

**FIRE SERVICE NOTES:**

**A. SPRINKLER SYSTEM**

- 1) AN AUTOMATIC SPRINKLER SYSTEM TO PROVIDED IN ACCORDANCE WITH THE LPC RULES FOR AUTOMATIC SPRINKLER INSTALLATIONS INCORPORATING BEEN 12645:2003 AND FSD C.L. 3/2006. THE CLASSIFICATION OF THE OCCUPANCIES TO BE CL15.
- 2) SPRINKLER TO BE PROVIDED FOR ENTIRE BUILDING EXCEPT B&M PLANT ROOM AND SERVICES DUCT AREAS.
- 3) THE GOODS TO BE STORED UNDER THE FOLLOWING CONDITION:
  - a. THE MAXIMUM STORAGE HEIGHT SHOWN IN FOLLOWING TABLE SHALL NOT BE EXCEED.
  - b. THE MAXIMUM STORAGE AREAS SHALL BE 50m<sup>2</sup> FOR ANY SINGLE BLOCK, WITH NO LESS THAN 2.4m CLEARANCE AROUND THE BLOCK.

Storage Category	Maximum storage height m	
	Free standing or block stacking (ST1) - see 6.3.2	All other cases (ST2, ST3, ST4, ST5)
Category 1	4.0	3.5
Category 2	2.0	2.0
Category 3	2.1	1.7
Category 4	2.0	1.7

6.3.2 Storage Configuration

Free storage configuration shall be as follows:

- ST1: free standing or block stacking.
- ST2: good pallets in single rows, with aisles not less than 2.4 m wide.
- ST3: good pallets in multiple (including double rows).
- ST4: uniform rack (double pallet loading).
- ST5: some or various types, 1 m or less wide.
- ST6: solid or slatted shelves over 1 m apart no more than 6 m wide.

- 4) NO IN RACK SPRINKLER TO BE PROVIDED
- 5) ONE 3000L SPRINKLER WATER TANK (FIBER GLASS) AS INDICATED ON PLAN, THE SPRINKLER ALARM SIGNAL TO BE LINKED TO THE SERVICE PROVIDERS CENTRALISED FIRE ALARM TRANSMISSION SYSTEM. THE TOWN MAIN WATER SUPPLY TO BE FED FROM SINGLE END, TWO SPRINKLER PUMPS (AUTOMATIC) TO BE PROVIDED TO SERVE THE ENTIRE SPRINKLER SYSTEM.
- 6) SPRINKLER CONTROL VALVE SET AND SPRINKLER INLET TO BE PROVIDED AS INDICATED ON PLAN.
- 7) ALL SPRINKLER ALARM SIGNALS TO BE TRANSMITTED TO THE SPRINKLER ANNUNCIATOR PANEL LOCATED ON GF.

**B. H.R. SYSTEM**

- 1) ON OFF TYPE HOSE REEL NOZZLES HOUSED IN GLASS FRONTED CABINETS WITH PADLOCKS SHALL BE INSTALLED AT LOCATION NOT HIGHER THAN 1.350m AFDL.
- 2) HOSE REEL INSTRUCTION PLATES SHALL BE PROVIDED FOR ALL HOSE REELS.
- 3) THE LENGTH OF RUBBER HOSES SHALL NOT BE MORE THAN 30m.
- 4) DUTY AND STANDBY FEED FIRE PUMPS SHOULD BE PROVIDED FOR THE HOSE REEL SYSTEM.
- 5) MANUAL FIRE ALARM CONTROL PANEL SHOULD BE PROVIDED NEAR THE MAIN ENTRANCE ON GF FOR FIRE ALARM SIGNALS OF THE HOSE REEL SYSTEM.
- 6) THE HOSE REEL BRANCH NOZZLE SHALL HAVE A 4.5mm ORIFICE AND FIT WITH SIMPLE TWO WAY VALVE TO OPERATE AND PROVIDE A WATER JET NOT LESS THAN 6m.
- 7) ALL FIRE SERVICE INSTALLATIONS SHOULD BE COMPLIED WITH THE CURRENT REQUIREMENTS OF THE FIRE SERVICES DEPARTMENT AND THE WATER SUPPLIES DEPARTMENT.
- 8) HOSE REELS REFER TO CLAUSES 1460 IN THE CODE OF PRACTICE FOR MINIMUM FIRE SERVICE INSTALLATION AND EQUIPMENT 2012 VERSION.
- 9) ELECTRICAL CABLES FOR FIRE ALARM BELLS AND FIRE SERVICES PUMPS SHALL BE FIRE RESISTING TYPE COMPLYING WITH BS6397 CAT 0W.
- 10) A NEW FIBERGLASS F.S. WATER TANK OF EFFECTIVE STORAGE CAPACITY NOT LESS THAN 2000 LITERS SHALL BE PROVIDED ON GF FOR HOSE REEL SYSTEM.

**C. FIRE ALARM SYSTEM**

- 1) ACTIVATION OF ANY BREAK GLASS UNIT IN THE BUILDING WILL START THE FEED FIRE PUMP AND SOUND ALL THE ALARM BELLS IN THE WHOLE BUILDING.
- 2) THE CAPACITY OF BATTERIES IS SUFFICIENT TO MAINTAIN THE SYSTEM IN NORMAL CONDITION FOR 72 HOURS (A.L.A. SYSTEM) AND IT SHALL BE ABLE TO OPERATE THE SYSTEM AT ALARM CONDITION FOR 30 MINUTES.

**D. OTHERS**

- 1) ALL EXITS AND EXIT ROUTES SHALL COMPLY WITH CODE OF PRACTICE 4 FSD C.L. 5008 AND TO BE CLEARLY INDICATED BY ILLUMINATED EXIT (EXIT) SIGN AND DIRECTIONAL SIGNS IN CHINESE AND ENGLISH CHARACTERS OF NOT LESS THAN 125mm HIGH WITH 15mm WIDE STROKES.
- 2) EMERGENCY LIGHTING SHALL COMPLY WITH BS EN 18384:2003 AND TO BE PROVIDED THROUGHOUT THE ENTIRE BUILDING AND SHALL COMPLY WITH BS 5266: PART 1 AND BS EN 18384 EXCEPT THAT OF EXIT SIGNS.
- 3) ALL C.M.S. PIPE SHOULD BE CONFIRMED TO BS 1387 CLASS MEDIUM.
- 4) SECONDARY POWER SUPPLY SHOULD BE PROVIDED AND CONNECTED BEFORE THE SUPPLY MAIN SWITCH.

**ABBREVIATION:**

- EX. EXISTING
- M.H. MAIN HOLE
- EQM. EQUIPMENT
- F/A FROM ABOVE
- F/B FROM BELOW
- T/A TO ABOVE
- T/B TO BELOW
- L/L LOW LEVEL
- M/L MIDDLE LEVEL
- H/L HIGH LEVEL
- GW COMPLETE WITH
- SOL SOLID
- NO. NUMBER
- BL. BOUNDARY LINE
- PS PRESSURE SWITCH
- FP FIRE PUMP
- J.P.JOCKEY PUMP
- HR HOSE REEL
- FH FIRE HYDRANT
- MFA MANUAL FIRE ALARM
- N.T.S. NOT TO SCALE
- NEEDS INCLUDED CASE CIRCUIT BREAKER
- TIN TRIPLE POLE AND NEUTRAL
- ACR AFTER MINUTARY CIRCUIT BREAKER
- dia. Diameter

**LEGENDS**

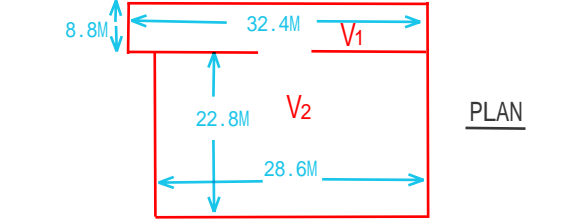
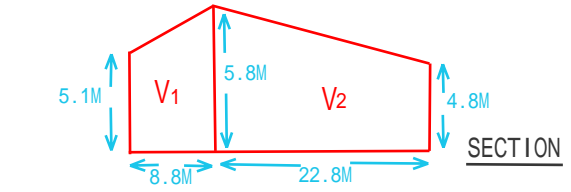
- Subsidiary Valves (w/ Mono Switch)
- GATE VALVE
- NON RETURN VALVE
- PUMP SET
- AUTOMATIC AIR VENT
- BALL FLOAT VALVE
- FIRE HOSE REEL
- CHECK METER POSITION
- FLEXIBLE CONNECTOR
- PRESSURE SWITCH
- FIRE HYDRANT
- FIRE SERVICE INSTALLATION IN SHADED AREAS ARE NOT INCLUDED IN THIS SUBMISSION
- Sprinkler Control Valve (Fan)
- Sprinkler Control Valve
- Flow Switch
- PRESSURE GAUGE
- MANUAL FIRE ALARM CALL POINT (BREAKGLASS TYPE)
- FIRE ALARM BELL
- FEED FIRE PUMP CONTROL PANEL
- MANUAL FIRE ALARM (MFA) CONTROL PANEL
- FUSE SWITCH
- STAR DELTA STARTER
- MINIATURE CIRCUIT BREAKER (MCB)
- EXISTING MINIATURE CIRCUIT BREAKER
- 4.5 KG CO2 FIRE EXTINGUISHER
- INSTALLATION IN SEPARATE SUBMISSION
- NEW INSTALLATION
- New GBC Sprinkler Head
- Exit Sign
- Emergency Lighting

ALL SPRINKLER PIPE SHOULD BE 45.7mm TO BS1387 CLASS MEDIUM

ALL SPRINKLER PIPE SHOULD BE 30 mm DIA. UNLESS OTHERWISE SPECIFIED

COLORIAL CHART FOR SPRINKLER PIPE

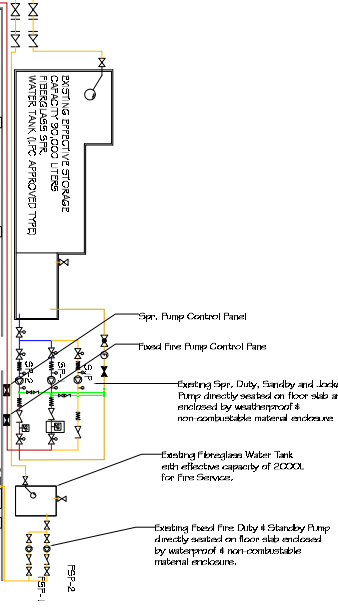
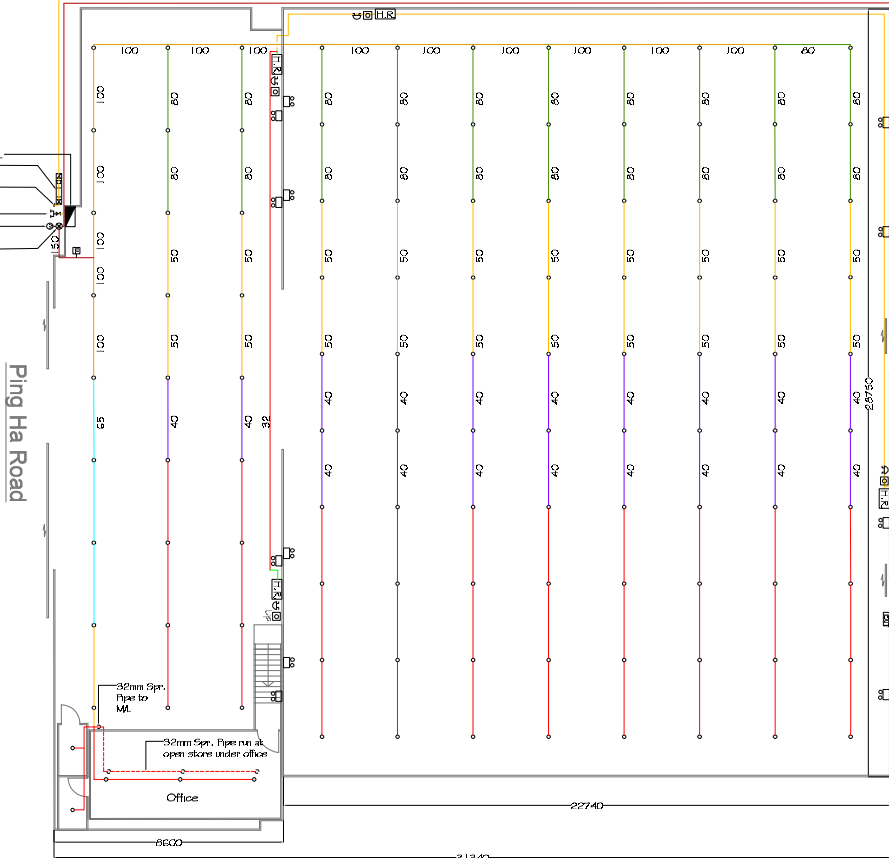
25 mm	40 mm	50 mm
32 mm	50 mm	75 mm
40 mm	75 mm	100 mm
50 mm	100 mm	150 mm
75 mm	150 mm	200 mm



$$V1 = (5.1 + 5.8) \times 8.8 \div 2 \times 32.4 = 1553.904$$

$$V2 = (4.8 + 5.8) \times 22.8 \div 2 \times 28.6 = 3456.024$$

$$5009.928 \text{ m}^3$$



**Ground Floor Plan**

No.	Date	Description
0	20-03-18	Proposal submission
1	22-03-18	Proposal re-submission
2	08-10-18	Proposal re-submission
3	20-11-18	Proposal re-submission

Client :

Architect :

FSI Consultant :  
 模高(亞洲)工程有限公司  
 Beau Growth (Asia) Engineering Limited

Project :  
 Proposed Temporary Warehouse at Lot 897 S.B. RP in D.D. 125 Ha Tsuen, Yuen Long.

Drawing Title :  
 Fire Service Installation Layout Plan and System Schematic Diagram

Dwg. NO. : BGA HT FS 01	
Approved By :	Date : 20 Nov. 2018
Checked By : S. Leung	Scale : 1:100
Drawn By : S. Leung	Rev. No. : 3