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ITSO & Facilities Buildings Fire

ITSO/OCC/SOP/EOP04.002	ITSO & Facilities Buildings Fire

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DOCUMENT CONTROL

REV	DOCUMENT TITLE & COPY NUMBER	Date	Prepared by	Reviewed by	Approved by
0	ITSO & Facilities Buildings Fire Copy____of ____	15th December 2009	Muhamad Ridha (OE)	Alfred Loh (SOE)	Soh Ling Tim (MOPN)
1	ITSO & Facilities Buildings Fire Copy____of ____	XX October 2013	Chiam Zhi Wei (DysOE) Chua Teck Leong (AOM, ITSO OCC)	Ng Soon Han, Frankie (DOM, ITSO OCC)	Yeo Se Lay (SM,Ops)
2	ITSO & Facilities Buildings Fire Copy____of ____	XX December 2020	Daniel Wu (AOM) Lye Keng Fatt (DM, ITSO OCC)	Ng Soon Han, Frankie (Mgr, ITSO OCC)	Yeo Se Lay (DDIT)

AMENDMENT HISTORY RECORD

Rev. No.	Effective Date of Change	Section & Sub-Section Amended	Amendments/ References	Party Requesting for Change
1	XX Oct 2013	Whole Document	Due to organization change of division name from ITSO to ITSO.	DOM, ITSO OCC
2	XX Dec 2020	Whole Document	Due to change of Staff Designations in ITSO OCC. Delete SOE, insert DM Delete DySOE, insert DyAM	Mgr, ITSO OCC

Section 1. Introduction

1.1.1   This document describes the handling process for fire incident occurrence in both the ITSO building and the tunnel facility buildings.

1.1.2   The tunnel facility buildings are normally unoccupied buildings housing mainly tunnel equipment and power distribution facility for tunnel. Maintenance personnel doing corrective or preventive maintenance work may at times occupy these facility buildings. These personnel are required to give ITSO OCC a contact number so that they can be contacted in times of emergency.

1.1.3   As for ITSO building, it is the nerve center for daily Singapore road operations. It houses all the equipment essential to perform this task, it also houses the OCC and all the related ITSO department. For any fire incident there is a need to evacuate all the personnel from the building.

Section 2. Personnel Involved

a)   ITSO OCC staff
b)   LTM & VRS staff
c)   Other ITSO department staff
d)   External Agencies

Section 3. Actions & Process

Sub-Section 3.1 ITSO Building Fire Incidents

3.1.1   Should any member of staff upon discovering a fire or signs of a fire, will carry out the following steps:

a.   Raise the alarm by operating the nearest break-glass (refer to Attachment 1 for location) to sound alarm and calling ITSO OCC.

b.   try to extinguish fire if possible using the appliances provided.

c.   If the fire is uncontrollable do not take risks, leave the area immediately.

3.1.2   The operation of the break-glass unit initiates the Fire Alarm Bells, which will ring continuously.

3.1.3   All ITSO staff and any persons within ITSO building on hearing the continuous ringing of the Fire Alarm Bells must evacuate the building immediately, by the safest Exit (refer to Attachment 3), and proceed to the Assembly Point in front of the building. Staff must ensure that they close all doors behind them.

3.1.4   The persons responsible for evacuation of their particular area must ensure that no one is left behind in their area of responsibility (Refer to Attachment 3 for name list of persons with area evacuation responsibility).

3.1.5   In the event of fire, the ITSO security shall ensure no person(s) or vehicles except for SCDF enter or re-enter the building.

3.1.6   On arrival of SCDF personnel, the DM shall liaise with the SCDF officer-in-charge of the incident.

3.1.7 The staff to remain outside the Control Building until the SCDF Officer confirms it is safe to re-enter

Sub-Section 3.2 ITSO Building Fire Incident (Actions by ITSO OCC Staff)

3.2.1 If the fire alarm is detected from the Fire System Main Terminal in the Control room, OCC staff will acknowledge the alarm quickly and off the buzzer.

3.2.2 Check fire alarm location. If the alarm location is in ITSO Building, one member of the OCC staff should proceed straight to the scene with the walkie-talkie, Telecom room key, Communication room key, Hydrant Cabinet key and Halon/FM200 Control Panel Key. The others will remain and carry on with the operations in the Control Centre.

3.2.3 After checking the location if the alarm is false, reset the alarm (Refer to ITSO/OCC/WM/SYS03.011for fire alarm Panel reset). If after reset the alarm occurs again do a check of alarm location. Reset fire alarm again if it is false and report to the maintenance contractor.

3.2.4 If the fire alarm location is in the following rooms :
   a) 2nd storey : Telecom Room, Communication Room, Computer Room and Control Room
   b) 3rd storey : TrafficScan Room, Transport Information (TI) Hub room and GLIDE Meeting Room (former GLIDE Computer Room),

OE shall take action to block the gas discharge (Halon or FM 200) and reset the control panel if there is a false alarm (Refer to ITSO/OCC/WM/SYS03.011 for Halon or FM200 Panel reset).

3.2.5 Upon confirming fire is real and if the fire is small, use the fire extinguisher or hose reel to extinguish it.

3.2.6 If fire is uncontrollable or becomes uncontrollable, inform the DM in the Control room to seek help from SCDF and Police. If the room belongs to those mentioned in 3.2.4 smash the break-glass and operate the manual release switch at the Halon/FM200 Control Panel to discharge the gas.

3.2.7 OE at fire site shall also activate the manual call point to raise the alarm for ITSO building evacuation.

3.2.8 DM shall call SCDF and Police for help and inform the Operations Manager and escalate to higher management.

3.2.9 If fire is in OCC or its immediate vicinity threatening the OCC, all operation staff must log out of their system and evacuate the OCC and leave the building immediately by the nearest safest exit to the Assembly point.

3.2.10 All operation staff should take the mobi-talk with them and DM will take the duty handphone and ensure the all staff in OCC has been evacuated and escalate to higher management via duty handphone (Refer to Attachment 6).

Sub-Section 3.3 Facilities Building Fire(FBs) Incident.

3.3.1   Upon notification of a fire via the FB fire alarm system or reports from public, use J-eyes (if possible) and send RC and LTM to reported area to investigate.

3.3.2   If the fire notification is confirmed false, DM will acknowledge the fire alarm immediately and put off the buzzer if it is via the fire alarm panel, if it is via public calls take no further action and treat as a hoax.

3.3.3   The Tunnel OE will notify the Maintenance Team if alarm is confirmed false.

3.3.4   If the fire alarm is confirmed real (or a fire report is received by contractors in the FB), RC shall try to extinguish the fire if possible, if fire is uncontrollable, DM shall call SCDF, Police and escalate to higher management immediately (Refer to Attachment 6). LTM shall wait at the main gate of the FB to direct the attention of the emergency services.

3.3.5   LTM and RC shall assist the emergency services to cordon off the affected FB.

3.3.6   Tunnel OE shall contact any contractors who are known to be working in the incident FB (for cases where the fire is not reported by contractors) to evacuate immediately. Tunnel OE will also monitor and confirm if any tunnel equipment function is affected by the FB fire.

3.3.7   If any of the lighting, LUS or any equipment needed for safe tunnel driving is affected, tunnel OE shall take the appropriate steps to warn motorist.

Section 4. Abbreviations

CMG Crisis Management Group
EMAS Expressway Monitoring Advisory Service
ITSO Intelligent Transport Systems Operations
LTA   Land Transport Authority
LTM Land Transport Authority Traffic Marshals
OE   Operations Executive
OCC Operations Control Center
PTZ   Pan Tilt Zoom Camera
PUB   Public Utilities Board
RC   Recovery Crew
DM   Deputy Manager
SPF   Singapore Police Force
SCDF Singapore Civil Defense Force
TM   Traffic Management
TP   Traffic Police
VRS   Vehicle Recovery Service
VMS   Variable Message Signs

ATTACHMENT 1- THE FIRE ALARM MANUAL CALLPOINT (BREAK-GLASS) LOCATIONS

BASEMENT CARPARK
Carpark (near electrical riser)
Carpark (near fuel tank)
Carpark (near intake shaft)
Sprinkler Pump Room

FIRST STOREY
Lift Lobby
Driveway (near Bin Centre)
Driveway Ramp (at LV cable chamber)
Corridor (near HV Switchroom)
Corridor (leading to Staircase 3)
Parking bay beside Genset room

SECOND STOREY
Lift Lobby
Corridor (near Halon Room leading to Staircase 1)
Corridor (leading to Staircase 3)
Corridor (next to Day Room)

THIRD STOREY
Lift Lobby
Corridor (near Janitor Storeroom leading to Staircase 1)
Corridor (leading to Staircase 3)

FOURTH STOREY
Lift Lobby
Fan Motor Room

ATTACHMENT 2 –ESCAPE EXIT LOCATION

A2a) Basement Carpark Exits Use driveway or emergency staircase 1 to River Valley Road

BASEMENT FLOOR PLAN
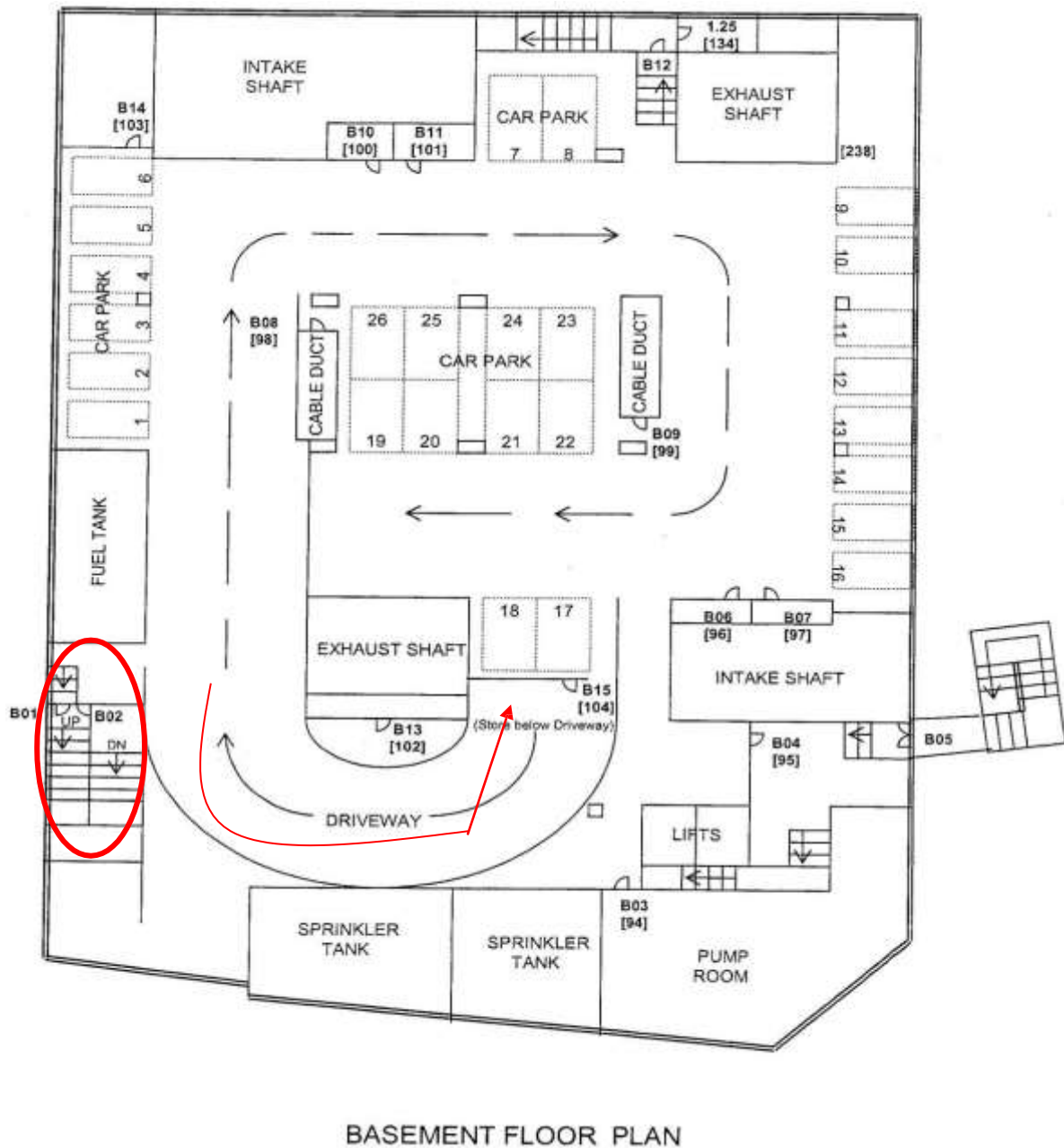
A2b) First Storey Exits   Use main entrance or driveway to car park
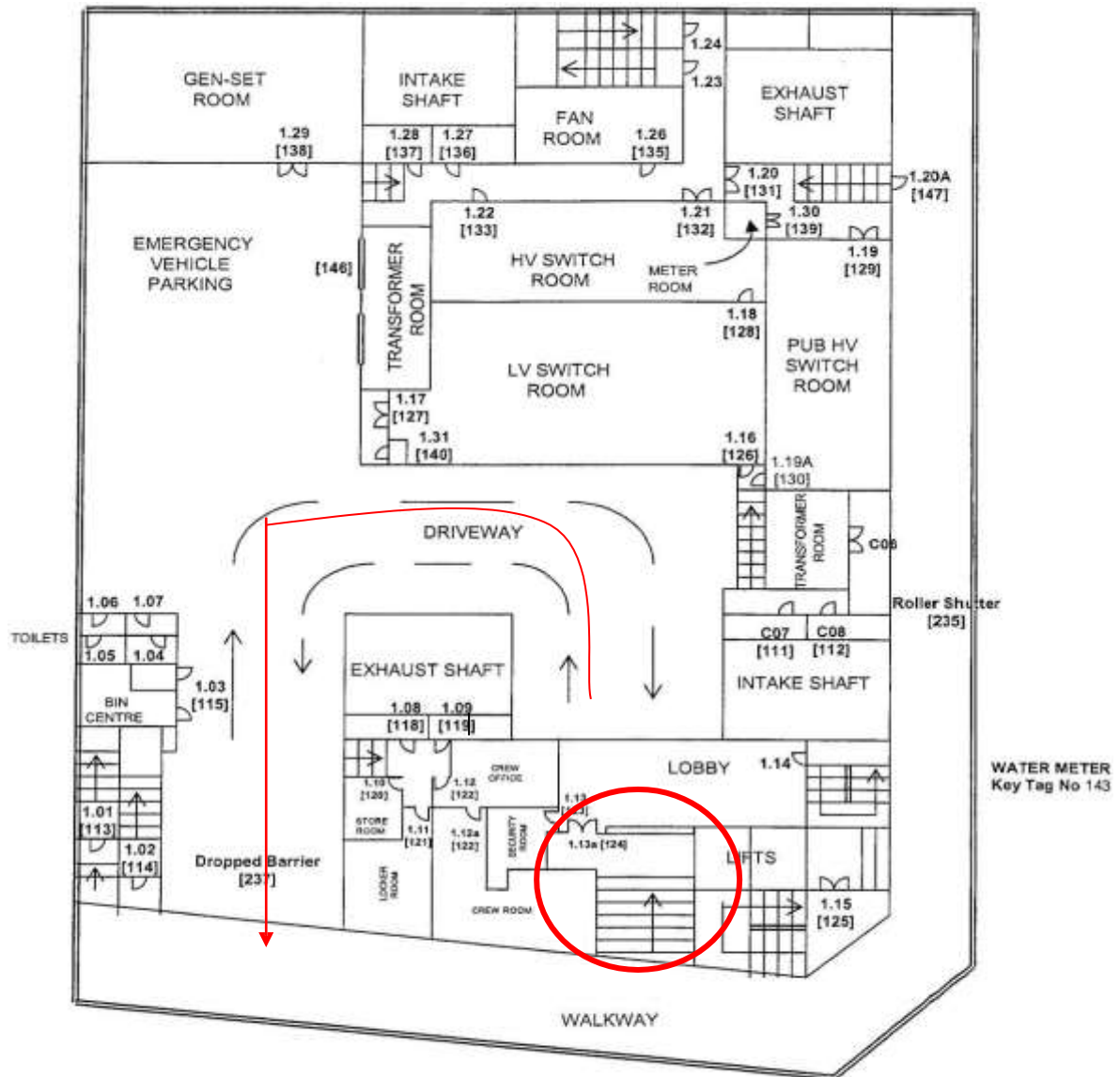
1ST STOREY PLAN

A2c) Second Storey Exits Use emergency staircase 1 to River Valley Road (front of building) emergency staircase 2 to Lift Lobby (front of building) emergency staircase 3 to Clemenceau Ave, (back of building).
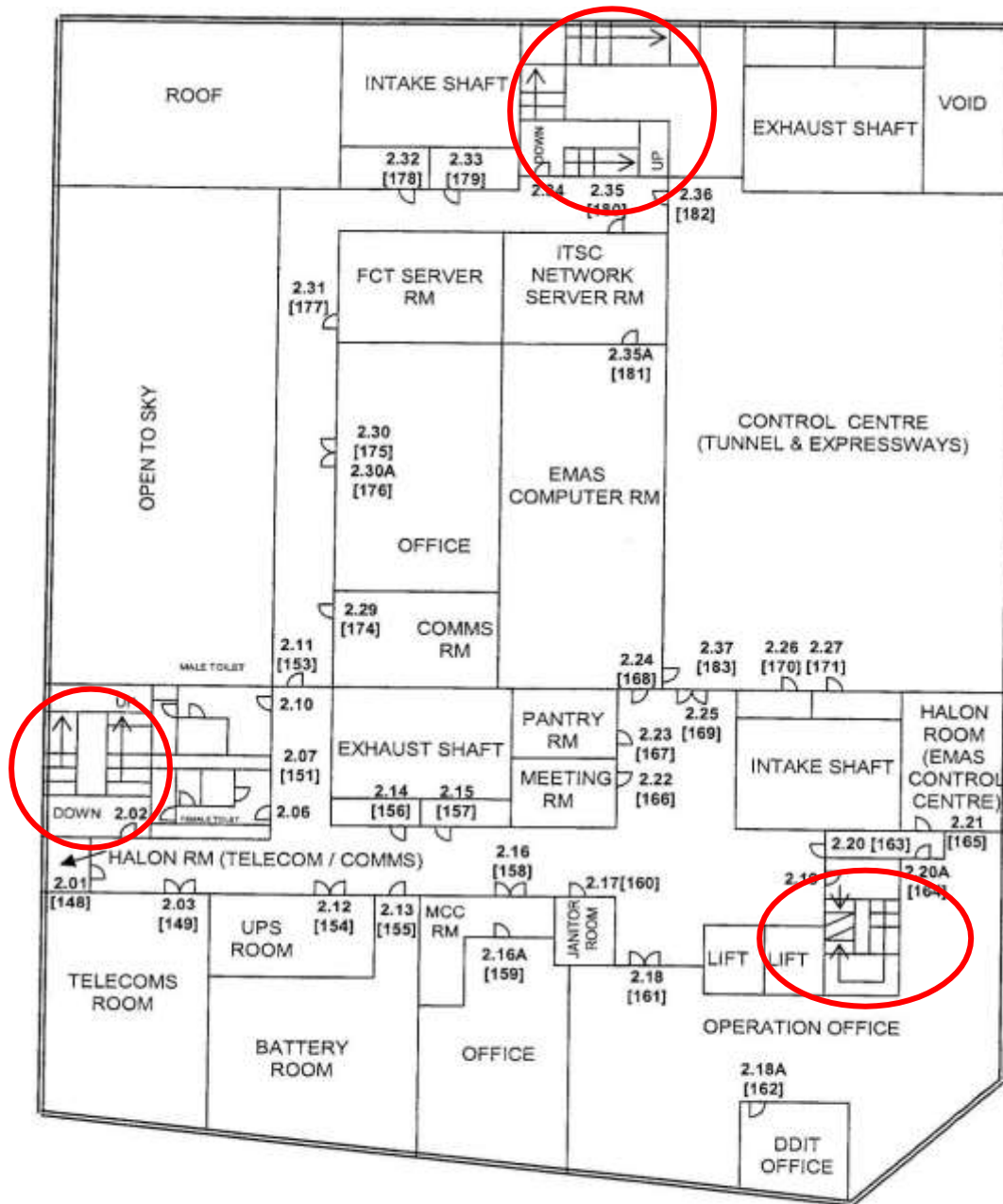
2ND STOREY PLAN

A2d) Third Storey Exits   Use as per Second Storey exits
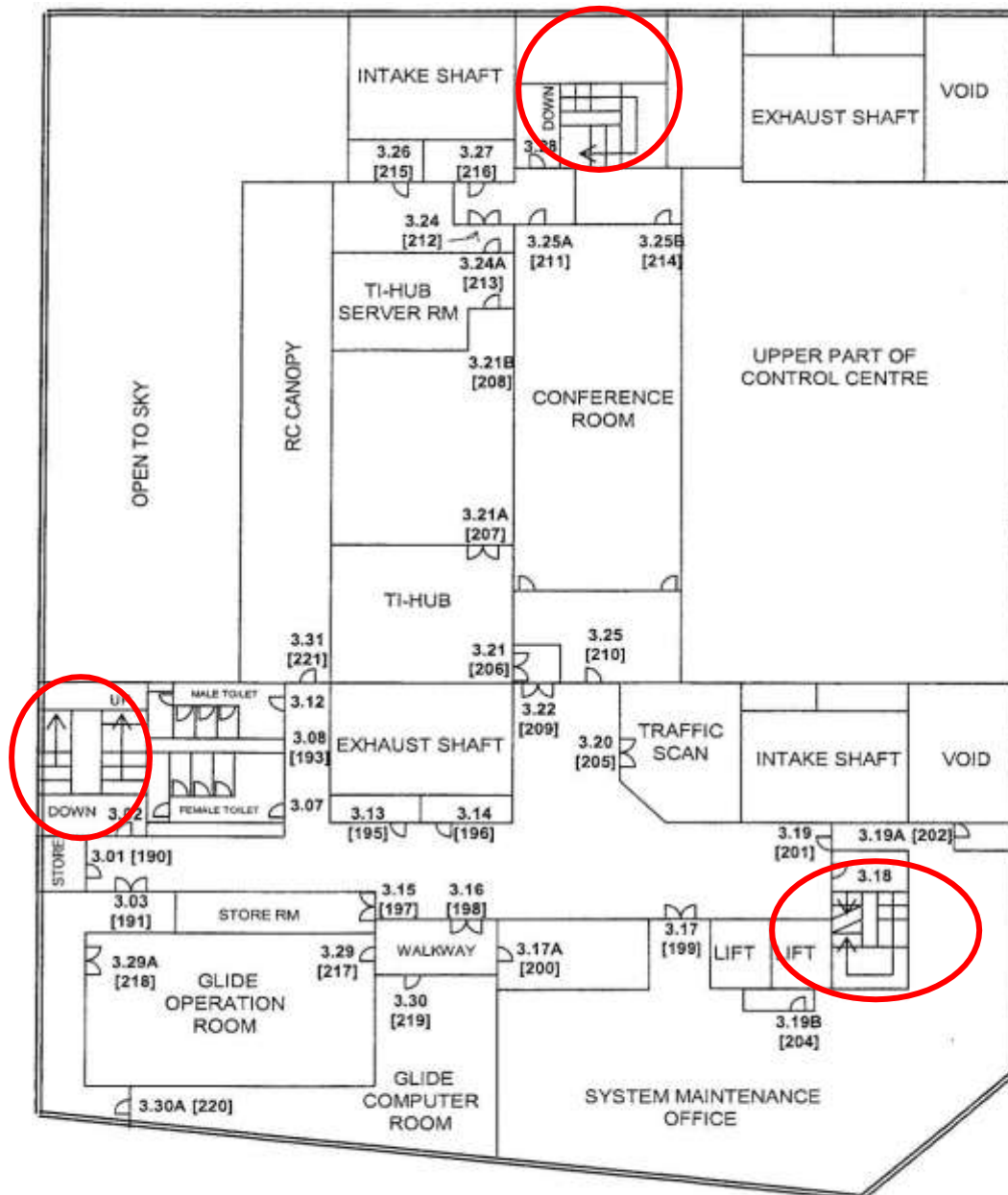
3RD STOREY PLAN

A2 e) Fourth Storey Exits
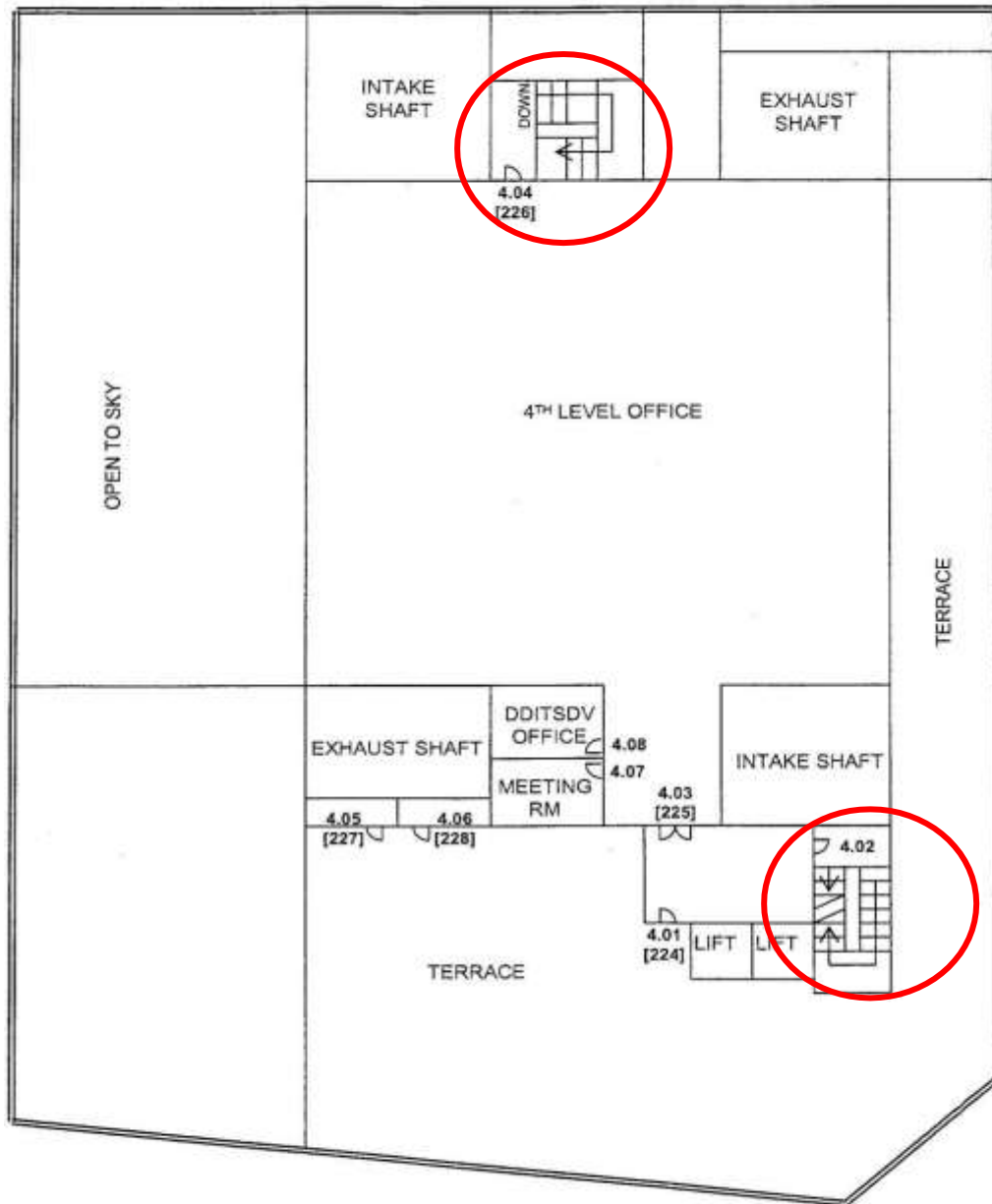
4TH STOREY PLAN

ATTACHMENT 3

LIST OF PERSONS RESPONSIBLE FOR THE EVACUATING THEIR RESPECTIVE AREAS & FIRE ALARM HANDLING FLOW-CHART

A3a) List of Person in charge:

i)   Level 1/Visitors   - Fire Wardens: Ithnin, Ng Bee Chin, Lim Soon Peng

ii)   Level 2   - Fire Wardens: Mary Tan, Low Thaim Teck, Wil Liam Tan

iii)   Level 3   - Fire Wardens: Louis Ang, Rohana, Alfie, Dominic Tay (Ti-Hub rm)

iv)   Level 4   - Fire Wardens: Wu Gang, Wong Teck Khuan, Lim Yong Kiat

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A3 b) Fire Alarm Handling Flow-Chart

```
                    ┌─────────────┐
                    │    Start    │
                    └─────────────┘
                           │
                           ▼
        ┌──────────────────────────────────────────┐
        │   Fire Alarm activated originated from     │
        │              CB or FBs                      │
        └──────────────────────────────────────────┘
                           │
                           ▼
        ┌──────────────────────────────────────────┐
        │   Fire Alarm activated originated from     │
        │   CB or FBs                                 │
        │   OCC Tunnel Operator to check the fire     │
        │   alarm location/origin                     │
        └──────────────────────────────────────────┘
                           │
                           ▼
        ┌──────────────────────────────────────────┐
        │  OCC to initiate the response of Tunnel    │
        │  OE (CB) &LTM/RC(FB) to the Alarm          │
        └──────────────────────────────────────────┘
                           │
                           ▼
        ┌──────────────────────────────────────────┐
        │  Tunnel OE(CB) &LTM/RC(FB) to verify the   │
        │  alarm and report the status to OCC        │
        └──────────────────────────────────────────┘
                           │
                           ▼
   YES          ◇ Is the Alarm Genuine? ◇          NO
     │                                              │
     ▼                                              ▼
┌──────────────────────┐          ┌──────────────────────────┐
│ Inform LTA staff and │          │ OCC Reset the Alarm &    │
│ OCC DM (Initiate Fire│          │ report CPG               │
│ Evacuation Procedure │          │ (Unable to reset isolate │
│ for CB only)         │          │ the zone)                │
└──────────────────────┘          └──────────────────────────┘
     │                                              │
     ▼                                              ▼
┌──────────────────────┐          ┌──────────────────────────┐
│ Call 995             │          │ CPG Identity and rectify │
│ (Attempt to          │          │ fault                    │
│ extinguish the fire  │          │ (Repair /Replace the     │
│ and assist the SCDF  │          │ faulty component)        │
│ when they arrived)   │          └──────────────────────────┘
└──────────────────────┘                          │
     │                                              ▼
     │                            ┌──────────────────────────┐
     │                            │ CPG Restore the fire     │
     │                            │ alarm system             │
     │                            └──────────────────────────┘
     │                                              │
     │                                              ▼
     └──────────────────────────►┌──────────────────────────┐
                                  │ Report and record the    │
                                  │ incident                 │
                                  └──────────────────────────┘
                                              │
                                              ▼
                                  ┌──────────────────────────┐
                                  │           End            │
                                  └──────────────────────────┘
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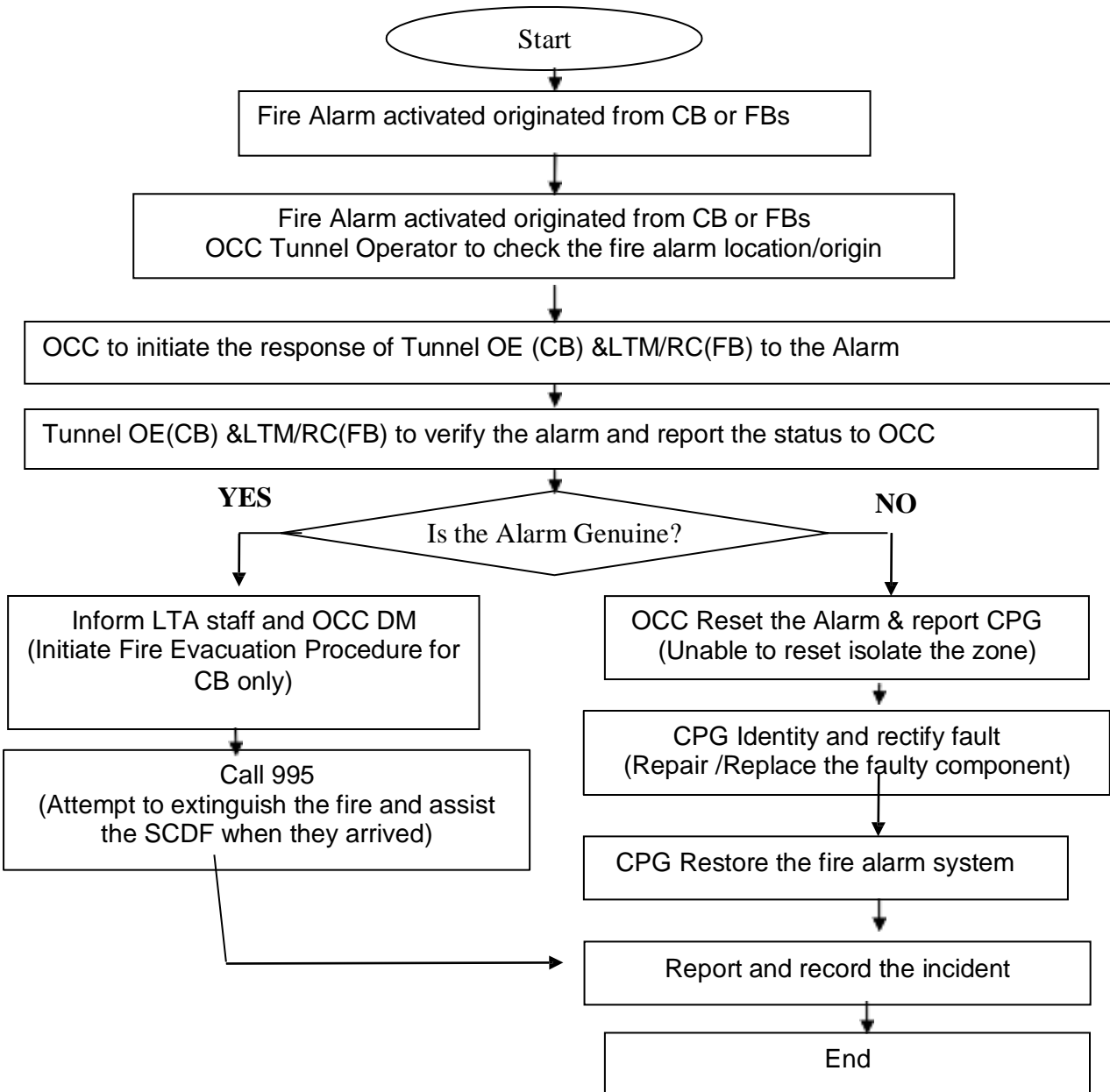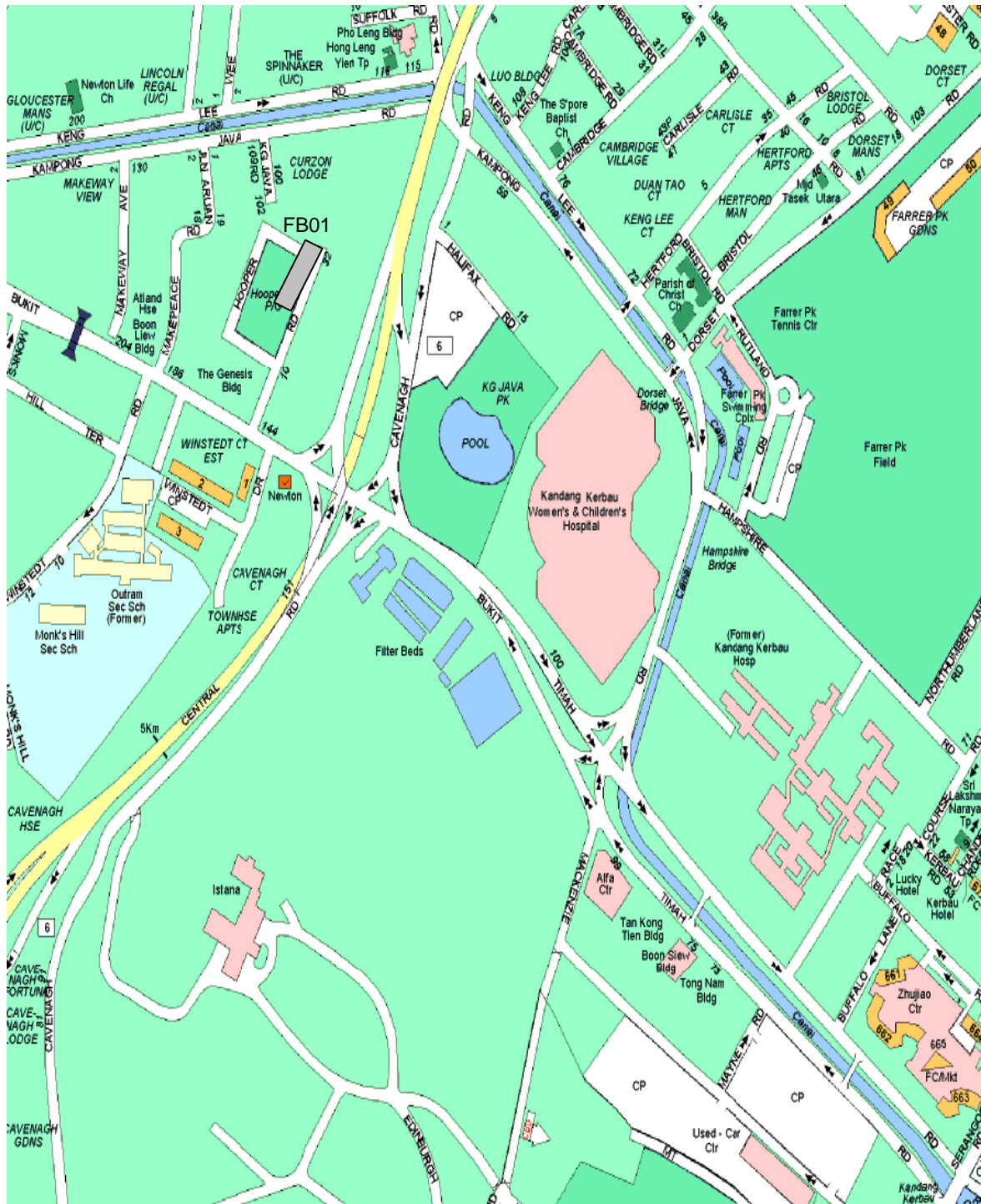
**A4a) LOCATION OF FACILITIES BUILDING NO 01 (FB 01)
BUKIT TIMAH ROAD**
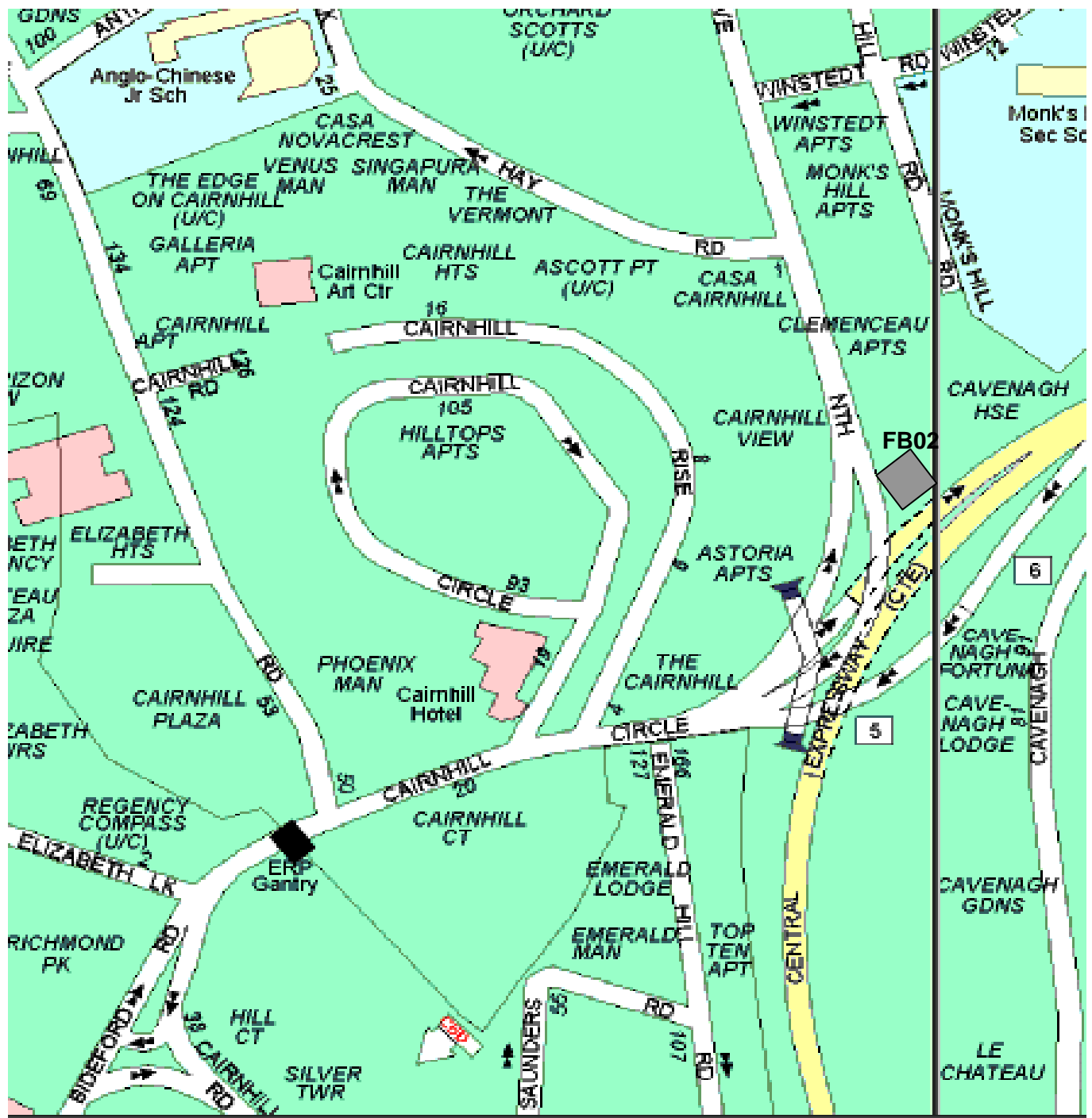
**A4b) LOCATION OF FACILITIES BUILDING NO 02 (FB 02)
CLEMENCEAU AVE NORTH**

**A4c) LOCATION OF FACILITIES BUILDING NO 03 (FB 03)
KRAMAT ROAD**
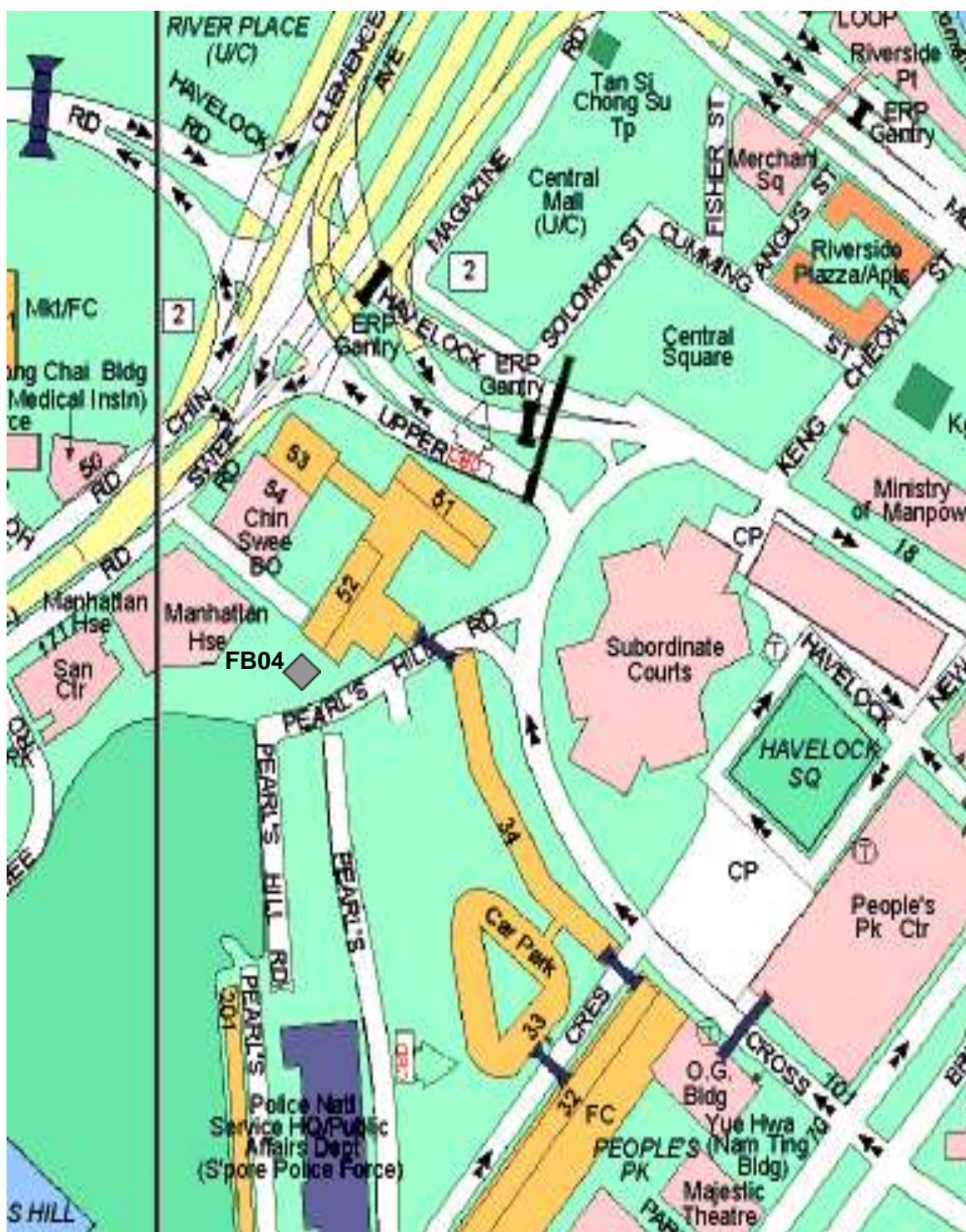
A4d) LOCATION OF FACILITIES BUILDING NO 04 (FB 04)
PEARL'S HILL ROAD
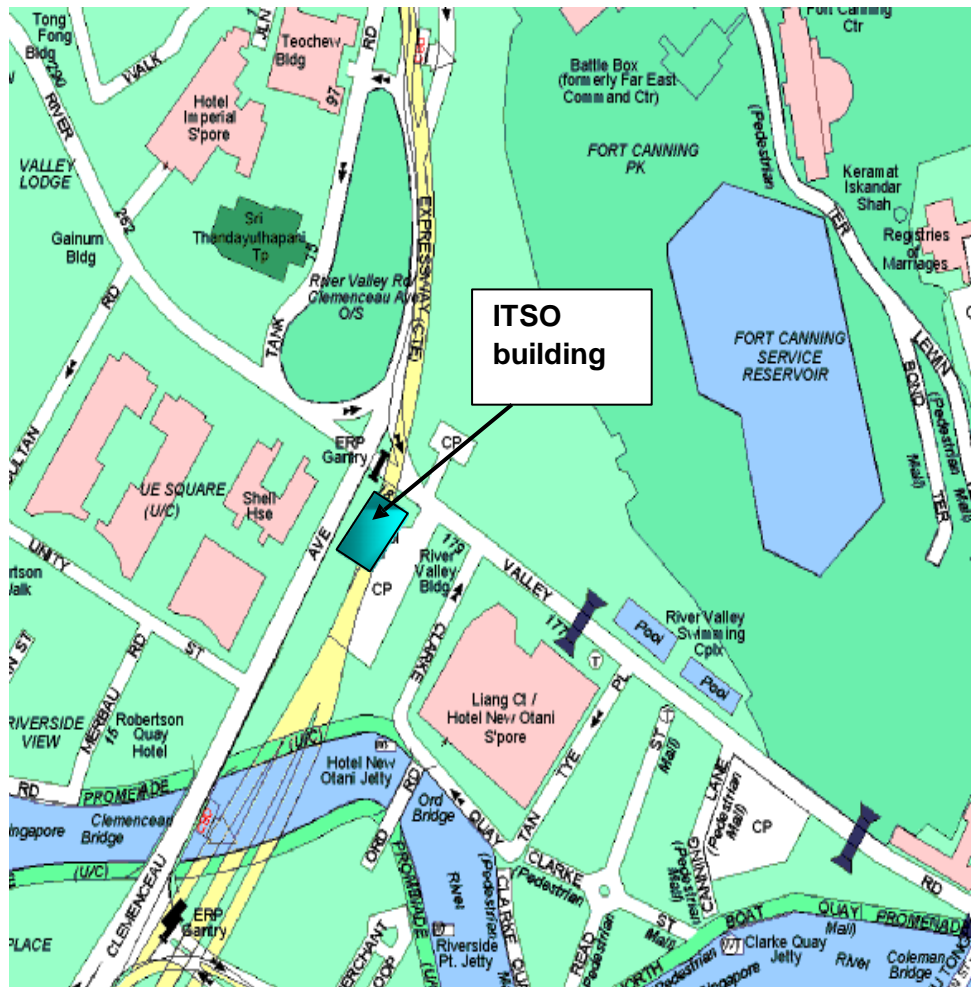
**A4e) Location of ITSO Building- Intelligent Transport
Systems Centre
Land Transport Authority
181 River Valley Road
Singapore 179034**

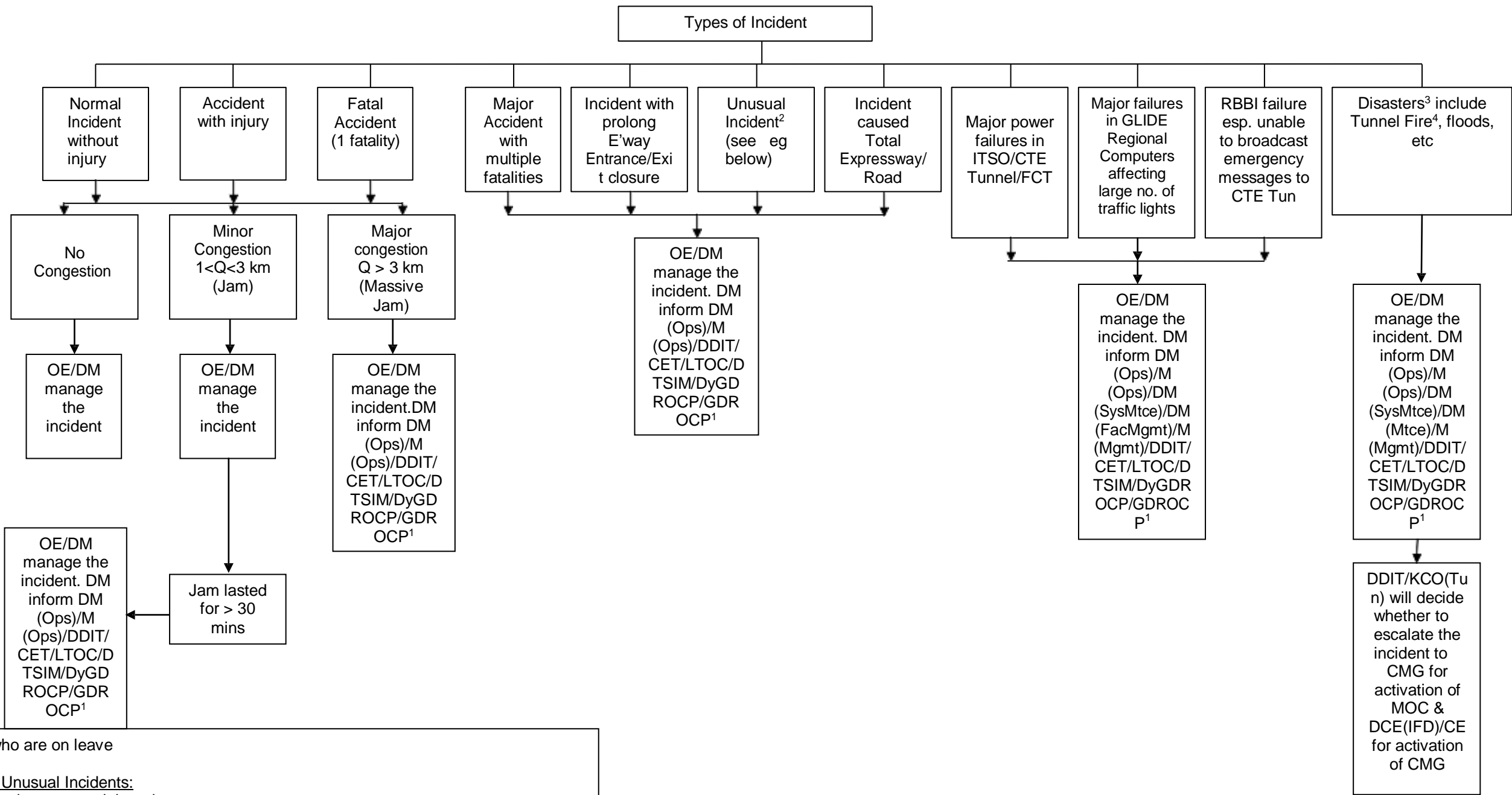**ATTACHMENT 5- FCT FACILITIES BUILDING LOCATION**
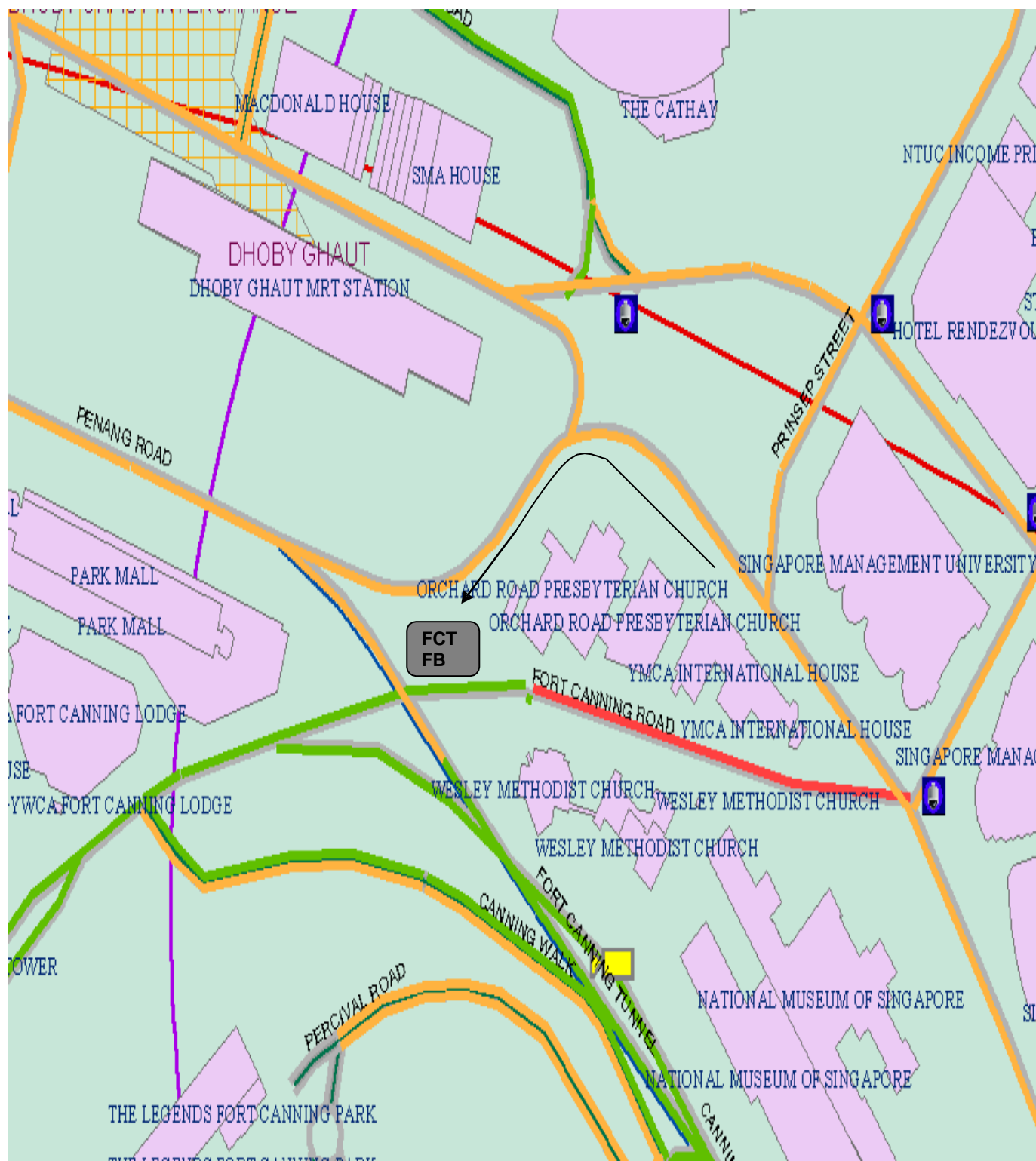
ATTACHMENT 6

ESCALATION OF INFORMATION ON INCIDENTS

Types of Incident

Normal Incident without injury

Accident with injury

Fatal Accident (1 fatality)

Major Accident with multiple fatalities

Incident with prolong E'way Entrance/Exit closure

Unusual Incident[2] (see eg below)

Incident caused Total Expressway/ Road

Major power failures in ITSO/CTE Tunnel/FCT

Major failures in GLIDE Regional Computers affecting large no. of traffic lights

RBBI failure esp. unable to broadcast emergency messages to CTE Tun

Disasters[3] include Tunnel Fire[4], floods, etc

No Congestion

Minor Congestion 1<Q<3 km (Jam)

Major congestion Q > 3 km (Massive Jam)

OE/DM manage the incident. DM inform DM (Ops)/M (Ops)/DDIT/ CET/LTOC/D TSIM/DyGD ROCP/GDR OCP[1]

OE/DM manage the incident

OE/DM manage the incident

OE/DM manage the incident. DM inform DM (Ops)/M (Ops)/DDIT/ CET/LTOC/D TSIM/DyGD ROCP/GDR OCP[1]

OE/DM manage the incident. DM inform DM (Ops)/M (Ops)/DM (SysMtce)/DM (FacMgmt)/M (Mgmt)/DDIT/ CET/LTOC/D TSIM/DyGDR OCP/GDROC P[1]

OE/DM manage the incident. DM inform DM (Ops)/M (Ops)/DM (SysMtce)/DM (Mtce)/M (Mgmt)/DDIT/ CET/LTOC/D TSIM/DyGDR OCP/GDROC P[1]

OE/DM manage the incident. DM inform DM (Ops)/M (Ops)/DDIT/ CET/LTOC/D TSIM/DyGD ROCP/GDR OCP[1]

Jam lasted for > 30 mins

OE/DM manage the incident. DM inform DM (Ops)/M (Ops)/DDIT/ CET/LTOC/D TSIM/DyGD ROCP/GDR OCP[1]

DDIT/KCO(Tun) will decide whether to escalate the incident to CMG for activation of MOC & DCE(IFD)/CE for activation of CMG

[1]To exclude those who are on leave

[2]Some examples of Unusual Incidents:
(a) Abnormal massive jam on arterial roads
(b) Huge obstacles such as fallen trees (affecting > 50% of carriageway)
(c) Road cave-in
(d) Serious upheaval of road surface
(e) Flooding
(f) Serious road settlement, subsidence or undulating carriageway over a considerable length of road
(g) Unauthorised works on roads that adversely affect traffic flow / unusual events on roads
(h) Severe damage to overhead gantry/cantilever sign causing massive jam or posing safety hazard
    (Also to inform DM (Fac Mgmt) & M (Mgmt) if it is an EMAS sign)

[3]Disaster – Please refer to the LTA CMG Minor Disaster List

[4]For Tunnel fire, SCDF takes command and control of the rescue and recovery operations

SMS Message
(a) Est. Nos. of SMS per incident: (i) Start of an incident (ii) updates when there is a change in status (iii) End of an incident.
Min. = 3nos.
(b) Format : <Time> : <New or U/D> : <Type of incident> : <Location> : <Actions taken> : <Impact of incident>
E.g. 0650hrs : New – Accident CTE(AYE) aft PIE(Changi) on Ln 1. TP & TW informed. Congestion 4km up to AMK Ave 1