisions.

(vii) A transistorised radio receiver, operating on batteries on the same frequency as the H.F. radio set.

(viii) A 50 W VHF radio telephone set, in addition to H.F. set, alongwith an identical reserve set.

(ix) A separate transistorised radio receiver on VHF frequency.

Fire Station Watch Room: The purpose of the fire station watch room is to ensure expeditious receipts of fire calls and dispatch of appliances to the scene of incident. It also facilitates the dispatch of additional assistance to the fire ground and establishment of contact with all essential services, whose assistance may be necessary for successful fire fighting and rescue operations.

The following equipments are recommended for each watch room:

(i) A single position console with facilities for received fire calls, either directly from the public or from the Divisional control room, as may be necessary in each case, and for contacting Police and other essential services, as may be necessary.

(ii) An illuminated grid map of the area covered by the fire station with controls for lighting up any particular grid from the console.

(iii) Necessary switch for operating the fire bells and public address equipment (with the microphone on the console).

(iv) A 50 W VHF radio telephone set on the same frequency the VHF set in the divisional control room.

(v) A transistorised radio receiver, operating on batteries, on the same frequency as the VHF radio set.

(vi) Facilities for non-operational communications should be provided through an independent telephone in the fire station office.
Mobile Radio Telephone Stations on Fire Appliances: Each mobile fire appliance, including each Command car and motor cycle, should be equipped with a 25 W mobile VHF radio telephone set with a choice of 2 frequencies (1) for communication with the fire station watch room, and (2) for fire ground communication with walkie-talkie sets.

Each appliance should also carry at least one walkie-talkie set (radio Telephone set) for fire ground communications with the fire appliances.

13 Water Supply

13.1 Standardization of the types of fire fighting appliances as recommended earlier, will automatically ensure adequate water for firefighting within the urban areas. However, Fire fighting in industries may require additional water resources.

13.2 For towns covered by fire stations it would be necessary to ensure that sufficient water would be readily available for fire fighting. For this purpose, all available natural resources of water may be surveyed and tapped. In addition, storage tanks should be constructed at suitable locations within the towns where volunteer fire stations are to function.

14 Mutual Assistance

Mutual assistance plans should also be drawn up between neighboring State Fire Services on a ‘no charge’ basis.

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