Fire Service Installations (FSI) Compliance Checking and Inspection Process

Fire Services Department
Fire Service Installations Division

28.11.2017

Focus Today

1. Workflow for FSI Acceptance Inspection and Issuance of Certificate
2. Form FSI 314 and 501 Submissions
3. Site Conditions Ready for Acceptance Inspection
4. Compliance Inspection in Practice
5. Common Irregularities
6. Document Required for Acceptance Inspection and FS172 Issuance

Legislative Ground for FSI relating to New Buildings

CAP 123 BUILDING ORDINANCE

Section:	21	**Occupation of new building**

(6) The Building Authority may refuse to issue a temporary occupation permit or an occupation permit under this section where—

(d) in the case of a building the plans whereof were certified by the Director of Fire Services in the terms indicated in section 16(1)(b)(ii), the applicant for the permit fails to produce to the Building Authority a certificate from the Director of Fire Services in such form as may be prescribed certifying that he is satisfied that the fire service installations and equipment shown on the plans aforesaid have been provided and are in efficient working order and satisfactory condition; (Added 3 of 1964 s. 3)

Form FSI / 314 Drawings Submissions for Ventilation / Air Conditioning Control Systems

- Drawing contents and format follow FSD Circular Letter No. 4 / 96 Part I
  - Only details and layouts relevant to systems related should be shown
  - Both schematic drawings and layout plans
  - Method for tripping off
  - Capacities of ventilation equipment
  - Duplicate copies
  - Colouring

Form FSI/314 Drawings Submissions for Smoke Extraction/Staircase Pressurization Systems

- Drawing contents and format follow FSD Circular Letter No. 4/96 Part I & FSCoP
  - Approved GBP with FS Notes
  - Design Calculations
  - Only details and layouts relevant to submissions should be shown
  - Both air-side schematic drawings and layout plans
  - Fire compartment arrangement (i.e. fire shutter locations)
  - Elevations to indicate the intake/discharge louvre
  - Relevant electrical schematics & panel layouts
  - Control "mode tables"
  - Approved Fire Engineering Reports (if applicable)
  - Endorsement by Registered Professional Engineer (RPE)
  - Duplicate copies
  - Colouring

Form FSI/314 Drawings Submission Processing

1. If submission is acceptable, one copy of the submission will be returned
2. In case of rejection of submissions, all contents of submission will be returned
3. In case of doubt in the course of vetting, designers will be approached for clarification or request for supplementary information
4. Contacts of case officer will be provided in the reply

Common Irregularities for Form FSI/314 Submissions (SES/SPS)

General:

- Scale and colouring of drawings not follow FSD Circular Letter no. 4/1996
- Form FSI/314 not be provided or signed
- Approved GBP not be specified on Form FSI/314
- FS Notes not be provided
- Endorsement by RPE outstanding
- Omission of approved Fire Engineering Report
- Incomplete background architectural layout and room name not be provided
- Mode tables/electrical schematic diagram not be provided
- Floor level not shown in the air side schematic

Common Irregularities for Form FSI/314 Submissions (SES/SPS) (Cont'd)

General:

- Actuation method not be provided
- Panel layouts not be provided or Chinese text for label description not be shown
- Audio and visual indications for manual override control of system including local motor control panels and supervisory panels not be provided
- Audio and visual indications not at where with 24 hours manned
- Prior approval for application of multiplex panel not acquired
- Fire resisting rating of smoke extraction/air release ductwork not be specified

Common Irregularities for Form FSI/314 Submissions (SES/SPS) (Cont'd)

Smoke Extraction System:

- Smoke travelling distance >30m
- Fire Compartment (e.g. Single system serving multi-compartment for SES)
- System calculations (i.e. Minimum compartment volume of 7,000m^3)
- Smoke extraction discharge distance from other openings of the building facade <5m
- Sprinkler zoning and location of subsidiary valves for actuation of system not be shown
- Separated system (at least two independent plant & ductwork) not be provided for each compartment of basements

Common Irregularities for Form FSI/314 Submissions (SES/SPS) (Cont'd)

Staircase Pressurization System:

- Single system serving staircase and lobbies
- Air relief/air release system not be provided
- System calculations (i.e. Lift well leakage not be included)
- Minimum temperature and time design criteria for air release fan not be specified
- Air release method not follow Section 6.3 of BS 5588-4:1998
- Twin air intakes (at roof) to alternative facades of building not be provided

Ready for Compliance Inspection ?

- All related GBPs approved
- All smoke control submissions/hydraulic calculations/fire engineering reports approved
- Hoarding & Scaffolding cleared
- EVA & its signage completed
- Building work substantially completed
- Approval/Licence for Fuel Tank Room (DG Store) of Emergency Generator acquired
- Electricity supply completed
- Water supply completed
- Fireman's lifts completed
- Fire service installations substantially completed

Ready for Compliance Inspection

- FORM FSI/501
  - Submitted by the AP and RFSIC
  - Certifying the completion of building and FSI installations
  - Date(s) of approval on GBP specified
  - Date of application for compliance inspection
  - Generally the target time of initial inspection will be conducted within 15 working days from the receipt of FSI/501

Compliance Checking and Inspection for Fire Service Installations

- Document Checking
- Site Inspection

Workflow for FSI Acceptance Inspection and Issuance of Certificate

1. Application Form FSI 314/501 by AP/RFSIC
2. Document checking and collect relevant information for inspection
3. Application may be rejected if the required documents were not provided or incomplete or contain significant irregularities
4. Assign Inspection Officer
5. Organize a pre-inspection meeting on need basis
6. Arrange initial inspection within 15 working Days
7. Acceptance Inspection on Site
8. No defects spotted in the inspection or all defects were cleared
9. Issue FS 172 or acceptance memo/letter within 7 working days

Relevant FSD Circulars related to FSI Compliance Checking and Inspection

1. Flow Chat for FSI Acceptance Inspection and Issuance of Certificate
   - http://www.hkfsd.gov.hk/eng/source/flowchart.pdf
2. FSD Circular Letter No. 1/2015
   Documents Required for Application for Compliance Inspection of FSIs and Equipment
   - http://www.hkfsd.gov.hk/eng/source/circular/2015_01_eng.pdf
3. FSD Circular Letter No. 4/2008
   Arrangements for Submissions of FSI Plans
   - http://www.hkfsd.gov.hk/eng/source/circular/2008_04.pdf
4. FSD Circular Letter No. 1/2007
   Guidelines on New Arrangement on Product Approval of FSIs and Equipment
   - http://www.hkfsd.gov.hk/eng/source/circular/2007_01.pdf
5. FSD Circular Letter No. 4/1996
   F.S.D. Circulars
   - http://www.hkfsd.gov.hk/eng/source/circular/e04_1996.pdf

Application for Compliance Inspection

- Submission of Form FSI/501
- Submission Form FSI/314 together with:
  - 1. As-built Fire Service Installations Drawings
  - 2. T&C Checklists according to FSD Circular No. 1/2015
  - 3. FSI Equipment Lists according to FSD Circular No. 1/2015
  - 4. Fire Service Completion Advice (FSCA)
  - 5. Direct Link Connection Invoice/Receipt or Owner's Undertaking Letter

Testing and Commissioning Checklists

- Appendix 1 to 7 of FSD Circular Letter No. 1/2015
  1. Actuation Devices and Operation of Fire Shutter
  2. CO^2/Clean Agent Extinguishing System
  3. Emergency Generator Installation
  4. Fire Detection and Fire Alarm System
  5. Fire Hydrant and Hose Reel System
  6. Staircase Pressurization System
  7. Street Fire Hydrant System

The RFSIC shall submit duly completed testing and commissioning checklists for FSIs to FSD before the inspection.

SAMPLE

APPENDIX 5

Test and Commissioning Checklist for Fire Hydrant and Hose Reel Installation

I. *REFERENCE*

Project: XXXXXXXXXXXXXXXXXXXXXX F.S.D. Ref.: FP19/XXXXX

Type of Building: *Domestic/~~Industrial/Godown~~/Others

Address: XXXXXXXXXXXXXXXXXXXXXX

F.S.I. Drawing Ref. : FP19 / XXXXX

The date of initial building plan submission to Building Authority XX Aug XXXX

*Delete whichever is inapplicable

		Yes	No	N/A	Remarks
II.	*F.S.I. DRAWINGS AGAINST BUILDING PLANS*				
	F.S.D. File Ref. (6)XXXXX (XX)^ (XX)^				
2.1	Check nos. and locations of:				
2.1.1	Fire service inlets	[X]	[ ]	[ ]	2 nos. at G/F
2.1.2	Fire hydrants and hose reels	[X]	[ ]	[ ]	#01 (1no.) and #02 (1no.) at G/F & Clubhouse
2.1.3	Fixed fire pumps	[X]	[ ]	[ ]	2 x 320L/M at MF FH/HR Pump & Sprinkler Pump for Recreational Facilities
2.1.4	Intermediate booster pumps	[ ]	[ ]	[X]	
2.1.5	Water tank and capacity	[X]	[ ]	[ ]	50m³ at MF FH/HR Pump & Sprinkler Pump for Recreational Facilities
III.	*PLUMBING LINE DIAGRAM*				
3.1	CHECK:				
3.1.1	Pipings are suitably connected to the fire pumps, fire hydrants, hose reels and fire service inlets.	[X]	[ ]	[ ]	
3.1.2	Size of the rising mains are correct.	[X]	[ ]	[ ]	
3.1.3	Size of the inter-connection header pipe(s) for fire service inlets is correct.	[X]	[ ]	[ ]	
3.1.4	By-pass pipings for intermediate booster pumps.	[ ]	[ ]	[X]	
3.1.5	FS appliance to be provided by F.S.D. to test the system. (to be confirmed by FSD)	[ ]	[ ]	[X]	
IV.	*ON SITE INSPECTION*				
4.1	FIRE HYDRANT				
4.1.1	Outlets are of: Male round thread [ ] or Female instantaneous [X]				
4.1.2	Adaptable to FSD equipment.	[X]	[ ]	[ ]	
4.1.3	Individually controlled by wheel operated screw valve designed to open by counter-clockwise rotation.	[X]	[ ]	[ ]	
4.1.4	The direction of opening engraved in both English and Chinese on the wheel of the valve.	[X]	[ ]	[ ]	
		Yes	No	N/A	Remarks
4.1.5	Centre of coupling not less than 800 mm nor more than 1200 mm above finished floor level.	[X]	[ ]	[ ]	
4.1.6	Prominently sited [ ] or Recessed [ ]				

Page 1

XXXXX 44 55

Testing and Commissioning Checklists

SAMPLE

APPENDIX 5

V. *GENERAL COMMENT & REMARKS*

Signed with Company Chop

Test conducted by:

(Signature)

XXXXXXXXXXXXXX

Name of FSI Contractor's Representative (in block letters)

Company Chop

(RC 1, 2 / 68, 188)

Name of FSI Contractor (FSI Contractor Registration Number)

Date 27 August 2016

Page 8

Testing and Commissioning Checklists

SAMPLE

Fire Service Installation – Equipment List
(To be appended to Form FSI/501)

(Revised in December 2014)

FP Ref. no. 43/19/20 XXXXX Address of Premises: XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Item	System/ Equipment	Manufacturer / Model No. / Part No. (a)	FSD Approval / Acceptance Reference (If available) (b)	Listing Certificates / Records / Documents/ Printouts from Product Certification Bodies (c)				
				UL	FM	LPCB	VdS	Others
A	**Automatic Actuating Device**							
A1	Emergency exit device							
A2	Electromagnetic door releasing device to be used in conjunction with automatic fire alarm system							
B	**Automatic Fixed Installation other than Water**							
B1	Fixed carbon dioxide installation							
B2	Fixed clean agent installation							
B3	Fixed dry chemical installation							
C	**Automatic Fire Alarm System**							
C1	Fire alarm control panel	Johnson Controls / IFC2-640, / Notifier / LCD2-80 Johnson Controls/5951RJ		S1570 S635 S2375				
C2	Heat detector							
C3	Smoke detector							
C4	Beam detector							
C5	Smoke detector with integration device							
C6	Flame detector							
C7	Intrinsically safe/ explosion proof detector							

This is to confirm that either original copies of above mentioned documents or their photocopies which have been checked as true and correct, are appended to this Equipment List.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX — Full Name of FSI Contractor
[redacted] — Signature
(RC 1, 2, 3 /XX, XXX, XXX) — Registration Number
[redacted] — Company Chop
24 August 2016 — Date

Appendix 8 (17)

Page 1 of 6

Equipment List

水務署
Water Supplies Department
香港灣仔告士打道七號入境事務大樓43樓
43/F, Immigration Tower, 7 Gloucester Road, Wan Chai, Hong Kong

電子郵遞 *e-mail* wsdinfo@wsd.gov.hk
電話 *Telephone* 2824 5000
檔號 *Reference*
圖文傳真 *Facsimile* 2802 7333

SAMPLE

1 September 20XX

FIRE SERVICES DEPARTMENT
1 HONG CHONG ROAD
TSIM SHA TSUI EAST
KOWLOON

FIRE SERVICE COMPLETION ADVICE

Lot. DD XX LOT XXX
Address: RESIDENTIAL DEVELOPMENT
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX NEW TERRITORIES

FIRE SERVICE SUPPLY

I hereby advise that one number permanent connection of a supply of fresh water from the Waterworks for the purpose of fire service has been made to the above premises.

Yours faithfully,

(XXXXXXXXXXXX)
for Water Authority

'o: BUILDINGS DEPARTMENT
'C: FIRE SERVICES DEPARTMENT
XXXXXXXXXXXXXX (Authorised Person)

Fire Service Completion Advice (FSCA)

Form FSI/501

FORM FSI/501 Part A

Part B :

I, Lee Mei Lai, Authorized Person, certify that the above installations have been installed in accordance with the approved building plans stamped by FSD on 1/8/2017 & 2/10/2017 and, in my opinion they are ready for inspection.

The Fire Service Completion Advice from Water Supplies Department in respect of Fire Service Installations (*copy attached) requiring Government water mains connection has been * ~~issued~~ / applied for.

*An undertaking letter / ~~memo~~ from building owner for providing 24-hour attendant service with normal telephone provision pending the connection of direct telephone link for the fire service installation(s) is attached herewith.

I request that a * Certificate F.S. 172, required under S21(6)(d) of the Buildings Ordinance / ~~acceptance memo~~ / ~~acceptance letter~~ be issued to me. I can be contacted on telephone no. 33445566 for collection.

I also certify that the building gross floor area as defined under the Buildings Ordinance is 12,340 m and the type of building is ~~domestic~~ / non-domestic.*

Office name : Lee Mei Lai Tel. : 33445566

Office address : LML Architects Ltd., 38/F, Wisdom Commercial Building, Wealthy Street, Central, Hong Kong

Signature of Authorized Person :

Full Name of Authorized Person : Lee Mei Lai Date :07/10/2017

(Rev. 01/2012)

SAMPLE

signature

inappropriate words not be deleted

Approved FS Plans not fully be specified

Form of FS certificate not be specified

Type of building not be specified

FORM FSI/501 Part B

SAMPLE

FSI/314

*Form FSI/314 shall be submitted together with smoke control submission

Appendix A

To : Director of Fire Services

Fire Service Installation Plans for Building at

Area XXX , Shatin, STTL XXX

File no. missing

Part I

This is to certify that the attached fire service installation plans are identical to the building plans approved by you on 01/08/2017 . Your file reference is FTP 8 / 49 / 12345

Signed

Date 07/10/2017

Full Name of Authorized Person Lee Mei Lai

Part II

This is to certify that the details and specifications of all installations shown on the attached fire service installation plans are as prescribed by the Fire Services Department and in accordance with the relevant Rules and Codes of Practice as listed below :-

- ☐ **Rules of Fire Offices' Committee for :**
  - ☐ Automatic Sprinkler Installations (29th Edition)
  - ☐ Automatic Fire Alarm Installations (12th Edition)
  - ☐ Installation of Drenchers (4th Edition)
- ☒ **Rules of the Loss Prevention Council for**
  - ☒ Automatic Sprinkler Installations (BS EN 12845) / (BS 5306 Part 2)*
  - ☒ Automatic Fire Alarm Installations (BS 5839 Part 1)
- ☐ **Codes of National Fire Protection Association for :**
  - ☐ Carbon Dioxide Extinguishing Systems (Standard 12)
  - ☐ Clean Agent Fire Extinguishing Systems (Standard 2001)
  - ☐ Water Spray Fixed Systems for Fire Protection (Standard 15)
- ☒ **Codes of Practice for Minimum Fire Service Installations and Equipment, Fire Services Department for :**
  - ☒ Fire Alarm Systems
  - ☒ Fire Hydrant / Hose Reel Systems
  - ☐ Exit Signs
  - ☐ Emergency Lighting Installations
  - ☐ Emergency Generator Installations
  - ☒ Ventilation / Air Conditioning Control Systems
  - ☐ Smoke Extraction Systems
  - ☐ Staircase Pressurization Installations
- ☒ **Others**
  Visual Fire Alarm System, Street Fire Hydrant System

Signed

Date 07/10/2017

Full Name of FSI Contractor/Consultant ABC Engineering Company Limited

Correspondence Address 18/F, ABC Building, No. 38 Hong Chong Road, Tsim Sha Tsui, Kowloon

Tel. No.: 22330000

☐ *Mark "x" where applicable*

* *Delete where appropriate*

(Rev. 01/2012)

Not original signature

Specify incorrect FSI system

Form FSI/314

Common Irregularities Found in FSI / 501 Application

1. Original/ Authorized signatory not be provided
2. Signature date or FSI completion date not be specified
3. Signature date earlier than FSI completion date
4. Date(s) of approved GBP not be specified
5. Fire service installations to be inspected not be specified
6. Approval/Licence for Fuel Tank Room of Emergency Generator acquired
7. T&C Checklists attached to the FSD Circular Letter No. 1/2015 were not used or signed
8. Approval for smoke control submissions (SES/SPS/VAC) or hydraulic calculations was not acquired

Ad-hoc Meeting for Compliance Inspection

- Early before the submission of FSI/314 & 501
- Projects with public interest
- Phasing problem
- Complicated projects
  - Special arrangement of manpower resources
  - Abnormal working hours
  - Special site/off-site test
    - Extended coverage sidewall sprinkler installations
    - Long-throw sprinkler installations
    - In-rack sprinkler installations
    - Water spray systems (fuel farm)
    - Foam systems
    - Hot smoke test

Compliance Inspection in Practice

- Inspection officer-in-charge will contact the AP for agreeing the initial date of inspection
- AP to be verified at the beginning
- Delegation letter from the AP in case of the presence of representative
- All RFSICs present to carry out the operation of systems pertaining to FSI
- Compliance inspection is subject to checking by inspection team
- Inspection schedule to be agreed on a reasonable basis
- Inspection duration depends on area of development and complexity of FSI system

Compliance Inspection in Practice

- In case of unsatisfactory compliance inspection result at the end
  - Inspection report for the actions / rectifications /clarifications by AP and /or RFSIC
  - Inspection report to be signed by AP and RFSIC
  - AP to contact SBSI/FSI for reporting completion of rectification
  - Inspection officer contact AP to fix the date of re-inspection
  - Target time for re-inspection depending on the schedule of the inspection team and ASAP
  - FS 172/ Acceptance Letter / Acceptance Memo to be issued in case of satisfactory completion of compliance inspection

Confirmation Letters by the AP

- Address and Description of Premises to be shown on FS172/ Acceptance Letter/ Memo
- Building Name
- Owner's Name and Address
- Confirmation of no VAC installation

Undertaking Letter by the Owner

- Provide 24 hours attendant with fixed telephone line no. on site for Direct Telephone Link
- Future VAC installation shall comply with the relevant requirement of FSD

Information Required for On-site FSI Inspection

- Delegation Letter(s) from AP/RFSIC
- Approved FS Plans (Drawing List may be required)
- 1st GBP Submission Date
- Provision of Wall Lining Material (if applicable)
- FSMP Approval for Open Kitchen (if applicable)
- Approval for Non-FSI Load Connection (if applicable)
- Approval for Non-provision/exemptions of FSI (if applicable)
- Approval for method statement of FSIs such as extended coverage sidewall sprinkler, long throw sprinkler, hot smoke test, etc.

Information Required During Site Inspection

- Copy of FS 251 for potable fire extinguishers
- Copy of FS 251 for existing FSIs (if applicable)
- Open kitchen location list
- Surveyor report for fuel tank
- Battery calculations of starting capacity for emergency generator
- Door curb volume calculations for fuel tank room
- Water Tank Calculations

Information Required During Site Inspection

- Pump curves
- Calculations of NPSH for sprinkler pump
- Fireman's lift information (Lift no., served landing floors and fireman's lift switch location)
- Battery calculations for fire detection alarm panels
- Sound level report for alarm sounder/sounder base detector
- Zoning schedule for fire detection system
- Two Sets of as-built EVA layouts in A3 size indicated with all signage

Information Required for On-site Inspection with Staircase Pressurization System

- Certification letter from the RPE for completion of installation with satisfaction to the FSD's requirement and signed T&C record
- Certification letter from the AP for building air tightness condition during test is equivalent to the occupation condition
- Certification letter for fire resistance rating of fan/panel rooms and duct shafts
- Equipment list by the AP for door sets with related test report according to the requirement of Section 5.21D of FSCoP
- Equipment list for staircase pressurization systems
- Designations of staircase number, fireman's lift number and fire fighting access number
- Classification of pressurized spaces for MOE or MOA
- Fire Engineering Report if applicable
- FSD's approval letter for the fire rated duct/protection material including valid test report
- Copy of calibration certificates for measuring instrument

Information Required for On-site Inspection with Smoke Extraction System

- Certification letter from the RPE for completion of installation with satisfaction to the FSD's requirement and signed T&C record
- Certification letter for fire resistance rating of fan/panel rooms and duct shafts
- Fire Engineering Report if applicable
- FSD's approval letter for the fire rated duct/protection material including valid manufacturer's certification report
- Copy of calibration certificates for measuring instrument
- Equipment list for smoke extraction systems

Inspection Report

SAMPLE

FSI/507B-1 (7/2007)

Fire Service Department / Fire Protection Command

File No. 19/XXXXX

Initial / ~~Re~~-inspection Report on Fire Service Installation / ~~VAC Control System / Smoke Extraction System / Pressurization of Staircase System~~ Inspection and Testing

Part I

1. Building Address : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2. Inspection Result : (Defects noted by Inspecting Officer) :-

2.1 DSI is not provided.
2.2 Construction plan of building name is not submitted.
2.3 Construction plan of Affected & building Description is not submitted.
2.4 Underlying plan of VAC system (AP & owner) is not submitted.
2.5 Amendment of FSI equipment list is required.
2.6 Amendment of FSI checklist is required.

Remark : AP/AP representative is confirmed that no lining material (F.S. notes 7.1 & 7.2) is installed in this project.
to be continued (Total 1 Sheets including this one)

3. A letter / memo confirming the above defects will / will not be sent

Signature :
Inspecting Officer : XXX XXX XXX
Date : XX /4/ XXXX

Part II

4. I confirm that the defects as stated above have been brought to my attention

Authorized person (or representative)	XXX XXX XXX	Installation Contractors (or representative)	XXX XXX XXX
Signature		Signature	
Dated	XX /4/ XXXX	Dated	XX /4/ XXXX

Note : Appointment for re-inspection should be made by AP by telephone to the Senior Building Services Inspector (telephone no. 2733 7549) after the above defects have been remedied. Fresh application for inspection (FSI/501) is not necessary unless it is so required in a refusal letter / memo.
If you have found the inspection report unjustified or wish to appeal any points made in this report, please contact Fire Staff Officer of Licensing and Certification Command at Telephone no. 2733 7605.

FS 172

Sample

Serial No. : L0009XX

FIRE SERVICES DEPARTMENT
HONG KONG

DATE : 7/10/2017

OUR REF. : FP 19/12345
YOUR REF. :

Fire Service Installations and Equipment at:-

Address and Description shall match with that as shown on FS 161

Happy Lane, Kau To Shan, STTL 123
[A residential development comprising five 40-storey domestic buildings on top of a 2-level podium used as shops and clubhouses with one-level basement carpark (with open kitchen)]

This certificate is issued in accordance with Section 21 of the Buildings Ordinance Subsection 6(*d*), and certifies that the Director of Fire Services is satisfied that the fire service installations and equipment shown on the building plans approved by him have been installed in accordance with Sub-paragraph (ii) of Paragraph (*b*) of Subsection (1) of Section 16 of the Buildings Ordinance and were in efficient working order and satisfactory condition at the time of their inspection on 4/8/2017.

Rider (1) As the direct telephone link facilities required to link up the Automatic Fire Detection System, Manual Fire Alarm System and Automatic Sprinkler System with a Computerized Fire Alarm Transmission System (CFATS) of an authorized service provider [Note 1] cannot be provided by a Fixed Telecommunications Network Services Operator licensed by the Office of the Telecommunications Authority, a 24-hour 'attendant' service with normal telephone link is accepted as a temporary substitute pending completion of the direct telephone link facilities.

Rider (2) *Note 1 : Service provider entered into the Contract with the Government of the HKSAR for the provision of service, maintenance and operation of the CFATS.*
This certificate shall only be valid when the permanent water supply for the fire service installation/s has been connected.

Signature

(LEUNG Kwun-hong)
for Director of Fire Services

Ms. LEE Mei-lai
c/o LME Architects Ltd.
38/F,
Wisdom Commercial Building,
Wealthy Street,
Central,
Hong Kong.

c.c. ABC Engineering Co. Ltd.
18/F,
ABC Building,
38 Hong Cheng Road,
Tsim Sha Tsui,
Hong Kong.
(Excluding Portable Equipment)

c.c. Mr. WONG Kam-kwai
c/o ABC Engineering Co. Ltd.
18/F, ABC Building,
38 Hong Cheng Road,
Tsim Sha Tsui,
Hong Kong.
(For Portable Equipment only)

F.S. 172 (Rev 3/98)

差餉物業估價署
Rating and Valuation Department
九龍長沙灣道 303 號長沙灣政府合署 15 樓
15/F Cheung Sha Wan Government Offices,
303 Cheung Sha Wan Road, Kowloon.

Our Ref. : NT XXXX XXXXX
Your Ref. :
Tel. No. : 2150 8614
Fax No. : 2152 0118
Website : http://www.rvd.gov.hk

SAMPLE

To: XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
HK
(Attn: XXXXXXXXXXXXXXXX)

Dear Sir,

Numbering of Buildings
Buildings Ordinance (Cap.123) Section 32

DD XXX Lot XXXX

Based on the layout of the plans, the provisional building number allotted to the development to be erected on the above lot is No.

15 XXXX XXXX RD
XXXX 路 15 號

The above provisional building number is subject to confirmation when the building is completed.

If there are subsequent major changes to the development, please inform me, so that I can review the provisional number at an early stage.

Yours faithfully,

(Ms. XXXXXX)
for Commissioner of Rating and Valuation
Competent Authority

c.c. General Manager (Mail Distribution)
Director of Buildings
District Lands Officer (XXXXXXXX District)
District Survey Office (XXXXXXXX District)
Director of Water Supplies
Director of Fire Services (FSCC)
China Light & Power Co. Ltd
PCCW-HKT Telephone Limited
H.K. & China Gas Co. Ltd.
Commissioner of Police (CIP CID D3)
Land Registrar

RVD's Letter for confirming Building Address

Common Irregularities for Compliance Inspection

- Unclear inspection area, e.g. phasing plan or BA13/14 area was not be specified on the approved GBP
- Approval/License for DG Store of emergency generator was not available
- FSI/314 Smoke control drawings not approved
- Full hydraulic calculations for sprinkler systems/ drencher systems/water spray systems/foam system not approved
- EVA incomplete or design with questions
- Use Permits of Fireman's lifts from EMSD not available
- Approval for non-FSI load connection is not available
- Incomplete water supply from WSD
- Installed FSIs did not match with the information specified in the equipment list
- FSD's approval letters, PCB's certificates or test reports for FSI equipment were not available

Common Irregularities for Compliance Inspection

- Fire Hydrant / Hose Reel Systems
  - Insufficient flow rate and pressure
  - Static pressure at fire hydrant outlet exceeded 8.5 bar
  - Hose reel nozzle to reach every part of the building
  - Hose reel door obstructed Means of Escape
  - Multi-fire hydrant without interconnecting pipe
  - Failure in changeover of fire service pumps
  - Failure in performance test of intermediate booster pump
  - Insufficient all round clearance to permit free use of fire hydrant

Common Irregularities for Compliance Inspection

- Automatic Sprinkler Installations
  - Sprinkler heads >300mm from combustible ceiling (i.e. skylight)
  - Sprinkler head >1500mm from external walls of combustible material (i.e. window wall)
  - Sprinkler heads with obstruction within 500mm
  - Concealed sprinklers installed at where required fast response sprinklers
  - Malfunction of flow/pressure switches
  - Failure of auto-changeover between duty/standby pump
  - Failure of starting sprinkler pump when either pressure switch in open circuit
  - Incorrect taper pipe installation at pump suction
  - Butterfly valves installed at pump suction

Common Irregularities for Compliance Inspection

- Fire Detection Systems/Manual Fire Alarm Systems
  - Insufficient alarm sound pressure level at closed door situation
  - Insufficient clear space of 500mm around a detector
  - Failed continuous operation of fire alarm sounder in the vicinity of the control and indicating equipment
  - External fire alarm sounder at building entrance/fire access point/control & indicating equipment not be provided
  - Short or open circuit fault on fire detector circuit disabled protection area > 2000m^2 or more than one floor
  - Two simultaneous faults on manual call point/fire detector circuit disabled protection area > 10000m^2

Common Irregularities for Compliance Inspection

- Smoke Extraction Systems
  - Failed changeover of duty/standby fans by electrical and flow switch signals
  - Running signal of fans is not a true signals
  - Motorized smoke and fire damper with fusible link used in smoke extraction system
  - Smoke discharge on facade under canopy or < 5000mm from other opening into the building
  - Actuation by manual call point
  - Sprinkler flow switch not match with the smoke zone for system actuation
  - Control devices not suitable to handle hot smoke
  - Fire resisting rating of ductwork not comply with FSCoP

Common Irregularities for Compliance Inspection

Staircase Pressurization Systems

- Failed changeover of duty/standby fans by electrical and flow switch signals
- Incorrect design/operation of biometric damper
- Motorized smoke and fire damper with fusible link used in air release system
- System response not fast enough, i.e., achieving 90% to 110% of the new volumetric requirements within 5s of a door being opened or closed
- Manual override switch not be provided
- Visual and audio signals for indication of manual override control outstanding
- Door opening resistance >100N
- Fire resisting rating of ductwork not comply with FSCoP

Post Compliance Inspection Stage

Amendment to GBP stamped by FSD

- Minor amendments (NOT including change of architectural plans, usage of room and FSI provisions)
- Initiated by AP with letter and part plans highlighting amendments proposed
- Endorsed by Inspection Officer
- Recommended by SBSI/FSI
- Acceptance by New Projects Division
- AP's representative amends GBP in FSD
- Updated drawings in inventory of FSD for future use

Post Compliance Inspection Stage

- Undertaking letter for incomplete direct telephone line for direct link to Computerized Fire Alarm Transmission System (CFATS)
  - Providing 24-hour attendant services with normal telephone provision on site
  - Reminder letter/memo to be served ever three months until the completion of the fixed telephone line

Items upholding FS172/ Acceptance Memo / Acceptance Letter

- EVA
- Fireman's lifts
- FSCA for direct feed street fire hydrant and sprinkler system depending on inflow

♦ ♦ ♦ Thank You ♦ ♦ ♦