

1. SCOPE

The scope of this procedure is to ensure safety of life, protection of environment and property. This procedure only applies to;

Manufacturing Facility

YASKAWA India Private Limited
No. 17/A, 2nd Main Electronic City
Phase - I Hosur Road,
Bangalore – 560100.

2. OBJECTIVE

The objective of the On-Site Emergency Plan procedure should be to make maximum use of the combined resources of the works and the outside services to:

- Effect the rescue and treatment of casualties;
- Safeguard other people;
- Minimize damage to property and the environment;
- Initially contain and ultimately bring the incident under control;
- Provide authoritative information to news media (if required);
- Secure the safe rehabilitation of affected areas;
- Preserve relevant records of equipment by the subsequent enquiry into the cause and circumstances of emergency;

3. RESPONSIBILITY

It is the responsibility of the Steering Committee to adhere and implement this procedure, it is the responsibility of all employees to co-operate and act on the advice of the Steering Committee

4. DEFINITION

NA

5. PROCESS FLOW

NA

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6. PLAN

6.1. Nature of Emergency

Sl. No.	Emergency	Source	Effect
1	Fire / Explosion	Electrical Panels, Flammable oil storage tanks, Compressors, coolants, paints, etc.	Small fires, complete equipment loss, complete area burns out. Air pollution Soil pollution. Dangers to Human beings
2	Spillage of flammable / Hazardous Oils & coolants etc.	Hydraulic oil, Coolant etc.	Fire Burns Soil pollution. Injury by slippage
3	Electric Shock	Electrical panels, Power Distribution Board, DG Set, Voltage stabilizer, Electric Transformer & Machine Operated by electricity, etc.	Burns, suffocation, Death. Toxic chemical ingestion into blood stream
4	Accidents – Factory (Major)	Fall from height & Falling of Heavy Materials, Bins or other Heavy object	Fracture
5	Accidents-Transport	Accident due to transportation of man & material	Death or Injury to Body
6	Personal confinement	Toilets, Basement	Suffocation
7	Natural calamities such as storm, earthquakes, etc.	Nature	Structural collapse, Death
8	Structure collapse	Office building, & Any Wall or part of Factory building.	Serious injury, Major Fracture, Death
9	Riots, Arson, Sabotation	Anti-Social elements.	Serious injury, major Fracture, Death.
10	Electric fire	Fire Hazard	Serious injury, Death
11	Office fire	Fire Hazard	Serious injury, Death
12	Person on flames	Fire Hazard	Serious injury, Death
13	Food/Water Poisoning	Health Hazard	Poisoning, Death
14	Bomb hoax	Bomb threat	Explosion, Death, fear
15	Burn-Minor	Health Hazard	Burn injury
16	Electric shock casualties	Health Hazard	Injury, Death
17	Insects / Snake bite	Health Hazard	Ill Health, Death
18	STP overflow	Health Hazard	Soil Pollution, Ill Health

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6.2. Emergency Management & Key Persons

During the emergency situation it is generally seen that chaos and confusion rules leading to more damage. In Emergency Management, just like in normal operations where there are managers, engineers, supervisors, operators etc., who are assigned specific tasks to run the business, similarly during emergency also there are persons with specific duties. These persons are known as “Key Personnel”.

FOLLOWING ARE THE PERSONS WHO ARE RESPONSIBLE TO FACE THE EMERGENCIES.

❶ Dy. COO -HR & GA Harish B S Office: +91 80 42441906 Mob: +91 9845351918 Email: harish_bs@yaskawa.in	❷ EHS Officer Bhumika B Office: +91 80 42441912 Mob: +91 9632755996 Email: bhumika_b@yaskawa.in
❸ Production & Facility Manager Srinivas Murthy Office: +91 80 42441926 Mob: +91 9686922443 Email: srinivasa_m@yaskawa.in	❹ Chief Finance Officer Tomomi Omori Office: +91 80 42441903 Mob: +91 9686921117 Email: tomomi_omori@yaskawa.in

6.3. Roles & Responsibilities**6.3.1. Any Individual**

When an emergency occurs, the person who observes it must evaluate the gravity of the emergency and he should alert all the factory personnel by activating the Emergency Siren. The emergency siren is activated just by breaking the glass using hammer provided at the Emergency Manual Call points located at the exit doors & other different locations. Then he immediately reports to the Main Security gate and informs about the Emergency location.

6.3.2. Security Officer

Security Officer will be responsible for firefighting. On hearing the fire alarm, he shall call the fire station immediately and advise fire in the factory. He will convey the message to the EHS officer about the incident zone. He will direct the emergency services.

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6.3.3. Department Heads

The HODs will report to EHS Officer and provide assistance as required. They will decide the staff they require at the incident site.

6.3.4. Maintenance Team

Maintenance team will report the scene of the incident and close down the services as directed by the Steering Committee

6.3.5. First-Aid Team

The Security shall keep the roll call lists for the Fire fighting and First Aid team on duty. The First Aid team is appointed by Steering Committee.

Department heads shall check their rolls as member of the services and report for emergency duty. Name of unaccounted persons or absentees will be informed to the Security Officer. Members of First Aid teams will report to the EHS Officer on hearing the alarm and follow his/her directions.

6.3.6. Fire Fighting Team

The duty of the Fire Fighting personnel shall be responsible for firefighting. On hearing the alarm, they shall proceed to the place of incident, if known, or otherwise they shall report to the Security Gate. The men at security Gate shall find the location of the emergency, the equipment and proceed to the site or occurrence. At the site, the team will respond to the directions given by the EHS Officer.

6.3.7. Rescue Team

After confirmation of the emergency location from the EHS Officer, concerned teams will start functioning. The rescue team will co-ordinate and communicate with the management.

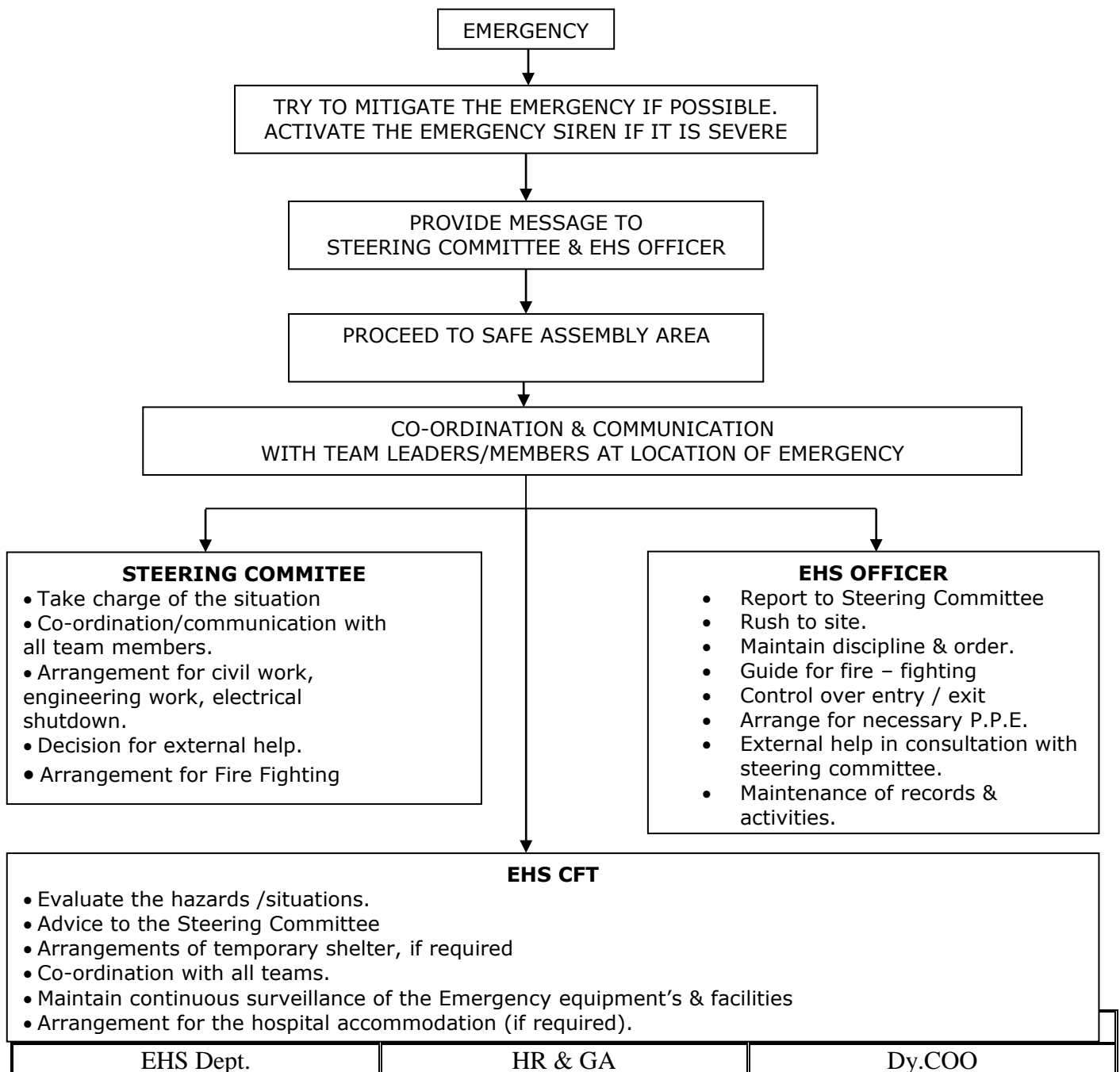
The team member fights the emergency. The team will ensure that:

- The emergency does not spread.
- The head count is taken in consultation with Department Heads, and if necessary, search operation for missing person/s. is under taken.
- Every member of the team uses the required Personal Protective Equipment while operation is going on.
- First aid is arranged.
- Additional firefighting equipment's for the firefighting team are arranged.
- Smooth rescue operation is facilitated.
- Emergency will be informed to fire brigade, neighboring industries (if required).
- Medicines are provided (based on the requirement).
- Send injured to hospital if necessary.

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- Records of first aid and hospitalization are maintained.
- Help of other people is taken to control emergency (if required).
- Remaining part of the plant is safe.
- Area is cordoned off.
- Necessary tools, equipment to handle any repair work are mobilized.
- Main power supply line is cut – off if necessary.
- Maintenance and repair are undertaken.
- Conduct safety committee meetings every 3 months or in case of any emergency.

ROLES & RESPONSIBILITY (FOR INDIVIDUALS)



6.4. Safe Assembly Point

Safe assembly point is displayed at front of main gate and known to every one which is ensured at time of safety audit. The area of safe assembly point has been set at farther from the location of likely hazardous events, where employees, contractors and visitors must assemble in case of emergency. Up- to date list pre –designated employees must be available with the EHS Officer at the assembly point in case of assembly of the employees. The head of the department’s shall then do the roll call of the people present so that their presence can be marked.

6.5. Alarm Rising System

The factory “Main Fire Panel” placed near security room is used for indicating the incident zone.

6.6. Emergency Responding Procedure

In case of Fire / Explosion / natural calamity etc. any person noticing it must evaluate the severity of the emergency and he should alert all the factory personnel by activating the Emergency Siren. The emergency siren is activated just by breaking the glass using the hammer provided at the Manual Emergency Call Points provided near the exit gates. Then he immediately reports to the EHS Officer and informs about the Emergency location. As soon as alarm is heard, the safety team members will contact the Security office at the Main Entrance and the safety team will rush to the Emergency location.

6.7. Communication System

Alarms should be followed by a verbal shouting. In case of failure of alarm system, communication should be by mobile phones, landlines etc. for emergency. If everything fails a messenger(person) could be used for sending the information.

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6.8. Action Plan for Various Emergencies

Sl No.	Emergency	Actions to mitigate the emergency	Responsibility to respond
1	Fire / Explosion	Raising emergency alarm	One who observes Fire or explosion
		Shut down machines and Main power supply	One who observes Fire or explosion / Prod in charge / Maintenance team
		Evacuation, Assembly at Assembly Point.	All employees
		Fire fighting	Fire Fighting team
		Rescue Operation	Rescue team
		First aid or Hospitalization	First Aid team
		Final Declaration of "All Clear" Situation	Steering Committee
2	Major Spillage of flammable / hazardous oils	Raising emergency alarm	One who observes the major spill
		Switch Off Power Supply of the equipment	Concerned supervisor, Maintenance engineers
		Evacuation, Assembly at Assembly Point	All employees
		Isolate & Barricade the area of spill	Process Owner
		Control the spillage to avoid spread	Process Owner
		Stop all the work related to electric	Process Owner
		Fire fighting	Firefighting team
Final Declaration of "All Clear" Situation	Steering Committee		
3	Electric Shock	Switch Off Power Supply of the equipment	Concerned supervisor, Maintenance engineers
		Rescue the person.	Concerned supervisor, Maintenance engineers, Rescue team
		Call the ambulance, provide first aid	Department Head
4	Accidents – Factory (Major)	Contact doctor/ rush to hospital	Departmental Head
		Rescue Operation	Rescue team
5	Accidents-Transport	Contact Ambulance/ Hospital, provide first aid, Inform HR Dept Inform Police	Concerned Person HR dept
6	Personal confinement	Call fire brigade	One who has observed the situation
		Raising emergency alarm	
7	Natural calamities such as storm, earthquakes, etc.	Evacuation, Assembly at Assembly Point	All employees
		Raising emergency alarm	One who observes the calamity such as storm, earthquake
		Isolate & Barricade if necessary	Security
		Fire fighting	Firefighting team
		Rescue Operation	Rescue team

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		Hospitalization	First Aid team
		Evacuation, Assembly at Assembly Point	All Employees
		Final Declaration of "All Clear" Situation	Steering Committee
8	Structure collapse	Raising emergency alarm	One who observes the such situation
		Evacuation, Assembly at Assembly Point	All employees
		Isolate & Barricade if necessary	Security
		Rescue Operation	Rescue team
		Hospitalization	First Aid team
		Final Declaration of "All Clear" Situation	Steering Committee
9	Riots, Arson, Sabotaging (Outside the premise)	<p>Inform Steering Committee, Security, immediately.</p> <p>Inform the Police immediately.</p> <p>Inform Hospital immediately to prepare for any emergencies.</p> <p>The gates should be closed and no person and vehicle should be allowed to leave the company premises.</p> <p>Security should man the gates with full force and should prevent entry of any unauthorized person inside the company premises.</p> <p>In case of more than 8 hours of riot situation, Admin should ensure adequate food and water is available for the employees.</p> <p>Once all clear signal is received from the police, normal operation shall resume in the organization</p>	<p>Concerned person</p> <p>Steering Committee HR dept</p> <p>Security</p> <p>Security</p> <p>Admin in charge</p> <p>Dept. HOD</p>
10	Electrical Fire	<p>1.Disconnection of the electric supply of the affected area.</p> <p>2.Attempt to extinguish the fire with the help of DCP/CO2 fire extinguishers</p> <p>3.If the fire still persists, ensure complete isolation of electric supply of that area and use of water.</p>	Maintenance and fire fighting team
11	Office fire	<p>1.Disconnection the electric supply of the affected area.</p> <p>2.Attempt to extinguish the fire with the help of DCP/CO2 fire extinguishers</p> <p>3.Save all records from fire.</p>	Office staff and fire fighting team
12	Person on Flames	<p>1.Get a blanket</p> <p>2.The blanket can be held as a screen between the victim and the fire</p> <p>4.If possible, lay down the victim and wrap the blanket around the victim. Leave the victim wrapped in blanket and seek</p>	Firefighting team

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		medical help	
13	Food/Water Poisoning	<p>1. Persons observing the symptom should inform the location in charge for assessing the situation</p> <p>2. In charge should call the doctor and ambulances and also alert all hospitals to meet any exigencies</p> <p>3. To render first aid and induce vomiting to the affected persons</p> <p>4. The ambulances and vehicles available should be mobilized to be in readiness to transport large number of people if required</p> <p>EHS Officer to report to location for required sanitation and medical assistance.</p>	First Aid team
14	Bomb Hoax	<p>1. Person noticing on object like bomb, should bring it to the notice of the nearest available officer.</p> <p>2. The officer should carefully observe the same from a distance and raise alarm</p> <p>3. The area should cordon off.</p> <p>4. Police control and fire control to be informed for their arrival and inspection of the area.</p> <p>After the bomb is diffused, all clear signal should be provided by Steering committee</p>	Concerned person/ Admin dept
15	Burn –Minor	<p>1. Pour cool water on the burn area till the burning sensation is reduced.</p> <p>2. Cover it lightly with a clean cotton cloth.</p> <p>3. Do not apply butter, oil, ointments or any home remedies</p> <p>4. Get Medical help</p>	First aid team
16	For Electric shock casualties	<p>Electric shock results in irreversible damage to brain cells followed by deterioration of the other organs.</p> <p>Rescue and first aid.</p> <p>Do first thing first, quickly and without fuss or panic. Switch off the supply if this can be done at once. If not possible, use a dry stick, dry cloth or other non conductor to separate the victim of electrical contact. The rescuer must avoid receiving shock himself by wearing gloves or using a jacket to pull</p>	First aid team

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		the victim.	
17	Insects / Snake bite	Insects / Snake bite results in unconsciousness, ill health and may also lead to death. 1. Wash the infected area with saline water 2. Cover the infected area with sterilized cotton cloth 3. Get immediate medical help	First aid team
18	STP Overflow	1. Isolate the area and provide barricades 2. Communication to the concerns	Safety Officer HR & GA

6.9. Do’s and Don’ts

All company employees

<u>Do’s</u>
<ul style="list-style-type: none"> • Stop work on getting information or hearing the alarm. • Switch off the machines and main power supply. • Gather at safe assembly point. • Contact Management • Take visitors to safer place.

<u>Don’ts</u>
<ul style="list-style-type: none"> • Do not panic & cause stampede. • Do not run and prevent others from doing so. • Do not go anywhere else. • Do not wait to collect personal belongings.

6.10. Visitors & Contractors

After hearing the alarm, they will follow the following steps:

1. Give attention to all instructions.
2. Stop the work. Do not panic.
3. Do not wait for personal belongings.
4. Assemble at safe assembly point.
5. Do not go to the emergency site.
6. Do not spread rumors.
7. Do not engage communication systems.

6.11. Training

The employees will be informed about, “On–Site Emergency Plan” in detail, with the help of training programme. For the success of this plan not only training will be organized but mock drills also will be organized twice in a year. Mock drills will help to understand the role to be played by everyone during the emergency. The Core members of Safety Team will be given the refresher training at the interval of every One Year.

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6.12. Mock Drill Procedure

The success of the “On–site emergency plan” is very much dependent on planned and unplanned mock drills. Mock drills help employees to be familiar with their roles, and ensure accuracy of the onsite Emergency Plan.

Following is the procedure for conducting a Mock drill.

- Inform all the employees about mock drill procedures.
- Fix the date and time for planned mock drill.
- Mock drill will be monitored by observer/s not involved in the exercise.
- Emergency alarm will be raised.
- After hearing the alarm, Emergency Procedure will be followed. All clear signals will be given after emergency is over.
- Observer/s will note down the activities with respect to the time.
- Gap observed in the system will be studied carefully.
- Records of drills will be maintained.

After each drill, the plan will be thoroughly reviewed to take into account of the omissions or shortcomings for improvement.

6.13. Information on Preliminary Hazard Analysis (PHA)

The Diesel Generator, Compressor facility has been designed and installed in safer condition however the exposed parts like safety relief valve vents, drain valves, flanges joints, pipe lines may be chances of leakage of diesel/oil and if not controlled in time, can come in contact with source spark from the area in the vicinity to cause fire/explosion.

About 200 liters of Diesel (1 drum) is located at isolated area in the plant. The same is cordoned off and with enclosure and is in possession of responsible person.

In addition to this about a total of 5 liters of Iso propyl alcohol is being stored in respective areas in a container which is required for cleaning the components.

6.14. Location of Dangerous substances

- Diesel which can cause emergency is stored in vertical storage MS drum of 200L capacity in isolated area.
- About a total of 5 liters of Iso propyl alcohol in small containers is stored in respective usage areas.

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6.15. Likely Dangers to The Plant & The Extent of Effects

- Fire/ Explosion at Diesel Storage area: The fire will be localized limited to fenced area only.
- Explosion in Air Compressor. Exposure will be limited to the surrounding area.
- Fire due to Iso propyl alcohol etc., Exposure will be limited to the respective user area.

6.16. Updating the Plan

As and when required, this ‘On – Site Emergency Plan’ will be updated and informed to all. If necessary, after each drill the plan will be thoroughly reviewed to take account of shortcomings.

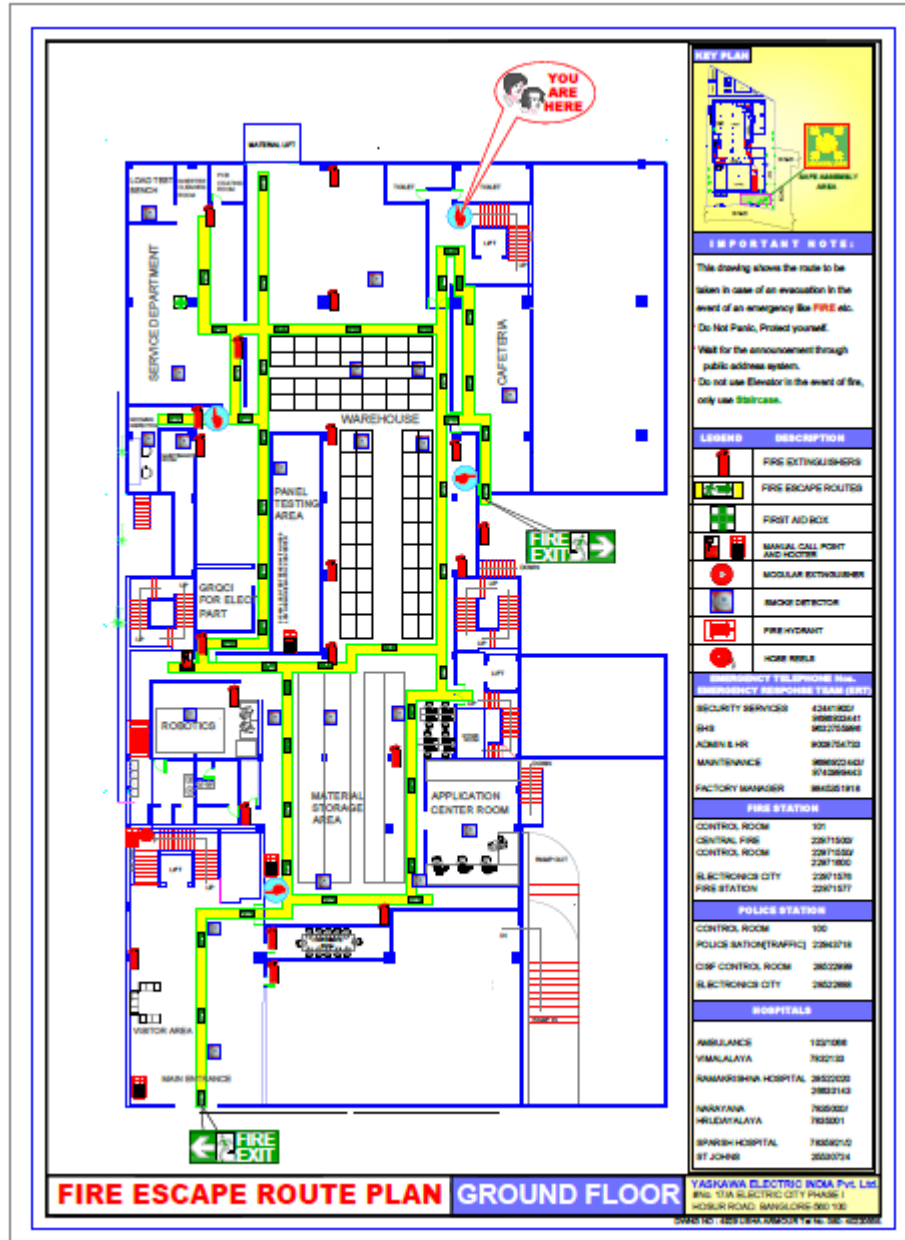
6.17. Emergency Contact Details

Office			
Facility Head	9845351918	Security	42441900/ 9686933441
HR & Admin	9008754733	Maintenance	9686922443
EHS	9632755996		
Others			
Police Station (Law & Order)	22943469/28520824	BETL Office	28520119
Police Station (Traffic)	22943718	BETL Toll free	18004258444
CISF Control Room	28522999	BSNL Office	28521111/28520200
ELCIA Security & Traffic Hub	28522888	BESCOM Office	28520555
Fire Station – E City	22971576/22971577	NICE Road Toll free	672280026/27

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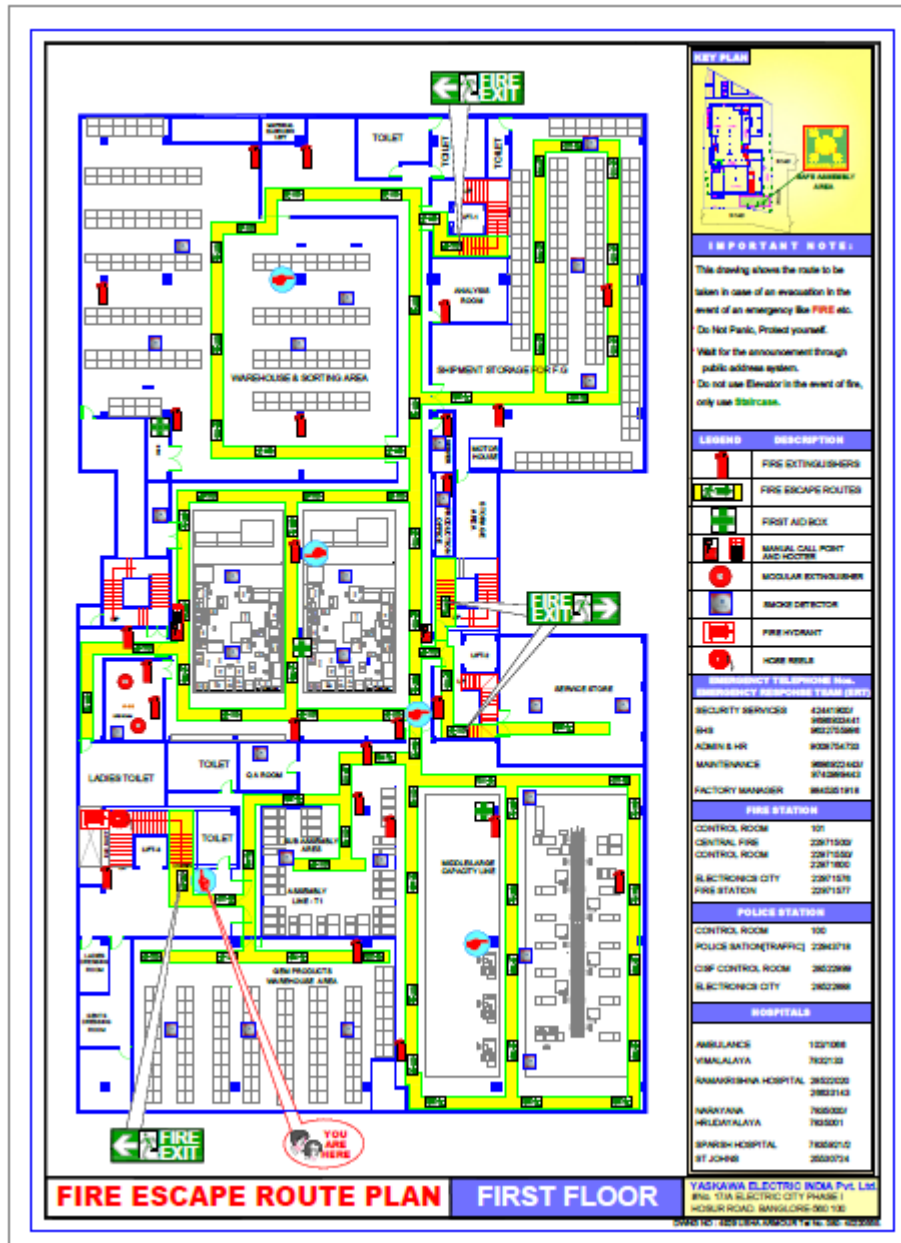
6.18. Evacuation Map

a. Ground Floor



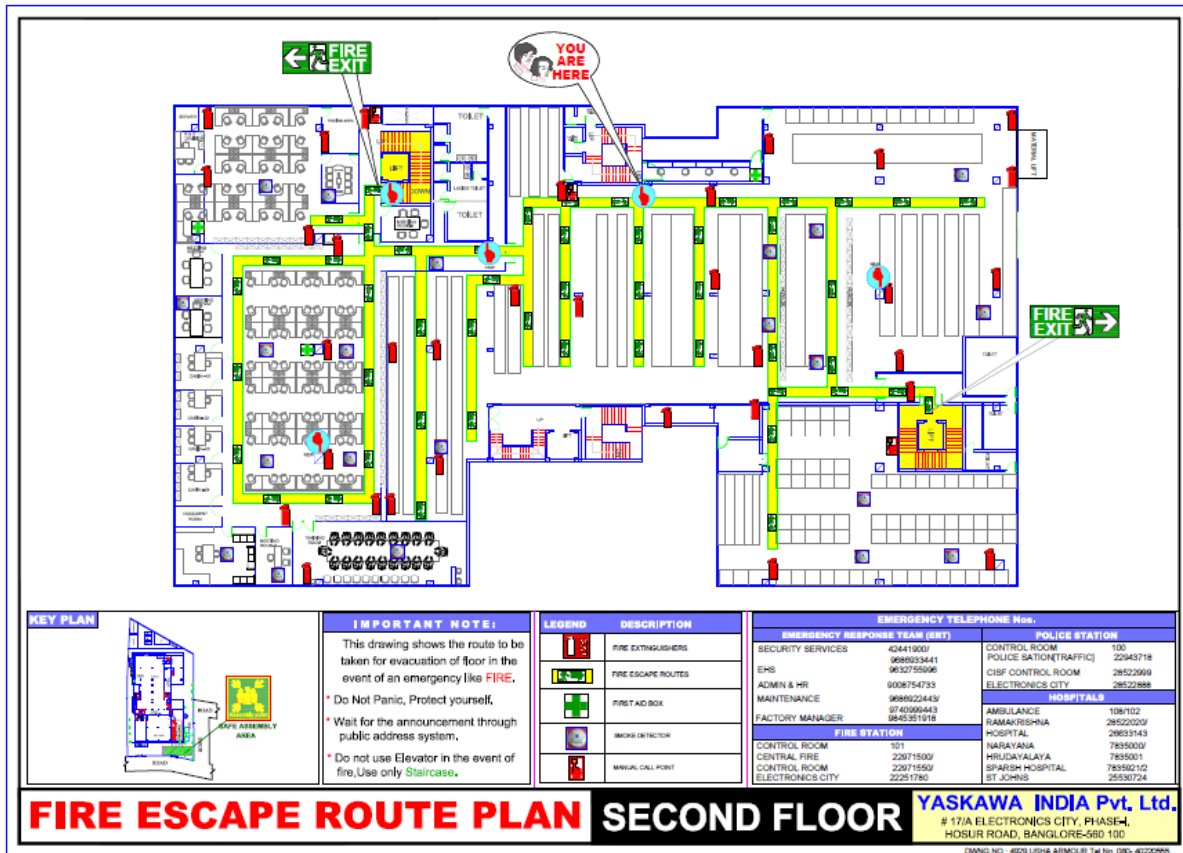
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b. First Floor



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c. Second Floor



7. RELATED DOCUMENTS

1. Ledger of statutory requirements
2. Review of Corrective Action Report
3. Mock Drill Report
4. Training Plans

8. REVISION HISTORY

Date	Rev	Reason for Revision
27.11.2018	A	Combined “Incident Response” Procedure & “Emergency Preparedness” Procedure to “On-site Emergency Plan”
06.12.2018	B	Insects / Snake bite & STP Overflow added into Emergency condition (6.1) & in Action Plan (6.8)
01.10.2020	C	Updates on responsibility people change, Emergency contact details and fire escape route plan

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