





























































PART 'T' FIRE PROTECTION

REGULATIONS

THIS BUILDING SHALL COMPLY WITH T1 "GENERAL REQUIREMENTS OF NATIONAL BUILDING REGULATIONS AND STANDARDS ACT 103 (1977) SECTION TT" DEEMED TO SATISFY RULES AND RATIONAL DESIGN PROPOSALS

TT 1	◦GENERAL		TT 29	◦MARKINGS AND SIGNPOSTING	
TT 2	◦SAFTEY DISTANCES		TT 30	◦LIGHTING OF FEEDER AND EMERGENCY ROUTES	
TT 3	◦DIFFERENT OCCUPANCIES IN A BUILDING		TT 31	◦FIRE DETECTION AND ALARM SYSTEMS	
TT 4	◦DIVISION AREA		TT 32	◦PROVISION OF FIRE FIGHTING EQUIPMENT	
TT 5	◦FIRE PERFORMANCE GENERAL		TT 33	◦WATER RETICULATION FOR FIRE FIGHTING PURPOSES	
TT 6	◦FIRE RESISTANCE OF OCCUPANCY AND DIVISION SEPERATING WALLS		TT 34	◦HOSEREELS	
TT 7	◦FIRE STABILITY OF STRUCTURAL ELEMENTS OR COMPONENTS		TT 35	◦HYDRANTS	
TT 8	◦TENANCY SEPERATING ELEMENTS		TT 36	◦SPRINKLER SYSTEMS	
TT 9	◦PARTITION WALLS AND PARTITIONS		TT 37	◦PORTABLE FIRE EXTINGUISHERS	
TT 10	◦PROTECTION OF OPENINGS		TT 38	◦MOBILE FIRE EXTINGUISHERS	
TT 11	◦RAISED ACCESS AND SUSPENDED FLOORS OF COMBUSTIBLE MATERIAL		TT 39	◦FIRE STOPPING OF INACCESSIBLE CONCEALED SPACES	
TT 12	◦ROOF ASSEMBLIES AND COVERINGS		TT 40	◦PROTECTION IN SERVICE SHAFT	
TT 13	◦CEILINGS		TT 41	◦SERVICES IN STRUCTURAL OR SEPERATING ELEMENTS	
TT 14	◦FLOOR COVERINGS		TT 42	◦SMOKE CONTROL	
TT 15	◦WALL FINISHES		TT 43	◦AIR-CONDITIONING AND VENTILATION SYSTEMS	
TT 16	◦PROVISION OF ESCAPE ROUTES		TT 44	◦NO-SMOKING SIGNS	
TT 17	◦EXIT DOORS		TT 45	◦LIFT SHAFTS	
TT 18	◦FEEDER ROUTES		TT 46	◦LIFT	
TT 19	◦EMERGENCY ROUTES		TT 47	◦FIREMANS LIFT	
TT 20	◦DIMENSIONS OF COMPONENTS OF ESCAPE ROUTES		TT 48	◦STRETCHER LIFT	
TT 21	◦WIDTH OF ESCAPE ROUTES		TT 49	◦STAGE AND BACKSTAGE AREAS	
TT 22	◦BASEMENTS		TT 50	◦SEATING ARRANGEMENTS IN AUDITORIA OR HALLS AND ON GRANDSTANDS	
TT 23	◦STAIRWAYS AND OTHER CHANGES IN LEVEL ALONG ESCAPE ROUTE		TT 51	◦PARKING GARAGES	
TT 24	◦VENTILATION OF STAIRWAYS IN AN EMERGENCY ROUTE		TT 52	◦OPERATING THEATRES AND INTENSIVE CARE UNITS	
TT 25	◦PRESSURIZATION OF STAIRWAYS IN AN EMERGENCY ROUTE		TT 53	◦INSTALLATION OF LIQUID FUEL DISPENSING PUMPS & TANKS	
TT 26	◦OPENINGS IN FLOORS		TT 54	◦INSTALLATION OF OTHER TANKS	
TT 27	◦EXTERNAL STAIRWAYS & PASSAGES		TT 55	◦ACCESS TO BUILDING FOR FIRE FIGHTING & RESCUE PURPOSES	
TT 28	◦LOBBIES , FOYERS AND VESTIBULES		WW 1	◦GENERAL	

KEY

 APPLICABLE  RATIONAL DESIGN  NOT APPLICABLE
 EXISTING

FIRE RATIONALE NOTES

1. Data centre halls and UPS rooms will be protected by a gaseous fire suppression system. (Pyroshield) Bottled solution and concentration to be determined by specialist.

OCCUPANCY

A1	Entertainment and public assembly	D1	High risk industrial	* G1	Offices
A2	Theatrical and indoor sport	* D2	Moderate risk industrial	H1	Hotel
A3	Places of instruction	D3	Low risk industrial	H2	Dormitory
A4	Worship	D4	Plantroom	H3	Domestic Residence
A5	Outdoor sport			H4	Dwelling House
				H5	Hospitality
B1	High risk commercial service	E1	Place of detection	J1	High risk storage
B2	Moderate commercial service	E2	Hospital	* J2	Moderate risk storage
B3	Low risk commercial service	E3	Other institutional (residential)	J3	Low risk storage
				J4	Parking garage
C1	Exhibition hall	F1	Large shop		
C2	Museum	F2	Small shop		
		F3	Wholesalers' store		

* = APPLICABLE OCCUPANCY

POPULATION

1	2
Class of occupancy of room or storey or portion thereof	Population
A1 A2 A4 A5	Number of fixed seats or 1 person per m sq. if there are no fixed seats
E1 E3 H1 H3	2 persons per bedroom
G1	1 person per 15m sq.
J1 J2 J3 J4	1 person per 50m sq.
C1 E2 F1 F2	1 person per 10m sq.
B1 B2 B3 D1 D2 D3 D4	1 person per 15m sq.
C2 F3	1 person per 20m sq.
A3 H2	1 person per 5m sq.

 = APPLICABLE POPULATION OCCUPANCY

WATER SUPPLIES

A FLOW PRESSURE AT ANY HYDRANT OR HOSE REEL OF **NOT LESS THAN** 300kPa AND A FLOW RATE OF **NOT LESS THAN** 20l/s PER HYDRANT AND 0.5l/s PER HOSE REEL REQUIRED

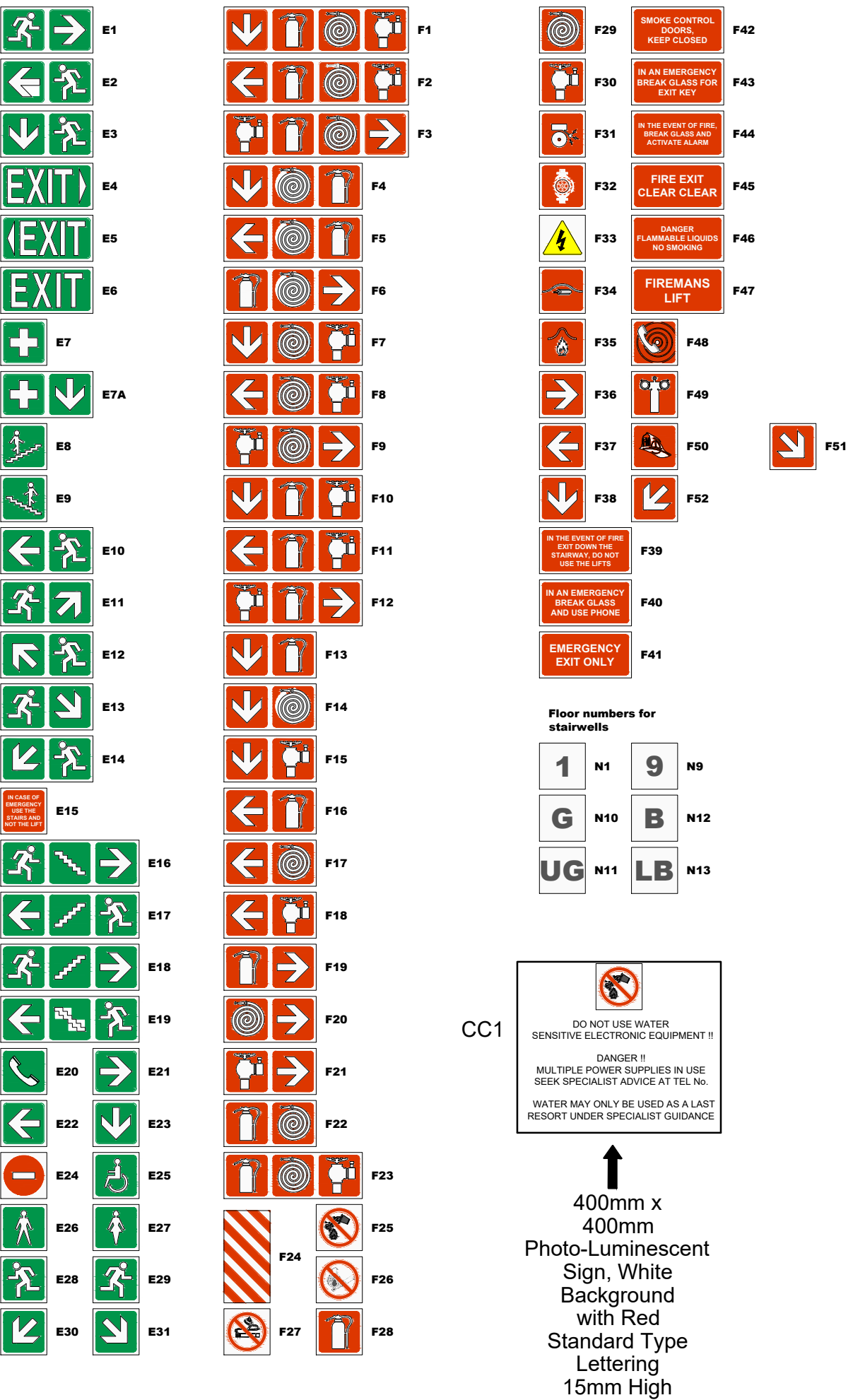
BUILDING AREA & FIRE PROTECTION SCHEDULE

AREA / ZONE	CLASSIFICATION	AREA (m²)	
SEQUENCING FACILITY	D2	16245	
CANOPY	J2	1430	
OFFICES	G1	500	
WASTE AREA	D2	135	
GUARD HOUSE	G1	0	

ITEM	DENSITY / SPECIFICATION	PROVIDED	NOTES
TWIN BOOSTER	N/A	1	
HYDRANT(S)	1/1000m²	16	
FIRE HOSE REEL(S)	1/500m²	32	
HANDHELD FIRE EXTINGUISHER(S)	1/100m²	162	SEQUENCING FACILITY (9kg DCP)
	1/200m²	3	OFFICE (4.5kg DCP)
SPRINKLERS	1/9m²	2040	SEQUENCING FACILITY (7.5mm/min)
	1/12m²	1354	OFFICE (5mm/min)
FIRE WATER STORAGE	431m³	2 x 580m³	
FIRE PUMPS	7184 l/min @350kPa	9000 l/min @1000kPa	
SMOKE & HEAT DETECTION	CATEGORY M CATEGORY L	SANS 10139 SANS 10139	SEQUENCING FACILITY OFFICES (L1)

GRAPHIC STANDARDS









SIGNS TO SABS 1186 (PHOTO LUMINESCENT)
ARROW SIGNS REF. SYSTEM (SIZE : 150mm X 150mm FOR H3)
(SIZE : 190mm X 190mm FOR J4)



SIZE OF SIGNS
FACTORY / WAREHOUSE:
E1 - E6: 290 X 584
E10 - E14: 290 X 584
F4 - F12: 290 X 878
F13 - F22: 290 X 584
F45 - F50: 290 X 290

SIZE OF SIGNS
OFFICES:
E1 - E6: 190 X 384
E10 - E14: 190 X 384
F4 - F12: 190 X 678
F13 - F22: 190 X 384

STANDARD DRAWING SYMBOLS

9kg DCP 	9kg DCP FIRE EXTINGUISHER
4,5 kg CO ₂ 	4,5 kg Co ₂ FIRE EXTINGUISHER
	CEILING SPRINKLER ON STRAIGHT PIPE
	FIRE HYDRANT
	30m FIRE HOSEREEL
	DIRECTION ARROW
	120 MINUTE FIRE RATED WALLS/SLABS
	INTERNAL FIRE RING MAIN

GENERAL NOTES

- HAND HELD EXTINGUISHERS ARE TO BE PROVIDED
- HYDRANTS AND HOSEREELS ARE TO BE PROVIDED
- ADDITIONAL FIRE SIGNAGE TO BE DETERMINED ON SITE WITH FIRE OFFICER

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GENERAL NOTE

- ALL STRUCTURAL, ELECTRICAL, CIVIL AND LANDSCAPING QUERIES ARE TO BE REFERRED TO THE RELEVANT CONSULTANTS DRAWINGS.
- ALL LUMINING QUERIES ARE TO BE REFERRED TO THE RELEVANT SPECIALIST CONSULTANTS DRAWINGS, SPECIFICATIONS AND DETAILS.
- ALL CONCRETE, COLLING AND STRUCTURAL QUERIES ARE TO BE REFERRED TO THE RELEVANT SPECIALIST CONSULTANTS DRAWINGS, SPECIFICATIONS AND DETAILS.
- ALL INTERNAL, INTERNAL WALLS REQUIRING BRACING / STIFFENING ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT STRUCTURAL ENGINEER'S DRAWINGS, SPECIFICATIONS AND DETAILS.
- ALL SPECIFICATIONS WITH REGARD TO FIRE REGULATIONS, TO BE REFERRED TO CONSULTANTS DRAWINGS, SPECIFICATIONS AND DETAILS.
- ALL DESIGN AND CONSTRUCTION TO COMPLY WITH THE RELEVANT SANS REGULATIONS.
- ANY DISCREPANCY IN THE DRAWINGS, DIMENSIONS & SPECIFICATIONS TO BE BROUGHT TO THE ATTENTION OF THE CONSULTANT AND ARCHITECT PRIOR TO ANY WORK BEING PUT IN HAND.
- ONLY FIGURED DIMENSIONS TO BE FOLLOWED - SCALED DIMENSIONS OF DRAWINGS WILL NOT BE PERMITTED

No	Date	Revision	Description	By

PROJECT TEAM

Project Managers :



Architects :



Quantity Surveyors :



Civil Engineers :



Structural Engineers :



Electrical & Mechanical Engineers :



CLIENT



CLIENT APPROVAL :

DATE :

TENANT

NAME :

DESIGNATION :

TENANT APPROVAL :

DATE :

Project

OE/001/2022 DTSA

Drawing Title

FIRE PROTECTION SERVICES TO
FACTORY - RATIONAL ASSESSMENT

Date

10/10/2024

Drawn

B.E.

Scale

NTS

Checked

D.P.

Approved

Name: -

Reg No: -

Signature:

Date:

Practice:

Workstage

For Tender Purposes

Drawing Number

3244-FP-01

Revision

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