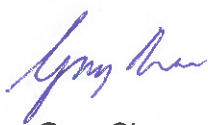






# Business Continuity Manual

## Business Continuity Plan: B3

### Lifts & Escalators

		Signature	Revision	Effective Date
Updated By	Senior Manager APM System TSS	 Gary Chan	35	May 2024
Updated By	Assistant General Manager Estate Management TOD	 Vincent Lui		
Updated By	Assistant General Manager Land Transport & Landscape LD	 Sanna Tam		
Reviewed By	Assistant General Manager BCP, SSBC	 Emily Chu		
Approved By	General Manager SSBC	 David Jea		

Blank Page

## **BCP – B3. Lifts & Escalators Table of Contents**

<b><u>ITEM</u></b>	<b><u>SUBJECT MATTER</u></b>	<b><u>PAGE</u></b>
A	System Description	B3.5
B	Physical System Risk	B3.7
C	Contingency Planning	B3.8
D	Contingency Procedures	B3.8
E	Interface with Other Operational Organizations during Contingency	B3.8
F	Drill Plan	B3.8
G	Procedure for Handling of Lifts Incidents	B3.9
H	Procedure for Handling of Escalators and Moving Walkways Incidents	B3.15

Blank Page

## **A. System Description**

### **1.0 Lifts**

1.1 There are passenger lifts, goods lifts, firemen lifts, dumbwaiters, dock levelers and scissors lifts.

1.2 The total number of lifts and their locations are as follows:

<b>Locations</b>	<b>Total Units</b>
Terminals & Concourses: <ul style="list-style-type: none"><li>• Terminal 1 (T1)</li><li>• Sky Bridge</li><li>• T1 Satellite Concourse (T1S)</li><li>• T1 Midfield Concourse (T1M)</li><li>• SkyPier Terminal (SPT)</li></ul>	110 13 8 23 17
Airside: <ul style="list-style-type: none"><li>• Integrated Airport Centre (IAC)</li><li>• Backup IAC</li><li>• T1M Ramp Office</li><li>• New APM Depot</li></ul>	3 1 1 9
Landside: <ul style="list-style-type: none"><li>• Ground Transportation Centre (GTC)</li><li>• Limousine Lounge</li><li>• Government VIP Lounge</li><li>• Car Park 4</li><li>• AEL Platform</li><li>• Airport Authority Building (AAB)</li><li>• HKIA Tower</li><li>• HKIA Tower Two</li><li>• HKIA Commercial Building</li><li>• HKIA Community Building</li></ul>	12 2 2 6 3 2 8 7 6 8

1.3 There are 4 maintenance contractors, namely Mitsubishi, KONE, Otis and TK Elevator.

1.4 Every lift is equipped with emergency lighting, ventilation fan and alarm button with intercom system connected to IAC. In case of any emergency, the trapped passenger(s) could press the alarm button and communicate with Duty Staff at IAC.

1.5 All lifts are equipped with CCTV.

## 2.0 Escalators

2.1 The total number of escalators and their locations are as follows:

Locations	Total Units
Terminals & Concourses: <ul style="list-style-type: none"><li>Terminal 1 (T1)</li><li>Sky Bridge</li><li>T1 Satellite Concourse (T1S)</li><li>T1 Midfield Concourse (T1M)</li><li>SkyPier Terminal (SPT)</li></ul>	82 20 6 16 10
Landside: <ul style="list-style-type: none"><li>Ground Transportation Centre (GTC)</li><li>Limousine Lounge</li><li>Government VIP Lounge</li><li>HKIA Community Building</li></ul>	4 1 2 6

2.2 There is one maintenance contractor namely TK Elevator.

2.3 Every escalator at T1, Sky Bridge, T1M, and SPT is equipped with 2 emergency buttons at each end of the escalator whereas those at GTC and T1S are equipped with 1 emergency button at each end of the escalator. In case of an emergency, any person could push the emergency button to cease the escalator with a descending speed.

2.4 For escalator with vertical rise greater than 10m, an additional emergency button (covered by a transparent plate) has been installed in the middle of the escalator.

## 3.0 Walkways

3.1 The total number of walkways and their locations are as follows:

Locations	Total Units
Terminals & Concourses: <ul style="list-style-type: none"><li>Terminal 1 (T1)</li><li>Sky Bridge</li><li>T1 Midfield Concourse (T1M)</li></ul>	66 2 19

3.2 There is one maintenance contractor namely TK Elevator.

3.3 Every walkway at T1, Sky Bridge and T1M is equipped with 1 emergency button at each end as well as in the middle of the walkway.

3.4 In case of any emergency, any person could push the emergency button to cease the walkway with a descending speed.

## B. Physical System Risk

Risk	Description	Mitigation	
		Lifts	Escalators/ Walkways
Temporary Power supply failure (e.g. power dip)	Interruption of the service due to suspension of power - less than 0.2 second or remaining 40% current power.	No interruption	Resume within 60 minutes upon power resumption
Power supply failure	Interruption of the service due to suspension of power	i. No interruption for Fire and OOG lifts due to support from emergency power.  ii. Passenger lifts could be resumed within 60 minutes upon power resumption	Resume within 60 minutes upon power resumption
Trespassers	Unauthorized operation of the equipment	Master key system had been applied for the switch on/off of the equipment.	Master key system had been applied for the switch on of the equipment.

### **C. Contingency Planning**

In accordance with Contingency Procedures for Power Distribution System under Business Continuity Manual, supported by an interleave system, only one-third of the zone (say North check-in hall, South East Hall etc.) would be affected during suspension of power. TOD / LD Duty Teams would guide the passengers to use unaffected lifts, escalators and walkways accordingly.

### **D. Contingency Procedures**

1. For the handling of incidents of lifts, escalators and walkways, Maintenance Procedures as stated in Items G and H are referred.
2. The purpose of these procedures are to define the responsibilities of the concerned parties and to describe the activities associated with the handling of incidents related to lifts, escalators and walkways within the Airport Authority's buildings and premises.
3. These procedures apply to the following incidents or situations affecting lift, escalator and walkway services in any of the Airport Authority's buildings or premises, including:
  - i. Interruption or suspension of power
  - ii. Interruption of service due to improper use or equipment failure
  - iii. Interruption of service with or without passengers trapped

### **E. Interface with Other Operational Organizations during Contingency**

1. Lifts / Escalators / Walkways Maintenance Contractors (MC);
2. AA IAC;
3. AA TSI;
4. AA TOD; and
5. AA LD.

### **F. Drill Plan**

Drill by Maintenance Contractors and TSI on handling of incidents of lifts, escalators and walkways is conducted on annual basis.



## **G. Procedure for Handling of Lift Incidents**

### **1.0 Interruption of service with passengers trapped**

- 1.1 On receipt of a call regarding a lift failure from IAC operation staff, or any other channels, FRTMO shall verify the lift status via General Building Management System (GBMS) or Building Management System (BMS) whether there are passengers trapped in the lift affected. At the same time, FRTMO makes an emergency call to the Maintenance Contractor to arrange immediate attendance and necessary emergency works.
- 1.2 If there are trapped passengers, a representative from the IAC must be dispatched to the scene to co-ordinate with the Maintenance Contractor to release the trapped passengers.
- 1.3 The Maintenance Contractor at the scene shall report to FRTMO as far as possible to ascertain the apparent cause of the failure (i.e. whether it is a lift failure or other failure such as power supply). FRTMO communicates the lift Maintenance Contractor, using mobile telephone, or other suitable means, so that the Maintenance Contractor can carry out the repair works urgently as required.
- 1.4 If the Maintenance Contractor cannot attend the site within the prescribed time, or if any passengers trapped in the lift become hysterical and/or ill, the IAC operation staff at the scene shall contact Fire Services Department for assistance. After the release of any passengers from the lift, the maintenance contractor will diagnose the failure, rectify the fault and restore the lift to normal operation, and to submit an incident report with recommendations to the Building Electrical and Mechanical Team to prevent the recurrence of similar incident.
- 1.5 Refer to details of the handling procedures in the attached flow chart.

\*Note: 'Prescribed time' is the response time agreed with the lift maintenance contractor in accordance with the maintenance contract.

## **2.0 Interruption of service with no passengers trapped**

- 2.1 If no passengers are trapped, IAC operation staff as far as possible ascertains the location and floor of the lift affected while FRTMO verifies the lift status via GBMS or BMS. FRTMO forward the information to the Maintenance Contractor as soon as possible using telephone or any other suitable means.
- 2.2 Upon arrival, the Maintenance Contractor reports to FRTMO by mobile telephone, etc., and rectifies the fault and restores the lift to normal operation as per instruction from FRTMO. The lift failure or interruption to service will be recorded in the routine maintenance report and submitted to Building Electrical and Mechanical Team. The Maintenance Contractor will inform the FRTMO after the fault was rectified and the lift was reactivated. FRTMO will report the status to IAC at the same time.
- 2.3 Refer to details of the handling procedures in the attached flow chart.

## **3.0 Interruption or Suspension of Power**

- 3.1 If there is an interruption to or suspension of power, the operation of the lift service may also be interrupted. If any of the lifts have stopped, IAC operation staff will immediately call FRTMO to inform the Maintenance Contractor to check whether there are any trapped passengers inside the affected lifts.
- 3.2 If there are passengers trapped, the procedure described in Section 1.0 is followed, except diagnosing the cause of failure and recommendations regarding rectification are not necessary. If no passengers are trapped, the procedure described in Section 2.0 shall apply, except that, again diagnosis and recommendations are not necessary.
- 3.3 Refer to details of the handling procedures in the attached flow chart.

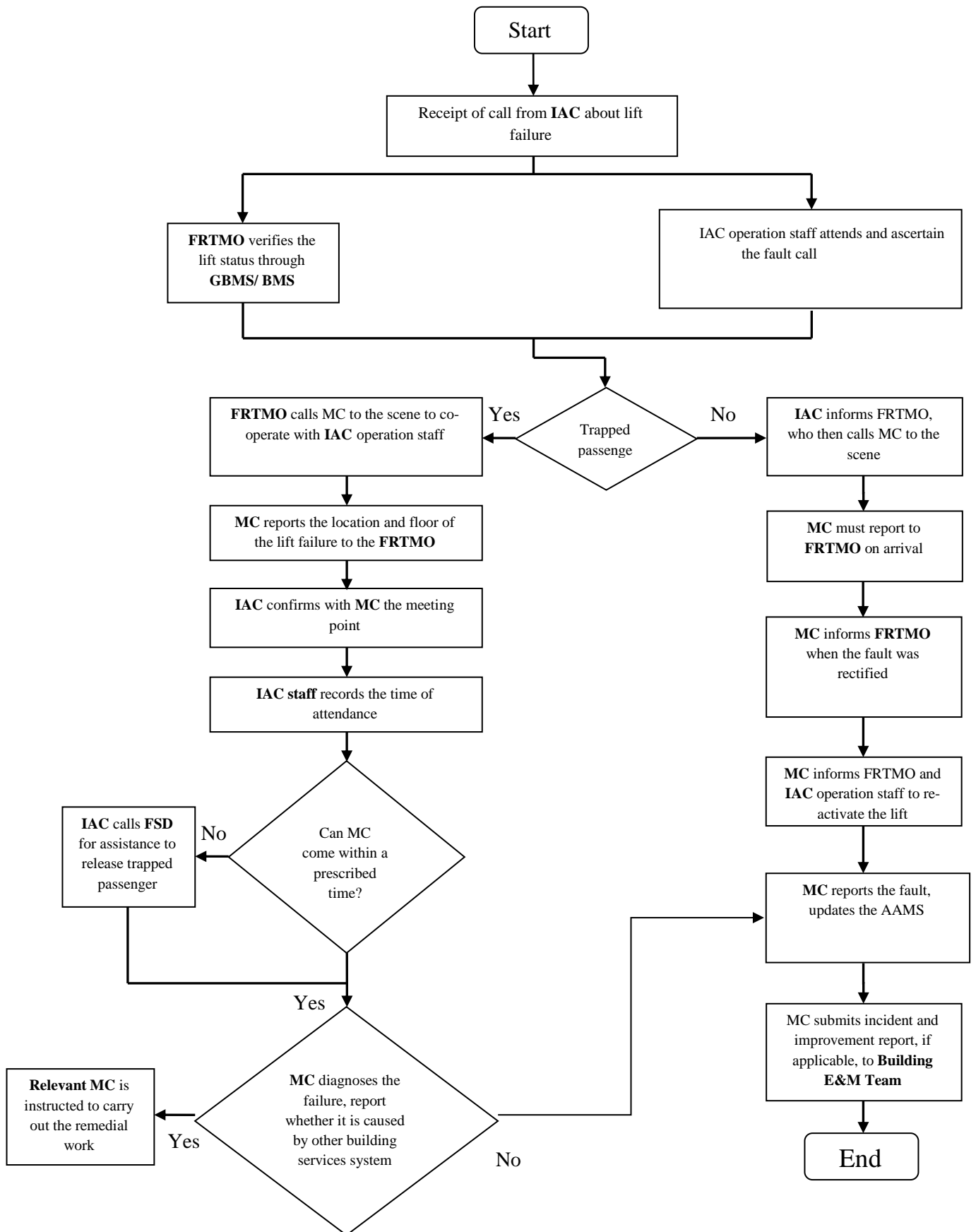
## **4.0 Interruption or Suspension of Lift Service**

- 4.1 If an interruption to or suspension of lift services is caused by careless, improper use or equipment failure such as accidental or deliberate jamming of the lift door safety edge, material trapped in the lift door track etc., the IAC operation staff are normally able to restore the lift to normal operation. If not, FRTMO will call the Maintenance Contractor for assistance.
- 4.2 Refer to details of the handling procedures in the attached flow chart.

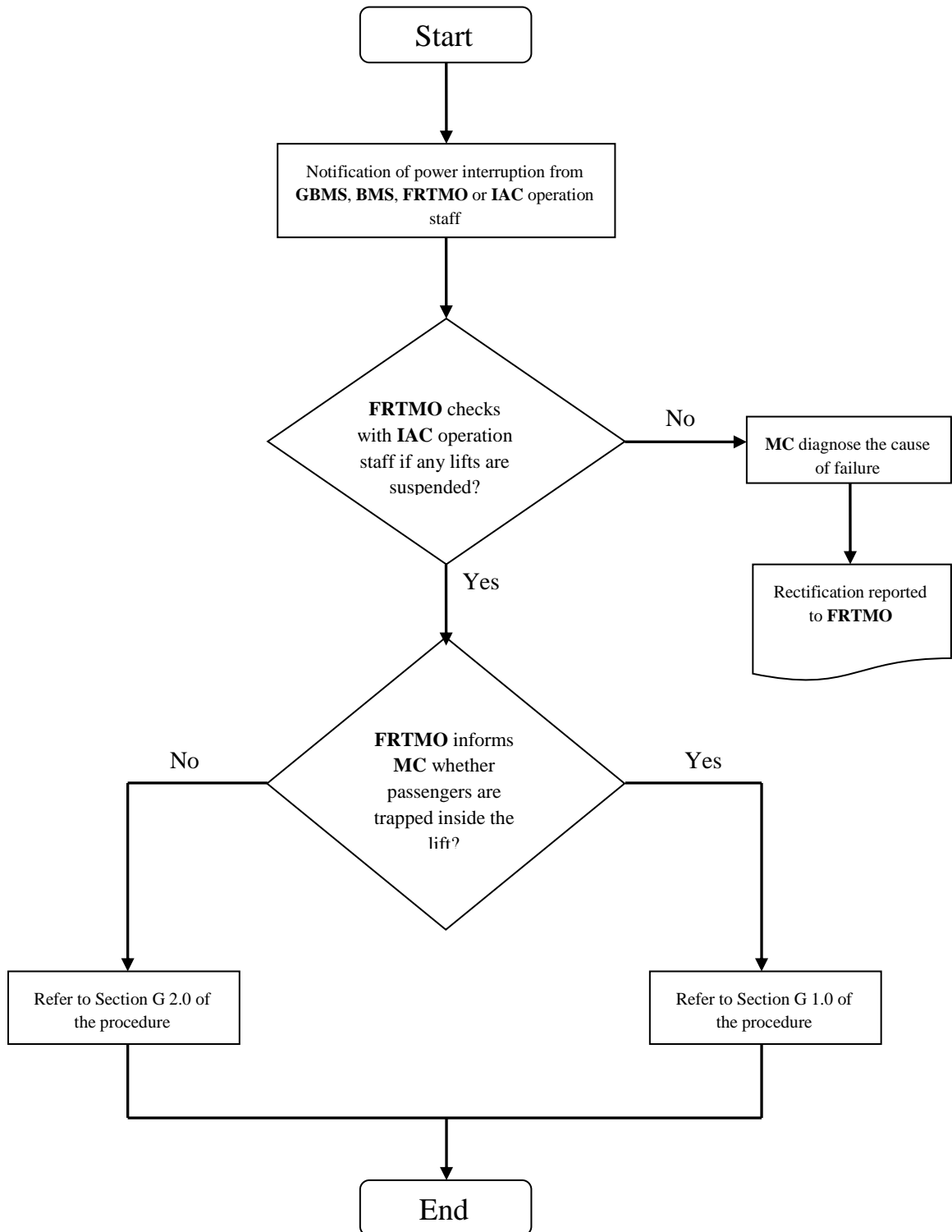
## **5.0 Management and Administration of the Work**

- 5.1 Service Request (SR) will be issued to the Maintenance Contractor for works related to Section 1.0 and 2.0 using the AAMS workstation in accordance with the procedures for “Unplanned Works Orders” set out in the maintenance contract. This type of works order is given a higher priority for the purpose of managing and controlling the workload.
- 5.2 During the repair work, staff from the Building Electrical and Mechanical Team are responsible for ensuring that the Maintenance Contractor provides all necessary fencing, and posts appropriate notices and temporary signage as required at the location.

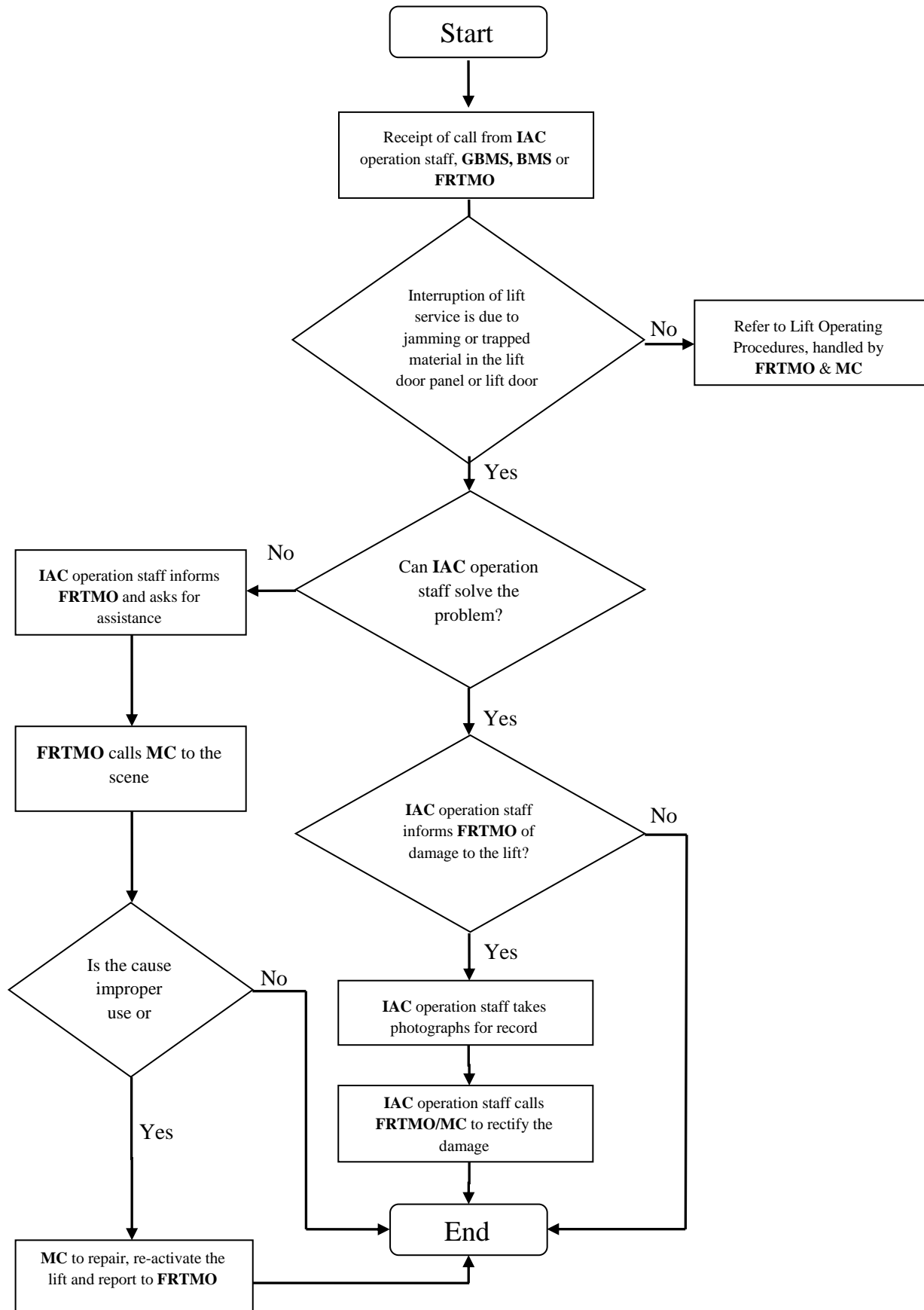
## LIFT FAILURE WITH PASSENGERS TRAPPED



## INTERRUPTION OR SUSPENSION OF POWER



## LIFT SERVICE SUSPENSION



## **H. Procedures for Handling of Escalators and Moving Walkways Incidents**

### **1.0 Interruption or Suspension of Power**

- 1.1 If there is an interruption to or suspension of power, the operation of escalators and/or moving walkways may also be interrupted. If any equipment has stopped, the FRTMO will immediately call the Maintenance Contractor for assistance.
- 1.2 The FRTMO verifies the location by means of the GBMS or BMS having ascertained this from the IAC operation staff.
- 1.3 The FRTMO calls the Maintenance Contractor to diagnose the cause of equipment shut down at the soonest practical time, restore the system to normal operational condition after detailed checking the safety devices and test. The Maintenance Contractor is required to submit an incident report to Building Electrical and Mechanical Team, to report the cause of breakdown and whether remedial/improvement work is required to prevent the recurrence of similar breakdown.
- 1.4 Refer to details of the handling procedures in the attached flow chart.

### **2.0 Interruption or Suspension of Service**

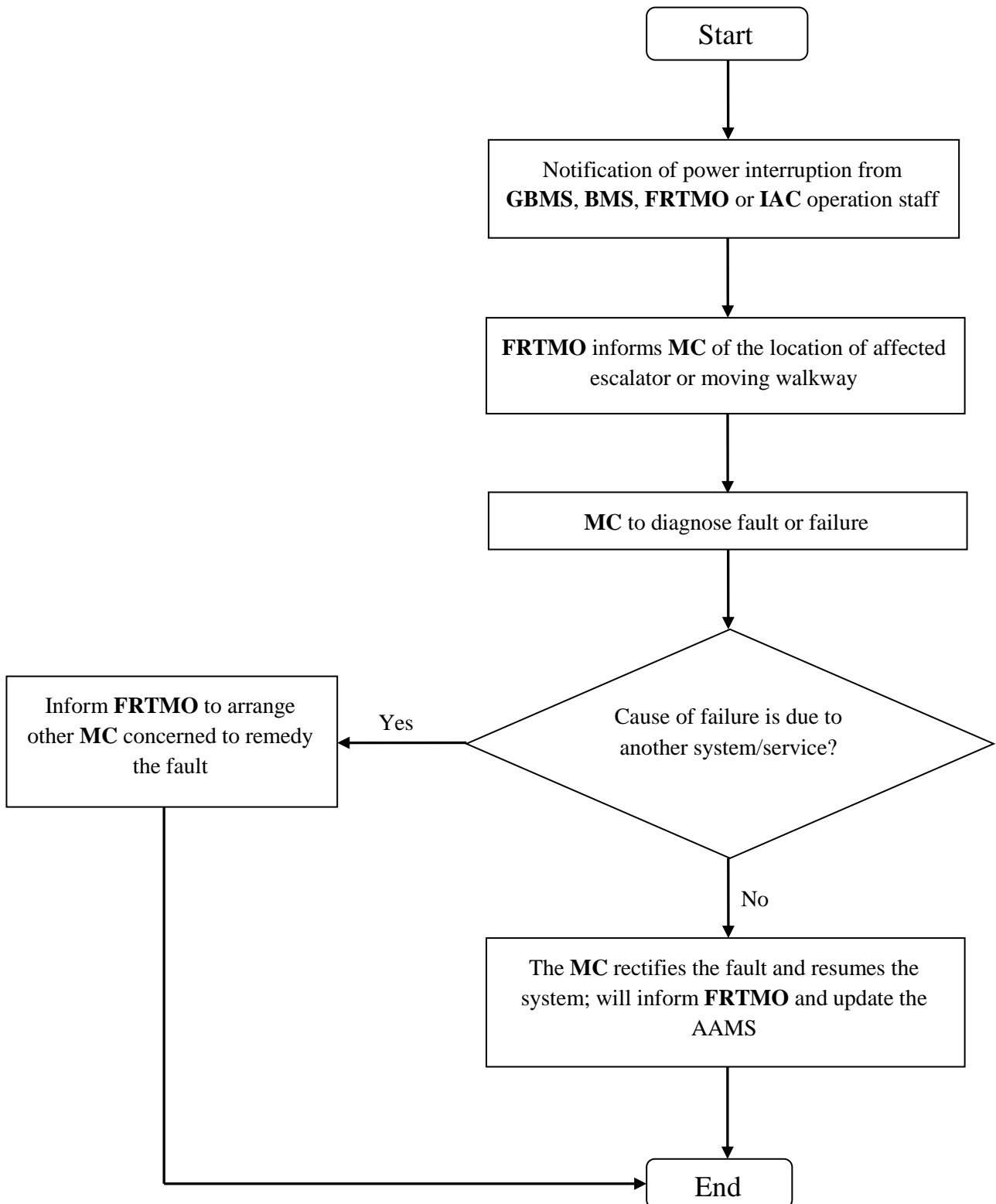
- 2.1 If an interruption to or suspension of the escalator or moving walkway service is caused by careless, improper use or machine failure such as accidental or deliberate jamming of the steps or pressing the emergency stop button etc., the FRTMO will immediately call the Maintenance Contractor.
- 2.2 The FRTMO instructs the Maintenance Contractor to diagnose the cause of equipment shut down and resume it at the soonest practical time.
- 2.3 If the incident involved any passenger injury, the Maintenance Contractor is required to submit LE27 to EMSD and report to IAC, TOD, LD and Building Electrical and Mechanical Team in 24 hours. The Maintenance Contractor must submit LE29 to EMSD and a full report to TOD, LD and Building Electrical and Mechanical Team within 7 days after the date on which the Maintenance Contractor notified of the incident.
- 2.4 Refer to details of the handling procedures in the attached flow chart.

### **3.0 Management and Administration of the Work**

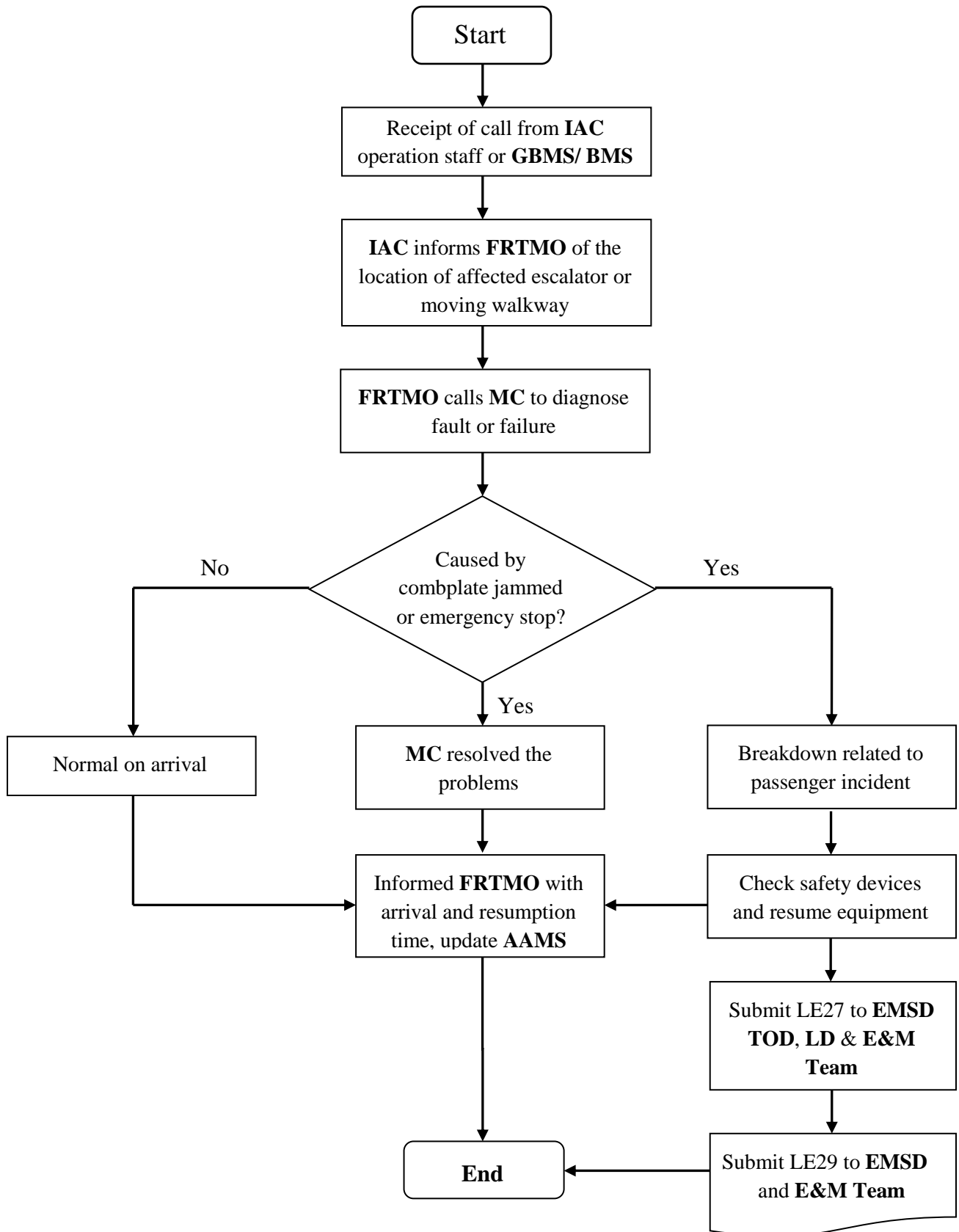
- 3.1 Service Request (SR) is issued to the Maintenance Contractor for works related to 1.0 and 2.0 using the AAMS workstation in accordance with the procedures for “Unplanned Works Orders” set out in the maintenance contract. This type of works order is given a higher priority for the purpose of managing and controlling the workload.
- 3.2 During the repair work, staff from the TSI is responsible for ensuring that the Maintenance Contractor provides all necessary fencing, and posts appropriate notices and temporary signage as required at the location.



## INTERRUPTION OR SUSPENSION OF POWER



## INTERRUPTION OR SUSPENSION OF SERVICE



End of BCP – B3