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Administrator's Notice 726 16 June, 1976

JOHANNESBURG MUNICIPALITY: ADOPTION OF STANDARD BUILDING BY-LAWS.

The Administrator hereby, in terms of section 101 of the Local Government Ordinance, 1939, publishes that the City Council of Johannesburg has, in terms of section 96bis(2) of the said Ordinance, adopted with the following amendments the Standard Building By-laws, published under Administrator's Notice 1993, dated 7 November 1974, as by-laws made by the said Council:

1. By amending the Index by —
 - (a) the deletion of sections 50, 95, 99, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 113, 114, 144, 145, 146, 147, 148, 149, 150, 151, 308, 309, 310, 312, 313, 356;
 - (b) the substitution under section 60 for the words "Damp Course" of the words "Damp-Proofing of Floors and Walls";
 - (c) the substitution under section 82 for the words "Fire Walls" of the words "Separating and Dividing Walls";
 - (d) the substitution under section 216 for the words "Cat-heads, Cranes and Platforms" of the words "Cranes and Other Lifting Devices"; and
 - (e) the addition at the end thereof of the following:

"CHAPTER XVII.

FIRE PROTECTION.

Section

368 Definitions

FIRE EXTINGUISHING EQUIPMENT AND SERVICES

- 369 Fire Extinguishing Equipment to be Installed
- 370 Approved Sprinkler Installations
- 371 Requirements for Hand Extinguishers
- 372 Requirements for Fitted Hose Reels
- 373 Requirements for Hydrant Valves
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- 375 Incorporation of Pressure Vessel in Fire Extinguishing Systems

Administrateurskennisgewing 726 16 Junie 1976

MUNISIPALITEIT JOHANNESBURG: AANNAME VAN STANDAARD BOUVERORDENINGE.

Die Administrateur publiseer hierby ingevolge artikel 101 van die Ordonnansie op Plaaslike Bestuur, 1939, dat die Stadsraad van Johannesburg die Standaard Bouverordeninge, afgekondig by Administrateurskennisgewing 1993 van 7 November 1974, ingevolge artikel 96bis(2) van genoemde Ordonnansie met die volgende wysigings aangeneem het as verordeninge wat deur genoemde Raad opgestel is:

1. Deur die Inhoudsopgawe te wysig deur —
 - (a) artikels 50, 95, 99, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 113, 114, 144, 145, 146, 147, 148, 149, 150, 151, 308, 309, 310, 312, 313, en 356 te skrap;
 - (b) die woord "Voglaag" by artikel 60 deur die woorde "Vogdigting van Vloere en Mure" te vervang;
 - (c) die woord "Brandmure" by artikel 82 deur die woorde "Skei- en Tussenmure" te vervang;
 - (d) die woorde "Kraanbalke, Hyskrane en Platforms" by artikel 216 deur die woorde "Hyskrane en Ander Hystoestelle" te vervang; en
 - (e) aan die einde daarvan die volgende by te voeg:

"HOOFSTUK XVII.

BRANDBEVEILIGING.

Artikel

368 Woordomskrywing

BRANDBLUSUITRUSTING EN -DIENSTE

- 369 Brandblusuitrusting moet geïnstalleer word
- 370 Goedgekeurde Sprinkelblusserstelsels
- 371 Vereistes vir Handblussers
- 372 Vereistes vir Gemonteerde Slangtolle
- 373 Vereistes vir Brandkrane
- 374 Vereistes in verband met Brandpype as 'n Toereikende Watertoever van die Raad Beskikbaar is
- 375 Inbou van 'n Drukhouer in 'n Brandblusstelsel

- 376 Hydrant Valve Installed at a Greater Height than that at which the Council can maintain an Adequate Water Supply
- 377 Position of Reflux Valve
- 378 Provision of Intercommunication Telephone System
- 379 Maintenance of Fire Extinguishing Systems, Equipment and Appliances
- 380 Fire Extinguishing Systems if Municipal Water is not Available or cannot be made Available
- 381 Fire Extinguishing Equipment during Construction
- 382 Fire Extinguishing Equipment during Demolition
- 383 Premises in which Oil is Heated
- 384 Fire Extinguishing Equipment Required for Changed Use, Increased Area or Increased Height
- 385 Fire Hazards on Vacant Land or in Premises
- 386 Fire Extinguishing Equipment in Circumstances not Provided for

MEANS OF EXIT.

- 387 Public Buildings and Places of Assembly
- 388 Buildings Other than Public Buildings
- 389 Means of Exit from Shops
- 390 Means of Exit from Rooms and Other Enclosed Spaces
- 391 Means of Exit from Basements, Cellars or Parts Thereof
- 392 Means of Exit from Internal Passages and Corridors
- 393 Accessibility of Exits from the Interior of a Building
- 394 Route to Point of Exit
- 395 Exit Routes and Directional Signs to be Lighted
- 396 Width of Passages, Corridors, Lobbies, Foyers, Vestibules or Stairways Forming Part of a Route of Exit
- 397 Prohibited Obstruction
- 398 Flame Spread Rating and Smoke Development Rating of Floor and Wall-Coverings, Ceilings and Suspended Ceilings
- 399 Emergency Electric Lighting System
- 400 Elimination of Dangerous Conditions

STAIRWAYS.

- 401 Occupant Load
- 402 Number of Stairways
- 403 Width of Stairways
- 404 Stairway Enclosures
- 405 Other Dimensions and Construction of Stairways
- 406 Protection of Stairways
- 407 Handrails
- 408 Headroom on Stairways
- 409 Material Used for Construction of Stairways

- 376 Brandkrane wat Hoër geïnstalleer is as die Hoogte waarop die Raad 'n Toereikende Watertoevoer kan handhaaf
- 377 Ligging van Terugslagklep
- 378 Verskaffing van Intertelefoonstelsels
- 379 Onderhoud van Brandblusstelsels, -uitrusting en -toestelle
- 380 Brandblusstelsels as Munisipale Water nie Beskikbaar is of Beskikbaar gestel kan word nie
- 381 Brandblusuitrusting Tydens Bouery
- 382 Brandblusuitrusting Tydens Slopingswerk
- 383 Persele waarin Olie verhit word
- 384 Brandblusuitrusting wat vereis word in die geval van 'n Verandering van Gebruik, Uitbreiding van die Opervlakte of van die Hoogte
- 385 Brandgevaar op Onbeboede Grond of in Persele
- 386 Brandblusuitrusting in Gevalle wat nie deur Hierdie Verordeninge gedek word nie

UITGANGE.

- 387 Openbare Geboue en Plekke van Samekoms
- 388 Geboue, Uitgesonderd Openbare Geboue
- 389 Uitgange uit Winkels
- 390 Uitgange uit Vertrekke en ander Ingeslote Ruimtes
- 391 Uitgange uit Kelderverdiepings, Kelders of Gedeeltes Daarvan
- 392 Uitgange uit Binnegange
- 393 Toeganklikheid van Uitgange uit 'n Gebou
- 394 Roete na Uitgangspunt
- 395 Uitgangsroetes en Rigtingwysers moet Verlig wees
- 396 Wydte van Gange, Binneportale, Voorportale, Vestibules of Trappe wat Deel van 'n Uitgangsroete is
- 397 Verbode Versperring
- 398 Vlamsprei- en Rookontwikkelvermoë in die Geval van Vloer- en Muurbedekkings, Plafonne en Hangplafonne
- 399 Elektriese Noodverligtingstelsel
- 400 Uitskakeling van Gevaartoestande

TRAPPE.

- 401 Okkupantetal
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- 403 Wydte van Trappe
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- 405 Ander Afmetings en die Konstruksie van Trappe
- 406 Beveiliging van Trappe
- 407 Handrelings
- 408 Kopruimte van Trappe
- 409 Materiaal wat vir die Bou van Trappe gebruik word

- 410 Deors; Windows and Other Openings in Stairway Enclosures
- 411 Stairways Contained in a Service Core
- 412 Pressurisation and Ventilation of Stairways
- 413 Accessibility of Stairways
- 414 Termination of Required Stairways
- 415 Escalators not to be Regarded as Stairways
- 416 Escalators between Storeys
- 417 Ramps

LIFTS.

- 418 Dimensions of Lift-lobbies, Lift-foyers and Lift-vestibules
- 419 Stretcher and Fireman's Lifts

SMOKE AND DRAUGHT CONTROL AND FIRE STOPPING.

- 420 Lift Installations
- 421 Dumbwaiter
- 422 Chutes between Storeys
- 423 Ventilating — or Air Conditioning System
- 424 Fire Stopping of Concealed Spaces

GENERAL.

- 425 Malfunctioning of Fire Alarm Systems
- 426 Prohibited Occupation of Buildings
- 427 Penalty Clause".

2. By the substitution for the preamble in section 1 of the following:

"In these by-laws, unless otherwise specifically provided or unless the context otherwise indicates —"

3. By the substitution in section 1 for the definition of "Council" of the following:

"'Council' means the City Council of Johannesburg, that Council's Management Committee acting under the powers delegated to it in terms of section 58 of the Local Government (Administrations and Elections) Ordinance, 1960, and any officer to whom that Committee has been empowered by the Council in terms of sub-section (2) of the said section to delegate and has in fact delegated the powers, functions and duties vesting in the Council in relation to these by-laws."

4. By the insertion after section 15(8) of the following:

"(9) (a) In respect of the drawings referred to in sub-section (1), the owner shall show or endorse thereon, or cause to be shown or endorsed thereon, the type or types of fire extinguishing appliances or equipment to be provided or installed and the position thereof, and the measures to be taken to prevent the spread of fire, heat and smoke or to prevent the concealment of an outbreak of fire.

(b) In addition to the requirements of paragraph (a), the Chief Officer, as defined in section 368 of these by-laws, may require the owner to furnish, or cause to be

- 410 Deure, Vensters en ander Openinge in Trapskagmure
- 411 Trappe in 'n Geboupit
- 412 Drukreefing in en Ventilasië van Trappe
- 413 Toeganklikheid van Trappe
- 414 End van Voorgeskrewe Trappe
- 415 Roltrappe word nie as Trappe Beskou nie
- 416 Roltrappe tussen Verdiepings
- 417 Opritte

HYERSERS.

- 418 Afmetings van Hyserbinnepoortale, -voorpoortale en -vestibules
- 419 Draagbaar- en Brandhysers

ROOK- EN TREKBEHEER EN BRAND-AFDIGTING.

- 420 Hyserinstallasies
- 421 Kostipe Hysers
- 422 Stortgeute tussen Verdiepings
- 423 Ventilasië- of Lugversorgingstelsel
- 424 Brandafdigting van Verskuilruimtes

ALGEMEEN.

- 425 Foutiewe Werking van Brandalarmstelsels
- 426 Verbode Okkupasie van Geboue
- 427 Strafbepaling".

2. Deur die aanhef van artikel 1 deur die volgende te vervang:

"In hierdie verordeninge, tensy uitdruklik anders bepaal of die sinsverband anders aandui, beteken —".

3. Deur in artikel 1 die woordskrywing van "Raad" deur die volgende te vervang:

"'Raad' die Stadsraad van Johannesburg, daardie Raad se Bestuurskomitee wat handel kragtens die bevoegdhede wat ingevolge die bepalings van artikel 58 van die Ordonnansie op Plaaslike Bestuur (Administrasie en Verkie-sings), 1960, aan hom gedelegeer is en enige beampte aan wie die Bestuurskomitee ingevolge die bepalings van sub-artikel (2) van genoemde artikel, op gesag van die Raad, die bevoegdhede, funksies en pligte wat ten opsigte van hierdie verordeninge by die Raad berus, kan deleger, en dit inderdaad gedelegeer het."

4. Deur na artikel 15(8) die volgende in te voeg:

"(9) (a) Wat betref die-tekeninge wat in subartikel (1) genoem word, moet die eienaar daarop aantoon of endosseer, of daarop laat aantoon of endosseer, watter soort of soorte brandblustoestelle of -uitrusting voorsien of verskaf gaan word en waar dit aangebring gaan word, asook die maatreëls wat getref word om brand-, hitte- en rook-verspreiding te voorkom of om te voorkom dat 'n brand wat uitbreek, onopgemerk bly.

(b) Benewens die bepalings van paragraaf (a), kan die Brandweerhoof, soos in artikel 368 van hierdie verordenin-ge omskryf, van die eienaar vereis om aan hom sodanige

furnished, to him such additional information as he may deem necessary to show compliance with all relevant requirements of Chapter XVII of these by-laws or compliance with any decision given by the Chief Officer thereof."

5. By amending section 18 by —

(a) the insertion in subsection (1) after the words "public street" of the words "or any immovable property owned by or vested in the Council";

(b) the renumbering of subsection (1) to read (1)(a), and the insertion after paragraph (a) of the following:

"(b) Where in the opinion of the engineer drawings are required to conclude an encroachment agreement, a fee of R20 shall be payable to the Council in addition to any other fee due to, or any other charge made by the Council." and

(c) the insertion in sub-section (3)(a)(v) immediately after the words "erected by him" of the word "or".

6. By the insertion in section 33(2)(e) before the expression "fine of R100" of the word "maximum".

7. By the deletion of sections 50, 95, 99, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 113, 114, 144, 145, 146, 147, 148, 149, 150, 151, 308, 309, 310, 312, 313 and 356.

8. By the substitution for section 60 of the following:

"Damp-proofing of Floors and Walls.

60.(1)(a) Any floor and any wall, pier, column or other part of a building built of bricks or blocks or similar masonry units which is or at any stage will be, in contact with the ground shall be provided with a damp-proof course or other effective means of preventing the entry of ground moisture into the building.

(b) Any material used as a damp-proof course shall comply with that Standard Specification of the South African Bureau of Standards which is applicable to the material and to the position in which it is used and shall bear the appropriate mark of the South African Bureau of Standards, or shall be of such other effective material as the engineer may approve.

(c) Where joints occur in a horizontal damp-proof course composed of sheeting, such sheets shall overlap by not less than 150 mm.

(2) External walls of buildings built of bricks, blocks or similar masonry units shall be so constructed or otherwise treated as to effectively resist penetration by rain."

9. By the substitution for section 82 of the following:

"Separating and Dividing Walls

82.(1) Walls separating dwelling units which have floors, ceilings or roofs made of combustible materials, and walls separating semi-detached dwelling-houses shall be constructed as firewalls.

(2) Internal walls in buildings of the domestic class, other than the walls referred to in subsection (1), and walls dividing buildings of the office class into separate

bykomende inligting te verskaf of te laat verskaf wat hy nodig ag om te bewys dat daar aan die betrokke vereistes van Hoofstuk XVII van hierdie verordeninge of aan enige beslissing wat die Brandweerhoof ooreenkomstig daarvan gegee het, voldoen is."

5. Deur artikel 18 te wysig deur —

(a) in subartikel (1) na die woorde "openbare straat" die woorde "of enige vaste eiendom wat aan die Raad behoort of by hom berus" in te voeg;

(b) deur subartikel (1) te hernoem (1)(a) en na paragraaf (a) die volgende in te voeg:

"(b) As daar na die mening van die ingenieur tekeninge nodig is vir die aangaan van 'n oorskrydingsooreenkoms moet daar, benewens enige ander gelde wat aan die raad betaalbaar is, of enige ander heffing wat die raad opleë, 'n bedrag van R20 betaal word."; en

(c) in subartikel (3)(a)(v) die woorde "deur kom op sy perseel opgerig" deur die uitdrukking "deur hom, of op sy perseel, opgerig" te vervang.

6. Deur in artikel 33(2)(e) voor die uitdrukking "R100" die woord "hoogstens" in te voeg.

7. Deur artikels 50, 95, 99, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 113, 114, 144, 145, 146, 147, 148, 149, 150, 151, 308, 309, 310, 312, 313 en 356 te skrap.

8. Deur artikel 60 deur die volgende te vervang:

"Vogdigting van Vloere en Mure.

60.(1)(a) Enige vloer en enige muur, penant, suil of ander deel van 'n gebou wat van bakstene of boublokke of soortgelyke boumateriaal gebou is en wat met die grond in aanraking is of wat in enige stadium daarmee in aanraking kan kom, moet deur 'n voglaag of ander doeltreffende manier beskerm word sodat die klammigheid van die grond nie tot die gebou kan deurdring nie.

(b) Enige materiaal wat as 'n voglaag gebruik word, moet voldoen aan die Suid-Afrikaanse Buro vir Standaarde se Standaardspesifikasie wat van toepassing is op die materiaal en op die posisie waar dit gebruik gaan word en dit moet die toepaslike merk van die Suid-Afrikaanse Buro vir Standaarde op hê, of dit moet van 'n ander doeltreffende materiaal wees wat die ingenieur goedkeur.

(c) Waar daar laste voorkom in 'n horisontale voglaag wat uit plaatbekleding bestaan, moet die dunplate wat sodanige plaatbekleding vorm 'n oorslag van minstens 150 mm hê.

(2) Buitemure van geboue wat van baksteen, boublokke of soortgelyke boumateriaal gebou is, moet só gebou word, of andersins op so 'n wyse behandel word, dat dit doeltreffend sal verhoed dat reën daar deurdring."

9. Deur artikel 82 deur die volgende te vervang:

"Skei- en Tussemure.

82.(1) Mure tussen wooneenhede waarvan die vloere, plafonne of dakke van brandbare materiaal gemaak is, en die mure wat 'n skeiding vorm tussen halfvrystaande woonhuise, moet as brandmure opgerig word.

(2) Binnemure van geboue van die huishoudelike klas, buiten die mure waarna daar in subartikel (1) verwys word, en die mure waardeur geboue van die kantoorklas

parts for occupation by different tenants, and all walls enclosing passageways used in common by such tenants, shall be made of non-combustible materials so constructed and installed as to have a fire-resistance rating as defined in section 368, of not less than one hour.

(3) All doorways in walls referred to in subsection (2) shall be fitted with doors having a fire resistance rating as defined in section 368 of not less than one half hour."

10. By the substitution for subsection (1) of section 84 of the following:

"(1) (a) Notwithstanding the provisions of section 82, where in any building any storey having a floor area greater than 950 m² contains separate rooms, dwelling units or offices for occupation by different tenants, such storey shall be divided into units each having a floor area not greater than 950 m² separated from each other by walls made of fire-resisting materials: Provided that where in the opinion of the Chief Officer, as defined in section 368, adequate arrangements are made and maintained to his satisfaction for lessening the danger of the spread of fire, units having a greater floor area may be permitted.

(b) Every doorway in any such wall shall be fitted with a selfclosing fire-resisting door.

(c) The floor of such storey and the floor of the storey immediately above shall be made of fire-resisting materials."

11. By the insertion after section 117(2) (b) of the following:

"(3) Where lifts are required in terms of subsection (2) such lifts shall comply with the requirements of section 419."

12. By the substitution in section 209(1) for the words "Except in" of the word "In".

13. By the substitution for section 216 of the following:

"Cranes and Other Lifting Devices.

216.(1) No person shall, without the consent of the Council, erect, maintain or operate, or cause to be erected, maintained or operated, any crane or other lifting device, any part of which, including any load attached thereto, will rest on, project over or overhang any street or public place.

(2) Any consent granted by the Council in terms of subsection (1) shall be in writing and may be given subject to any conditions the Council may deem fit."

14. By the insertion after section 224(2) of the following:

"(3) 'Free-standing pylon sign' means any advertisement or advertising device supported by, attached to or constructed as a pylon, mast, or other similar independent structure, other than a hoarding or a building."

15. By the insertion in section 230(3) (f) of the Afrikaans text of the word "sentrale" before the words "openbare vermaaklikheidsgebou".

in afsonderlike seksies verdeel word sodat dit deur verskillende huurders geokkupeer kan word en alle mure wat die gemeenskaplike gange wat deur sodanige huurders gebruik word, omsluit, moet van nie-brandbare materiaal gebou word en dit moet op so 'n manier gemaak en geïnstalleer word, dat dit 'n brandweerstandsvermoë, soos in artikel 368 omskryf, van minstens een uur het.

(3) Alle deuropeninge in die mure wat in subartikel (2) genoem word, moet deure in hê met 'n brandweerstandsvermoë, soos in artikel 368 omskryf, van minstens 'n halfuur."

10. Deur subartikel (1) van artikel 84 deur die volgende te vervang:

"(1) (a) Ondanks die bepalings van artikel 82, moet enige verdieping in enige gebou met 'n vloeroppervlakte groter as 950 m² wat uit afsonderlike vertrekke, woon-eenhede of kantore bestaan wat vir okkupasie deur verskillende huurders bedoel is, in eenhede verdeel word wat elk 'n vloeroppervlakte van hoogstens 950 m² het en wat van mekaar geskei word deur mure van brandbestande materiaal: Met dien verstande dat as daar na die mening van die Brandweerhoof, soos in artikel 368 omskryf, doeltreffende reëlings getref en gehandhaaf word ter vermindering van die gevaar van brandverspreiding, daar eenhede met 'n groter vloeroppervlakte toegelaat kan word.

(b) Elke deuropening in enige sodanige muur moet met 'n brandbestande selftoemaakdeur toegerus wees.

(c) Die vloer van sodanige verdieping en die vloer van die verdieping onmiddellik bokant sodanige verdieping moet van brandbestande materiaal gemaak wees."

11. Deur na artikel 117(2) (b) die volgende in te voeg:

"(3) As daar ingevolge subartikel (2) hysbakke verlang word, moet sodanige hysbakke aan die bepalings van artikel 419 voldoen."

12. Deur subartikel (1) van artikel 209 deur die volgende te vervang:

"(1) Geen verandakolomme word in of op enige straat of sypaadjie toegelaat in dié gedeelte van die munisipaliteit wat van tyd tot tyd deur die Raad omskryf word nie."

13. Deur artikel 216 deur die volgende te vervang:

"Hyskrane en Ander Hystoestelle.

216.(1) Niemand mag sonder die toestemming van die Raad enige hyskraan of ander hystoestel waarvan enige gedeelte, met inbegrip van enige vrag daaraan, op 'n straat of openbare plek staan of daaroor uitsteek of oorhang, oprig, onderhou of bedien of dit laat oprig, onderhou of bedien nie.

(2) Enige vergunning wat die Raad ingevolge subartikel (1) verleen, moet skriftelik wees en kan verleen word op enige voorwaardes wat die Raad goeddink."

14. Deur na artikel 224(2) die volgende in te voeg:

"(3) 'Vrystaande piloonteken' beteken enige advertensie of advertensietoestel wat deur 'n piloon, mas of ander soortgelyke losstaande struktuur, buiten 'n skutting of 'n gebou, gestut word, daaraan vas is of as sodanig opgerig is."

15. Deur in artikel 230(3) (f) voor die woorde "openbare vermaaklikheidsgebou" die woord "sentrale" in te voeg.

16. By the insertion after section 230(3)(i) of the following:

"(j) For the purposes of this section and of section 231(3), the words 'central public entertainment building' means a public building of the type referred to in paragraphs (a) and (b) of the definition of public building in section 1, situated within the area bordered by Noord Street, Mooi Street, Marshall Street and Sauer Street."

17. By the insertion in section 231(3) of the word "central" before the words "public entertainment building".

18. By the substitution for section 235 of the following:

"Bill Postings and Hoardings."

235.(1) The topmost part of any hoarding used or intended to be used for bill posting or the display or exhibition of any advertisement, shall not exceed 5 m in height above the lowest ground level upon which such hoarding is erected.

(2) Every free-standing pylon sign and its supporting structure shall comply with the following requirements:

- (a) The supporting structure shall be effectively secured to an adequate foundation and shall be without guys or other ancillary restraining devices.
- (b) No part of the supporting structure nor any part of the sign shall be located within or pass through a building or part thereof, or in any way be attached or secured to a building or to any part thereof.
- (c) The dimensions of the sign and its supporting structure shall be such that both the sign and the structure can be contained wholly within a notional vertical cylindrical figure having a diameter of not more than 6 m and a height of not more than 12 m.

(3) Drawings to a scale of 1:20 showing structural details of the support and framework of any bill-posting, hoarding, or any free-standing pylon sign shall be submitted to the Council together with other details specifically required in respect of signs in terms of these by-laws.

(4) The design of any hoarding or free-standing pylon sign and its supporting structure shall be to the satisfaction of the Council."

19. By the substitution in section 240(1) for the words "by the council from time to time" of the expression "in Schedule 3 hereto".

20. By the substitution in section 242(8) for the figures "6c" and "3c" of the figures "25c" and "10c" respectively.

21. By the deletion in section 257(1) of the word "city" in the third line and the words "in such streets" in the third and fourth lines.

22.(1) By the deletion of subsection (3) of section 264, and the renumbering of the remaining subsections to read (3), (4), (5), (6), (7), (8) and (9) respectively.

(2) By the deletion of paragraph (c) of section 264(5).

23. By the substitution in the second line of section 286 for the word "to" of the word "of".

16. Deur na artikel 230(3) die volgende in te voeg:

"(j) Vir die toepassing van hierdie subartikel en van artikel 231(3), beteken die woorde 'sentrale openbare vermaaklikheidsgebou' 'n openbare gebou van die soort waarvan daar in paragrawe (a) en (b) van die omskrywing van openbare gebou in artikel 1 melding gemaak word en wat geleë is in die gebied wat begrens word deur Noordstraat, Mooistraat, Marshallstraat en Sauerstraat."

17. Deur in artikel 231(3) die woord "sentrale" voor die woorde "openbare vermaaklikheidsgebou" in te voeg.

18. Deur artikel 235 deur die volgende te vervang:

Aanplak van Biljette en Skuttings.

235.(1) Die hoogste gedeelte van enige skutting wat vir die aanplak van biljette of vir die uitstalling of vertoning van enige advertensie gebruik word of bedoel is, mag nie hoër as 5 m bokant die laagste grondvlak waarop sodanige skutting opgerig is, wees nie.

(2) Elke vrystaande piloonteken en die drastruktuur daarvan moet aan die volgende vereistes voldoen:

- (a) Die drastruktuur moet op doeltreffende wyse in 'n toereikende fondament vasgeit word en mag geen ankertou of ander hulpstuttoestel aan hê nie.
- (b) Geen deel van die drastruktuur of enige deel van die teken mag binne 'n gebou geleë wees of daardeur of deur 'n gedeelte daarvan strek, of op enige manier hoegenaamd aan 'n gebou of enige gedeelte daarvan vas wees of daaraan vasgemaak word nie.
- (c) Die afmetings van die teken en die drastruktuur daarvan moet sodanig wees dat die teken sowel as die struktuur geheel en al in 'n denkbeeldige vertikale silindriese figuur met 'n middellyn van hoogstens 6 m en 'n hoogte van hoogstens 12 m kan pas.
- (d) Geen sodanige teken mag advertensiemateriaal oor 'n oppervlakte groter as 37 m² bevat nie.
- (e) Die laagste gedeelte van enige sodanige teken moet minstens 2,5 m bo die grondhoogte wees.

(3) Tekeninge op die skaal 1:20 waarop die strukturele besonderhede van die stut en die raamwerk van enige aanplakbord, skutting of enige vrystaande piloonteken aangedui word, moet saam met ander besonderhede wat uitdruklik ingevolge hierdie verordeninge ten opsigte van tekens vereis word, aan die Raad voorgelê word.

(4) Die ontwerp van enige skutting of vrystaande piloonteken en die stutstruktuur daarvan moet tot voldoening van die Raad wees.

19. Deur in artikel 240(1) die woorde "deur die raad van tyd tot tyd" deur die uitdrukking "in Bylae 3 hierby" te vervang.

20. Deur in artikel 242(8) die syfers "6c" en "3c" onderskeidelik deur die syfers "25c" en "10c" te vervang.

21. Deur in artikel 257(1) die woorde "stadswyke in sodanige strate" in die derde en vierde reëls deur die woord "wyke" te vervang.

22.(1) Deur subartikel (3) van artikel 264 te skrap en die oorblywende subartikels onderskeidelik te hernoem (3), (4), (5), (6), (7), (8) en (9).

(2) Deur paragraaf (c) van artikel 264(5) te skrap.

23. Deur in die tweede reël van artikel 286 van die Engelse teks die woord "to" deur die woord "of" te vervang.

24. By the substitution in section 315 —

(a) for the heading of the following:

"Hatchets."; and

(b) for the word "Hatches" in the first line of the word "Hatchets".

25. By the deletion of subsection (3) of section 341 and the renumbering of the remaining subsections to read (3), (4), (5), (6), (7) and (8) respectively.

26. By the substitution in section 367 for the figures "R50" and "R100" of the figures "R100" and "R300" respectively.

27. By the insertion after Chapter XVI of the following:

"CHAPTER XVII.

FIRE PROTECTION.

Definitions.

368. For the purpose of this Chapter unless the context otherwise indicates —

'adequate' or 'adequately' means adequate or adequately in the opinion of the Chief Officer;

'approved' means approved by the Chief Officer;

'Chief Officer' means the person appointed by the Council as Chief Officer of its Fire Department and includes any person representing the Chief Officer in the administration of these by-laws;

'effective' or 'effectively' means effective or effectively in the opinion of the Chief Officer;

'fire alarm system' means any apparatus, whether or not connected to a fire station, designed to give warning of any fire, excessive smoke or heat;

'fire-resistance rating' of any part or component of a building means the time in hours or fractions thereof that such part or component as constructed and installed in that building will withstand fire exposure as determined by a test carried out by the South African Bureau of Standards or the National Building Research Institute;

'flame spread rating' of a material means the measurement, expressed as a numeral of the comparative rate of spread of flame over the surface of the material as determined by a fire test carried out by the South African Bureau of Standards or the National Building Research Institute;

'height of building' means the vertical distance from the lowest ground level abutting on the building to a point at the average height of the ceiling of the topmost storey of the building, or if there is no ceiling, to a point at the average height of the roof structure;

'mezzanine' means any intermediate floor situated between a floor level and the floor level, ceiling or roof above, as the case may be: Provided that when the total gross floor area of all mezzanines occurring in any storey exceeds 33 1/3% of the gross floor area of that storey, such mezzanines shall be considered as separate storeys;

'occupant load' —

(a) where a storey or part thereof is used for one purpose only, 'occupant load' means the number ob-

24. Deur in artikel 315 van die Engelse teks —

(a) die opskrif deur die volgende te vervang:

"Hatchets." ; en

(b) die woord "Hatches" in die eerste reël deur die woord "Hatchets" te vervang.

25. Deur subartikel (3) van artikel 341 te skrap en die oorblywende subartikels onderskeidelik te hernommer (3), (4), (5), (6), (7) en (8).

26. Deur in artikel 367 die syfers "R50" en "R100" onderskeidelik deur die syfers "R100" en "R300" te vervang.

39. Deur na Hoofstuk XVI die volgende in te voeg:

"HOOFSTUK XVII.

BRANDBEVEILIGING.

Woordomskrywing.

368. Vir die toepassing van hierdie Hoofstuk, tensy dit uit die sinsverband anders blyk, beteken —

'brandalarmstelsel' enige stelsel, of dit met 'n brandweerstasie verbind is of nie, wat ontwerp is om te waarsku dat daar 'n brand, oormatige rook of hitte is;

'Brandweerhoof' die persoon wat die Raad as hoof van sy Brandweerafdeling aangestel het, en sluit in iemand wat die Brandweerhoof in die toepassing van hierdie verordeninge verteenwoordig;

'brandweerstandsvermoë' van enige deel of onderdeel van 'n gebou, die tyd in ure of gedeeltes daarvan wat sodanige deel of onderdeel soos dit gemaak en in die gebou geïnstalleer is, blootstelling aan vuur sal weerstaan, soos bepaal deur middel van 'n toets wat die Suid-Afrikaanse Buro vir Standaarde of die Nasionale Bounavorsingsinstituut toegepas het;

'doeltreffend' doeltreffend na die mening van die Brandweerhoof;

'gedeelte van 'n verdieping' enige gedeelte van 'n verdieping wat doeltreffend van die res van sodanige verdieping geskei word deur middel van materiaal wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van minstens twee uur het;

'geboupit' enige ruimte in 'n gebou wat deur mure omsluit word en as sodanige ruimte 'n hyserskag of hyserskagte en twee of meer trappe bevat wat vier verdiepings of meer bedien;

'goedgekeur' goedgekeur deur die Brandweerhoof;

'hoogte van 'n gebou' die vertikale afstand tussen die laagste grondoppervlak aangrensend aan die gebou en 'n punt op die gemiddelde hoogte van die plafon van die boonste verdieping van die gebou, of as daar nie 'n plafon is nie, 'n punt op die gemiddelde hoogte van die dakstruktuur;

'okkupantetal' —

(a) as 'n verdieping of gedeelte daarvan vir slegs een doel gebruik word, die getal wat verkry word deur

tained by dividing the net occupiable floor area of the storey or part thereof by the relevant unit of area prescribed in the right hand column of the table appearing in Schedule A to this Chapter;

- (b) where a storey or part thereof includes a section which is used for multiple purposes involving different activities at different times, 'occupant load' means the number obtained by dividing the net occupiable floor area of that section by that relevant unit of area prescribed in the right hand column of the table appearing in Schedule A to this Chapter which will involve the greater or greatest number of occupants envisaged by such different activities, as the case may be;
- (c) where different areas in a storey or part thereof are used for multiple purposes at the same time, 'occupant load' means the sum of the numbers obtained by dividing the net occupiable floor area of each such different area in the storey or part thereof by the relevant unit of area prescribed in the right hand column of the table appearing in Schedule A to this Chapter;

In determining the net occupiable floor area of a storey or part thereof, toilets, locker rooms, storage rooms, staff kitchens, lift shafts and similar rooms or spaces that are not occupied at the same time as other rooms or spaces on the same storey or part thereof, may, subject to the consent of the Chief Officer, be omitted from such calculation to the extent that such rooms or spaces serve other occupied rooms on the same storey or part thereof;

'part of a storey' means any part of a storey which is effectively separated from the remainder of such storey by materials so constructed and installed as to have a fire-resistance rating of not less than two hours;

'service core' means any volume of space enclosed by walls in a building and where such space contains a lift shaft or lift shafts and two or more stairways which serve four or more storeys;

'smoke development rating' of any material means the measurement, expressed as a numeral, of the comparative rate of liberation of smoke by the material as determined by a fire test carried out by the South African Bureau of Standards or the National Building Research Institute;

'storey' means that space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, and includes a mezzanine in the circumstances referred to in the proviso of the definition of mezzanine;

'sufficient' or 'sufficiently' means sufficient or sufficiently in the opinion of the Chief Officer.

die netto okkuperbare vloeroppervlakte van die verdieping of gedeelte daarvan deur die toepaslike oppervlakte-eenheid, wat in die regterkantste kolom van die tabel in Bylae A by hierdie Hoofstuk verstrekkend, te deel;

- (b) as 'n verdieping of gedeelte daarvan 'n deel insluit wat vir meervoudige doeleindes, wat verskillende aktiwiteite op verskillende tye behels, gebruik word, die getal wat verkry word deur die netto okkuperbare vloeroppervlakte van daardie deel van die verdieping of gedeelte daarvan te deel deur die toepaslike oppervlakte-eenheid wat in die regterkantste kolom van die tabel in Bylae A by hierdie Hoofstuk voorgeskryf word, wat die grootste getal okkupante behels wat aan die verskillende aktiwiteite kan deelneem;
- (c) as verskillende oppervlakte in 'n verdieping of gedeelte daarvan terselfdertyd vir meervoudige doeleindes gebruik word, die totaal van die getalle wat verkry word deur die netto okkuperbare oppervlakte van elke sodanige oppervlakte in die verdieping of gedeelte daarvan deur die toepaslike oppervlakte-eenheid wat in die regterkantste kolom van die tabel in Bylae A by hierdie Hoofstuk voorgeskryf word, te deel;

By die bepaling van die netto okkuperbare vloeroppervlakte van 'n verdieping of gedeelte daarvan, kan toiletkamers, kleekamers, pakkamers, personeelkombuis, hyserskagte en soortgelyke vertrekke of ruimtes wat nie terselfdertyd as ander vertrekke of ruimtes in dieselfde verdieping of gedeelte daarvan geokkuper word nie, met die toestemming van die Brandweerhoof van sodanige berekening uitgesluit word tot die mate waarin sodanige vertrekke of ruimtes ander geokkuperde vertrekke op dieselfde verdieping of gedeelte daarvan bedien;

'rookontwikkelvermoë' van 'n materiaal, die vermoë uitgedruk as 'n vergelykingsgetal, van die materiaal om rook te ontwikkel soos bepaal deur middel van 'n brandtoets wat die Suid-Afrikaanse Buro vir Standaarde of die Nasionale Bounavorsingsinstituut toegepas het;

'toereikend' toereikend na die mening van die Brandweerhoof;

'tussenverdieping' enige tussenverdieping wat tussen 'n vloervlak en, na gelang van die geval, die vloervlak of plafon of dak daarbo geleë is: Met dien verstande dat as die totale bruto vloeroppervlakte van al die tussenverdiepings op enige verdieping 33 1/3% van sodanige verdieping se totale bruto vloeroppervlakte oorskry, sodanige tussenverdiepings as afsonderlike verdiepings beskou word;

'verdieping' dié ruimte in 'n gebou tussen een vloervlak en die vloervlak net daarbo of as daar geen vloervlak daarbo is nie, die plafon of dak daarbo, en sluit in 'n tussenverdieping in die omstandighede waarna daar die voorbehoudsbepaling by die woordomskrywing van tussenverdieping verwys word;

'vlamspreivermoë' van 'n materiaal, die vermoë, uitgedruk as 'n vergelykingsgetal, van die materiaal te versprei vlamme oor die oppervlak van die materiaal te versprei soos bepaal deur middel van 'n brandtoets wat die Suid-Afrikaanse Buro vir Standaarde of die Nasionale Bounavorsingsinstituut toegepas het;

'voldoende' voldoende na die mening van die Brandweerhoof.

FIRE EXTINGUISHING EQUIPMENT AND SERVICES.

Fire Extinguishing Equipment to be Installed.

369 (1) To the extent that the floor space of a storey or portion thereof in any building envisaged in the tables appearing in Schedule B to this Chapter is used for a purpose or purposes envisaged in those tables, the owner of such building shall —

- (a) install the fire extinguishing equipment prescribed in those tables;
- (b) in cases not specifically regulated in terms of Schedule B or by any other provision of these by-laws install the fire extinguishing equipment required by the Chief Officer.

(2) Fire extinguishing equipment includes the following types of equipment which for the purposes of these by-laws are listed hereunder in order of what shall be deemed to be their increasing effectiveness.

- (a) Hand extinguishers,
- (b) Fitted hose reels,
- (c) Hydrant valves,
- (d) Approved sprinkler installation.

(3) Where different types of equipment are prescribed for two or more storeys of the same building, the Chief Officer may require that the entire building be protected by the most effective equipment prescribed for any one storey.

(4) If in any building a cubic capacity in excess of 6 000 m³ is devoted to the manufacture, processing, use, sale or storage of combustible material, whether contained in one or more than one storey, such building shall be divided into units of not more than 6 000 m³, separated effectively from each other and from all other parts of the building by materials so constructed and installed as to have a fire-resistance rating of not less than two hours, or such building shall be protected by hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation.

(5) Where an arcade or similar pedestrian way is less than 9 m wide at any point, and where there are shop-windows on both sides and the length of the arcade or pedestrian way exceeds 15 m, every shop having a window onto such arcade or pedestrian way shall be protected by an approved sprinkler installation, and if the arcade or pedestrian way is covered over, such arcade or pedestrian way shall be protected in the same manner.

(6) Where the use of any floor space or part of any floor space cannot, in the opinion of the Chief Officer, be classified in terms of Schedule B to this Chapter, the Chief Officer shall prescribe the type or types of fire extinguishing equipment to be installed in the entire storey.

(7) Where different parts of the floor space of any one storey or mezzanine are devoted to different uses referred to in Schedule B to this Chapter, the Chief Officer shall prescribe the type or types of fire extinguishing equipment to be installed in the entire storey.

(8) Where the Chief Officer considers that the materials used and the processes carried on in an industrial

BRANDBLUSUITRUSTING EN -DIENSTE.

Brandblusuitrusting moet Geïnstalleer word.

369. (1) Die eienaar van enige gebou moet in die mate waarin die vloerruimte van 'n verdieping of gedeelte daarvan in sodanige gebou aangewend word vir die doel wat in die tabelle in Bylae B by hierdie Hoofstuk aangegee word —

- (a) die brandblusuitrusting wat by sodanige tabelle voorgeskryf word, installeer;
- (b) in gevalle wat nie uitdruklik by Bylae B of 'n ander bepaling van hierdie verordeninge voorgeskryf word nie, die brandblusuitrusting wat die Brandweerhoof vereis, installeer.

(2) Brandblusuitrusting omvat die ondergenoemde soorte uitrusting, wat vir die toepassing van hierdie verordeninge in 'n stygende volgorde van doeltreffendheid aangegee word:

- (a) Handblussers.
- (b) Gemonteerde slangtolle.
- (c) Brandkrane.
- (d) Goedgekeurde sprinkelblusserstelsel.

(3) As verskillende soorte uitrusting vir twee of meer verdiepings van dieselfde gebou voorgeskryf word, kan die Brandweerhoof bepaal dat die hele gebou deur die doeltreffendste uitrusting wat vir enige verdieping voorgeskryf is, beveilig word.

(4) As in enige gebou 'n kubieke ruimte van meer as 6 000 m³ benut word vir die vervaardiging, verwerking, gebruik, verkoop of opberging van brandbare materiaal, afgesien daarvan of sodanige ruimte een verdieping of meer beslaan, moet sodanige gebou verdeel word in eenhede van hoogstens 6 000 m³ elk, wat doeltreffend van mekaar en van alle ander dele van die gebou geskei is deur materiaal wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van minstens twee uur het, of anders moet so 'n gebou deur handblussers, gemonteerde slangtolle, brandkrane en 'n goedgekeurde sprinkelblusserstelsel beveilig word.

(5) As 'n arkade of soortgelyke voetgangerpad op enige punt smaller as 9 m is, en daar winkelvensters aan weerskante is en die arkade of voetgangerpad langer as 15 m is, moet elke winkel waarvan 'n venster op sodanige arkade of voetgangerpad uitkyk, deur 'n goedgekeurde sprinkelblusserstelsel beveilig word, en as die arkade of voetgangerpad oordek is, moet sodanige arkade of voetgangerpad op dieselfde wyse beveilig word.

(6) As die gebruik van enige vloerruimte of 'n gedeelte van enige vloerruimte na die mening van die Brandweerhoof nie ingevolge Bylae B by hierdie Hoofstuk ingedeel kan word nie, moet die Brandweerhoof die soort of soorte brandblusuitrusting wat in die hele verdieping geïnstalleer moet word, voorskryf.

(7) As verskillende gedeeltes van die vloerruimte op enige verdieping of tussenverdieping gebruik word vir meer as een doel soos dit in Bylae B by hierdie Hoofstuk aangegee word, moet die Brandweerhoof die soort of soorte brandblusuitrusting voorskryf wat in die hele verdieping geïnstalleer moet word.

(8) As na die mening van die Brandweerhoof die materiaal wat gebruik word en die proses wat plaasvind

building of one storey only do not constitute a fire hazard, he may, irrespective of the height of such building, permit the installation of fire extinguishing equipment of lesser effectiveness than that prescribed in Schedule B to this Chapter.

(9) Where the height of a building exceeds 30 m, every storey therein shall be protected by an approved sprinkler installation in addition to any fire extinguishing equipment otherwise prescribed in terms of these by-laws: Provided that in the case of any building, other than an hotel whether licensed or unlicensed, which is divided into units for human residence which are effectively separated from each other by materials so constructed and installed as to have a fire-resistance rating of not less than two hours, the Chief Officer may relax the requirements of this subsection.

Approved Sprinkler Installations.

370. If in the opinion of the Chief Officer the existing means for the natural ventilation of a storey or part thereof having a floor area in excess of 200 m² are insufficient to dispel heat and smoke effectively in the event of a fire occurring therein, such storey or part thereof shall be protected by an approved sprinkler installation in addition to any fire extinguishing equipment prescribed in terms of these by-laws.

Requirements for Hand Extinguishers.

371.(1) Hand extinguishers prescribed in terms of these by-laws shall be of one or other of the following types:

- (a) Water or foam extinguishers, which shall have a capacity of not less than 9 litres; or
- (b) Carbon dioxide extinguishers, which shall have a capacity of not less than 2,25 kg; or
- (c) dry chemical powder extinguishers, which shall have a capacity of not less than 2,25 kg.

(2) Where hand extinguishers are prescribed in addition to fitted hose reels or hydrant valves, such hand extinguishers shall be provided in the ratio of two extinguishers for each reel or valve, and where not prescribed in addition to reels or valves, in the ratio of not less than two extinguishers for each 450 m² of floor area or part thereof of the storey concerned.

(3) Hand extinguishers prescribed in terms of these by-laws shall be hung in such manner and in such positions as the Chief Officer may approve.

Requirements for Fitted Hose Reels.

372. Fitted hose reels prescribed in terms of these by-laws shall —

- (a) comply with the South African Bureau of Standards specification No. 543 and any amendment thereto or substitution thereof;
- (b) contain not less than 25 m and not more than 30 m of 20 mm diameter reinforced plastic or reinforced rubber hose, fitted with a shut off nozzle having a 5 mm diameter outlet orifice;

in 'n enkelverdiepingnywerheidsgebou nie 'n brandgevaar inhou nie, kan hy, ongeag die hoogte van sodanige gebou, toelaat dat brandblusuitrusting wat minder doeltreffend is as dié wat by Bylae B by hierdie Hoofstuk voorgeskryf word, geïnstalleer word.

(9) As 'n gebou hoër as 30 m is, moet elke verdieping daarvan beveilig word deur 'n goedgekeurde sprinkelblusserstelsel benevens enige ander brandblusuitrusting wat ingevolge hierdie verordeninge voorgeskryf word: Met dien verstande dat in die geval van 'n gebou, uitgesonderd 'n hotel, of dit gelisensieer is of nie, wat vir mensebewing verdeel is in eenhede wat doeltreffend van mekaar geskei is deur materiaal wat so gemaak en geïnstalleer is dat dit 'n brandweerstandvermoë van ten minste twee uur het, die Brandweerhoof die bepaling van hierdie subartikel kan verslap.

Goedgekeurde Sprinkelblusserstelsels.

370. As die bestaande middele vir natuurlike ventilasie van 'n verdieping of gedeelte daarvan met 'n vloeroppervlakte groter as 200 m² na die mening van die Brandweerhoof onvoldoende is om die hitte en rook in die geval van 'n brand daarin doeltreffend weg te voer, moet sodanige verdieping of gedeelte daarvan, benevens deur die brandblusuitrusting wat ingevolge hierdie verordeninge voorgeskryf word, ook deur 'n goedgekeurde sprinkelblusserstelsel beveilig word.

Vereistes vir Handblussers.

371.(1) Handblussers wat by hierdie verordeninge voorgeskryf word, moet van een of ander van die ondergenoemde soorte wees:

- (a) Water- of skuimblussers met 'n inhoudsvermoë van ten minste 9 liter; of
- (b) koolsuurgasblussers met 'n inhoudsvermoë van ten minste 2,25 kg; of
- (c) poeierblussers met 'n inhoudsvermoë van ten minste 2,25 kg.

(2) As handblussers benevens gemonteerde slangtolle of brandkraan voorgeskryf word, moet sodanige handblussers in die verhouding van twee blussers tot elke tol of brandkraan verskaf word, en as dit nie benevens tolle of brandkrane voorgeskryf word nie, in die verhouding van ten minste twee blussers per vloeroppervlakte van 450 m² of gedeelte daarvan van die betrokke verdieping, verskaf word.

(3) Handblussers wat ingevolge hierdie verordeninge voorgeskryf word, moet op sodanige wyse en in sodanige posisies opgehang word, soos dit deur die Brandweerhoof goedgekeur is.

Vereistes vir Gemonteerde Slangtolle.

372. Gemonteerde slangtolle wat ingevolge hierdie verordeninge voorgeskryf word, moet —

- (a) aan die Suid-Afrikaanse Buro vir Standaarde se Spesifikasie No. 543 en enige wysiging of vervanging daarvan voldoen;
- (b) voorsien wees van 'n versterkte plastiek- of versterkte rubberslang wat 'n binnemiddellyn van 20 mm het en wat ten minste 25 m en hoogstens 30 m lank is, en waaraan 'n afsluitpuitstuk met 'n uitlaatopening met 'n binnemiddellyn van 5 mm geheg is;

- (c) be provided in the ratio of not less than one reel for each 450 m² of floor area or part thereof of any one storey and shall, irrespective of the floor area, be so located that all parts of such storey can be reached by one or more hoses;
- (d) without any reduction in the ratio prescribed in terms of paragraph (c), be located in a stairway enclosure, communal lobby, passage, foyer, vestibule or other approved position;
- (e) be connected to a service pipe complying with the requirements of section 374, or a delivery pipe as prescribed in section 376, as the case may be.

Requirements for Hydrant Valves.

373. Hydrant valves required in terms of these by-laws shall —

- (a) be of an approved material and made to a wheel valve pattern and shall have an inlet for a supply pipe of not less than 75 mm internal diameter and a female outlet of not less than 65 mm in diameter and such wheel valve shall have embossed or engraved thereon the words 'OPEN/OOP' and an arrow indicating the direction of rotation of the wheel to open the valve;
- (b) when required by the Chief Officer, be fitted with approved fire hoses of such length and diameter as he may specify together with all necessary hose-couplings and branch pipes;
- (c) be provided in the ratio of not less than one valve for each 900 m² of floor area or part thereof on any one storey and shall, irrespective of floor area, be so located that all parts of such storey can be reached by one or more hoses of a length not exceeding 35 m;
- (d) without any reduction in the ratio prescribed in terms of paragraph (c), be located in a stairway enclosure, communal lobby, passage, foyer, vestibule or other approved position;
- (e) be connected to a service pipe complying with the requirements of section 374, or a delivery pipe, as prescribed in section 376, as the case may be.

Requirements in regard to Service Pipes, if an Adequate Water Supply by Council is Available.

374.(1) Every service pipe to which a fitted hose reel or hydrant valve is connected shall be connected to the Council's communication pipe at a point approved by the Chief Officer and shall comply with the following requirements:

- (a) The diameter of a service pipe conveying water to the inlet of a fitted hose reel shall be not less than 50 mm and in the case of a service pipe serving a hydrant valve, not less than 100 mm.
- (b) Every service pipe to which a hydrant valve is connected shall be fitted with an approved twin fire-pump connection, and every service pipe installed exclusively to serve fitted hose reels installed at a height exceeding 6 m above the lowest ground level abutting on the building shall be fitted with a single fire-pump connection.

- (c) in die verhouding van minstens een tol per vloeroppervlakte van 450 m² of gedeelte daarvan per verdieping verskaf word en moet ongeag die vloeroppervlakte so geleë wees dat alle dele van die verdieping met een of meer slange bereik kan word;
- (d) sonder dat die verhouding wat by paragraaf (c) voorgeskryf is, verminder word, in 'n trapskag, gemeenskaplike binneportaal, gang, voorportaal, vestibule of 'n ander goedgekeurde plek geleë wees;
- (e) na gelang van die geval met 'n brandpyp wat aan die bepalings van artikel 374 voldoen of met 'n perspyp soos dit by artikel 376 voorgeskryf word, verbind wees.

Vereistes vir Brandkrane.

373. Brandkrane wat ingevolge hierdie verordeninge voorgeskryf word, moet —

- (a) van goedgekeurde materiaal en volgens 'n wielklep-patroon gemaak wees, en moet 'n toevoerpypinlaat met 'n binnemiddellyn van ten minste 75 mm en 'n oorpas-uitlaat met 'n binnemiddellyn van ten minste 65 mm hê en die woorde 'OOP/OPEN' en 'n pyltjie wat aandui in watter rigting die wiel gedraai moet word om die klep oop te kry, moet op sodanige wielklep gebosselcer of gegraveer wees;
- (b) wanneer die Brandweerhoof dit vereis, met goedgekeurde brandslange van sodanige lengte en binnemiddellyn wat hy voorskryf, tesame met al die nodige slangkoppelstukke en handpype voorsien word;
- (c) in die verhouding van minstens een brandkraan per vloeroppervlakte van 900 m² of gedeelte daarvan per verdieping aangebring word en, ongeag die vloeroppervlakte, so geleë wees dat alle dele van sodanige verdieping bereik kan word deur een of meer slange wat hoogstens 35 m lank is;
- (d) sonder vermindering van die verhouding wat by paragraaf (c) voorgeskryf word, in 'n trapskag, gemeenskaplike binneportaal, gang, voorportaal, vestibule of op 'n ander goedgekeurde plek geleë wees;
- (e) na gelang van die geval, met 'n brandpyp wat aan die vereistes van artikel 374 voldoen, of met 'n perspyp soos dit by artikel 376 voorgeskryf word, verbind wees.

Vereistes in Verband met Brandpype as 'n Toereikende Watertoever van die Raad Beskikbaar is.

374.(1) Elke brandpyp waarmee 'n gemonteerde slangtol of brandkraan verbind is, moet op 'n punt wat die Brandweerhoof goedkeur, aan die Raad se toevoerleiding verbind word, en moet aan die volgende vereistes voldoen:

- (a) Die binnemiddellyn van 'n brandpyp wat water na die inlaat van 'n gemonteerde slangtol voer, moet ten minste 50 mm en dié van 'n brandpyp wat 'n brandkraan bedien, ten minste 100 mm wees.
- (b) Elke brandpyp waarmee 'n brandkraan verbind is, moet toegerus wees met 'n goedgekeurde dubbele brandpompverbinding en elke brandpyp wat geïnstalleer is uitsluitlik om gemonteerde slangtolle te bedien wat hoër as 6 m bokant die laagste grondoppervlak aangrensend aan die gebou geïnstalleer is, moet toegerus wees met 'n enkele brandpompverbinding.

- (c) Every service pipe fitted with one or more fire-pump connections shall have a pressure gauge reading up to 2 100 kPa and a reflux valve so located as to shut off automatically the supply of water from the Council's main whenever and for so long as the fire-pump connection pipe is in use.
- (d) Every service pipe which has a hydrant valve or fitted hose reel connected to it at a height exceeding 30 m above the lowest ground level abutting on the building shall at its uppermost end be connected to a tank which has a capacity of not less than 6 kl of water above its point of connection with the service pipe.

(2) The tank referred to in subsection 1(d) shall be connected, supplied with water and controlled in accordance with the following requirements:

- (a) The point of connection between the tank and the service pipe shall be not less than 4,5 m above the level of the outlet of the topmost hydrant valve or the inlet pipe of a fitted hose reel, as the case may be: Provided that where for any reason the dimensional requirements of this subsection cannot be met, a power driven pump capable of maintaining a flow rate of not less than 20 litres of water per second at a gauge pressure of not less than 300 kPa at the topmost hydrant valve, and made to function automatically and simultaneously with the opening of the hydrant valve or hose reel nozzle, shall be installed between the tank and the said hydrant valve or hose reel.
- (b) A reflux valve and a manually operated shut-off valve shall be provided on the service pipe at a position between the topmost hydrant valve or fitted hose reel and its point of connection with the tank and so arranged as to cut off the flow of water from the tank whenever and for so long as its associated fire-pump connection is in use.
- (c) The tank shall be supplied with water in a manner adequate to fill and to maintain it automatically to its required capacity except when any hydrant valve or hose reel connected to it is in use and where the supply of water is controlled by a ball valve, such valve shall have a diameter of not less than 20 mm and shall be fitted with a manually operated shut-off valve.

Incorporation of Pressure Vessel in Fire Extinguishing Systems.

375.(1) In lieu of the installation of the tank referred to in section 374(1)(d), the owner of a building may with the consent of the Chief Officer incorporate into a fire extinguishing system a pressure vessel tested and approved to resist safely a pressure of not less than one and a half times its working pressure.

(2) In lieu of the installation of the tank referred to in section 374(1)(d), the Chief Officer may require the incorporation in a fire extinguishing system of a pressure vessel tested and approved to resist safely a pressure of not less than one and a half times its working pressure.

Hydrant Valves Installed at a Greater Height than that at which the Council can maintain an Adequate Water Supply.

376.(1) Where in any fire extinguishing system installed in a building any hydrant valve or fitted hose reel is

(c) Elke brandpyp wat toegeus is met een brandpomp-verbinding of meer, moet toegeus word met 'n drukmeter met 'n lesinggrens van 2 100 kPa en 'n terugslagklep wat so geleë is dat die watertoevoer van die Raad se hoofleiding outomaties afgesluit word terwyl die brandpompverbindingspyp in gebruik is.

(d) Elke brandpyp waaraan 'n brandkraan of 'n gemonteerde slangtol verbind is op 'n hoogte hoër as 30 m bokant die laagste grondoppervlak aangrensend aan die gebou moet op sy hoogste punt verbind wees met 'n watertenk wat bokant die plek waar dit met die brandpyp verbind is, 'n inhoudsvermoë van ten minste 6 kl het.

(2) Die tenk waarna daar in subartikel 1(d) verwys word, moet ooreenkomstig die volgende bepalings verbind, van water voorsien en beheer word:

(a) Die plek waar die tenk en die brandpyp verbind is, moet ten minste 4,5 m bokant die hoogte van die uitlaat van die boonste brandkraan of van die inlaatpyp van 'n gemonteerde slangtol wees, al na gelang van die geval: Met dien verstande dat as daar om enige rede nie voldoen kan word aan hierdie subartikel se bepalings betreffende die afmetings nie, daar 'n kraggedrewe pomp wat die lewering van ten minste 20 liter water per sekonde teen 'n meterdruk van ten minste 300 kPa by die boonste brandkraan kan handhaaf en wat outomaties en gelyktydig met die oopgaan van die brandkraan of die slangtolspuitstuk funksioneer, tussen die tenk en genoemde brandkraan of gemonteerde slangtol geïnstalleer moet word.

(b) 'n Terugslagklep en 'n handsluitklep moet aan die brandpyp aangebring word tussen die boonste brandkraan of gemonteerde slangtol en die plek waar die brandpyp met die tenk verbind word, en moet so ingerig word dat dit die watertoevoer van die tenk afsluit terwyl die verwante brandpompverbinding in gebruik is.

(c) Die tenk moet op toereikende wyse van water voorsien word sodat dit outomaties tot sy voorgeskrewe inhoudsvermoë gevul en dié stand gehandhaaf word behalwe wanneer 'n brandkraan of 'n slangtol wat daarmee verbind is, gebruik word, en as die watertoevoer deur 'n vlotterklep beheer word, moet sodanige vlotterklep 'n middellyn van ten minste 20 mm hê en toegeus wees met 'n handsluitklep.

Inbou van 'n Drukhouer in 'n Brandblusstelsel.

375.(1) Die eienaar van 'n gebou kan, met die toestemming van die Brandweerhoof, in plaas van die tenk waarna daar in artikel 374(1)(d) verwys word, 'n druhouer wat getoets en goedgekeur is om 'n druk van ten minste anderhalf keer sy werkdruk veilig te weerstaan, in 'n brandblusstelsel inbou.

(2) Die Brandweerhoof kan bepaal dat 'n druhouer wat getoets en goedgekeur is om 'n druk van ten minste anderhalf keer sy werkdruk veilig te weerstaan in plaas van die tenk waarna daar in artikel 374(1)(d) verwys word, in 'n brandblusstelsel ingebou word.

Brandkraan wat Hoër Geïnstalleer is as die Hoogte Waarop die Raad 'n Toereikende Watertoevoer kan Handhaaf.

376.(1) As enige brandkraan of gemonteerde slangtol in enige brandblusstelsel in 'n gebou hoër aangebring is

installed at a height greater than that at which the Council is capable of maintaining an adequate water supply through its mains or the equipment of its Fire Department, the owner of the building shall ensure that such system is capable of maintaining a flow rate of not less than 20 litres per second at a gauge pressure of not less than 300 kPa at any hydrant valve connected to such system.

(2) Every fire extinguishing system as prescribed in terms of subsection (1) shall be provided by the owner of the building with—

(a) a tank located at or below ground level which shall—

- (i) have a capacity of not less than 25 kl;
- (ii) be supplied by a service pipe which has a diameter of not less than 100 mm, is connected to the Council's communication pipe and is provided with a pressure gauge reading up to 2 100 kPa, controlled at its outlet by an approved high pressure automatic shut-off-valve;
- (iii) be connected to a supplementary service pipe which has a diameter of not less than 100 mm, and which has a twin fire-pump connection fitted at its inlet, and which has an outlet so positioned as to discharge into the top of the tank;
- (iv) be provided with a gauge to indicate the level of the water contained in the tank.

(b) not less than two interconnected power driven water pump units each individually capable of producing and maintaining the flow rate and pressure specified in subsection (1) and each of which shall—

- (i) be fitted with starting mechanisms either manually controlled or functioning automatically with any lowering of the static pressure in the system;
- (ii) be driven by an electric motor connected to the normal electric power supply and also to a diesel-electric unit which shall start automatically and immediately in the event of failure of the normal electric power supply;
- (iii) be connected to a delivery pipe having a diameter of not less than 100 mm and not less than 150 mm in the case of a delivery pipe which exceeds a height of 50 m above the pump;

(c) approved devices limiting the gauge pressure at any hydrant valve to 700 kPa.

(3) Every pump unit and its starting and driving mechanisms prescribed in terms of subsection (2) shall be installed in an adequately ventilated compartment constructed to have a fire-resistance rating of not less than two hours and where any such compartment is located at or below ground level, the entrance or other means of access thereto shall be on a street, public place or other approved open space: Provided that where any such compartment is located in a sub-basement, the means of access thereto from the street, public place or other open air space shall be enclosed by walls having a fire-resistance rating of not less than two hours and shall not be used as a means of access to any other part of the building.

as die hoogte waarop die Raad 'n toereikende watertoevoer deur sy hoofleidings of deur die uitrusting van sy Brandweerafdeling kan handhaaf, moet die eienaar sorg dat sodanige stelsel 'n watertoevoer van ten minste 20 liter per sekonde teen 'n meterdruk van ten minste 300 kPa by enige brandkraan wat met sodanige stelsel verbind is, kan handhaaf.

(2) Elke brandblusstelsel soos dit ingevolge subartikel (1) voorgeskryf word, moet deur die eienaar van die gebou toegevoeg word met —

(a) 'n tenk wat op of onderkant die grondhoogte geleë is en —

- (i) 'n inhoudsvermoë van ten minste 25 kl het;
- (ii) voorsien word deur 'n brandpyp met 'n binnemiddellyn van ten minste 100 mm wat verbind is met die Raad se toevoerleiding en toegevoeg is met 'n drukmeter met 'n lesinggrens van 2 100 kPa en by sy uitlaat deur 'n goedgekeurde outomatiese hoëdrukafsluitklep beheer word;
- (iii) verbind is met 'n aanvullende brandpyp met 'n binnemiddellyn van ten minste 100 mm en met 'n dubbele brandpompverbinding wat by die inlaat van sodanige brandpyp aangebring is en die uitlaat waarvan so geleë is dat die water bo-in die tenk inloop;
- (iv) voorsien is van 'n meter wat die stand van die water in die tenk aandui;

(b) ten minste twee kraggedrewe waterpompeenhede wat onderling verbind is en wat elkeen afsonderlik in staat is om die watertoevoer en druk wat by subartikel (1) voorgeskryf word, te bewerkstellig en te handhaaf en wat elkeen —

- (i) toegevoeg is met aansit-meganismes wat of met die hand beheer word of outomaties en onmiddellik met 'n afname in die statiese druk in die brandblusstelsel funksioneer;
- (ii) aangedryf deur 'n elektriese motor wat met die gewone kragtoevoer verbind is, en ook deur 'n diesel-elektriese eenheid wat outomaties en onmiddellik aanskakel wanneer die gewone kragtoevoer onderbreek word;
- (iii) verbind is met 'n perspyp met 'n binnemiddellyn van ten minste 100 mm, en as die perspyp se uitlaat hoër as 50 m bokant die pomp is, ten minste 150 mm;

(c) goedgekeurde toestelle om die waterdruk volgens die meter in enige brandkraan tot 700 kPa te beperk.

(3) Elke pompeenheid met sy aansit- en dryfmeganismes wat ingevolge subartikel (2) voorgeskryf word, moet geïnstalleer word in 'n doeltreffend-geventileerde kompartement wat so gebou is dat dit 'n brandweerstandvermoë van ten minste twee uur het en as sodanige kompartement op of onderkant die grondhoogte geleë is, moet die ingang of ander toegang daartoe aan 'n straat, openbare plek of ander goedgekeurde oop ruimte grens: Met dien verstande dat as sodanige kompartement in 'n subkelder-verdieping geleë is, die toegang daartoe van die straat, openbare plek of ander oop ruimte af, omsluit moet word deur mure wat 'n brandweerstandvermoë van ten minste twee uur het en dit mag nie as 'n toegang tot ander dele van die geboue gebruik word nie.

(4) Where the pressure developed by any pump unit can be varied by altering the speed of its driving equipment, a suitable chart indicating the pressure that develops at any given speed at any particular floor shall be displayed in a prominent position in close proximity to the controls of such equipment and shall be maintained in a legible condition.

(5) Every fire extinguishing system equipped with automatic pump starting mechanisms shall be fitted with an alarm system designed to emit an adequate and continuous audible warning whenever and for so long as any pump installed in the system is set in motion.

(6) Every fire extinguishing system equipped with manual pump starting mechanisms shall be kept constantly charged with water and shall at all times be under the supervision and control of a person who is fully conversant with all the technical details of the system and its warning devices.

(7) The provisions of these by-laws shall not be construed as prohibiting the installation of supplementary pumps or tanks at any point in a building.

(8) Every fire pump connection, pressure gauge, water level indicator, installation diagram and other equipment prescribed in terms of these by-laws shall be located in approved positions.

Positions of Reflux Valve.

377. No reflux valve in any fire extinguishing system shall be so positioned as to prevent or hinder the flow of water from any fire-pump connection to any hydrant valve or fitted hose reel connected to such system.

Provision of Intercommunication Telephone System.

378. The owner of a building in which pumps form part of the fire extinguishing system shall provide an intercommunication telephone system for the use of the Fire Department and such telephone system shall include the following:

- (a) Wall-hung hand-sets or standard type connections for portable hand-sets which permit intercommunication between the main entrance to the building and all pump and tank rooms; and between all storeys and all pump and tank rooms.
- (b) Where portable hand-sets are installed, not less than three such hand-sets shall be kept in an approved cabinet at the main entrance to the building and each connecting point for a portable hand-set shall be housed in an approved box with a transparent and easily breakable glass panel.
- (c) Every telephone in a pump room shall be fitted with loudspeaker equipment of sufficient strength and clarity to transmit a voice distinctly over a distance of not less than 5 m from the loudspeaker when the pumps are in operation.

Maintenance of fire Extinguishing Systems, Equipment and Appliances.

379.(1) The owner of premises in which a fire extinguishing system is installed in terms of these by-laws shall at all times keep and maintain in a proper state of repair and working order and to the satisfaction of the Chief Officer such fire extinguishing system and all equipment and appliances forming part thereof.

(4) As die druk wat enige pompeenheid ontwikkel, gewysig kan word deur die snelheid van die aandryfuitrusting te verander, moet daar 'n geskikte kaart waarop die druk aangedui word wat teen enige bepaalde snelheid op enige verdieping ontwikkel word, op 'n opvallende plek naby die aandryfuitrusting vertoon, en in 'n leesbare toestand onderhou word.

(5) Daar moet aan elke brandblusstelsel wat met outomatiese pompaansitmeganismes toegerus is, 'n alarmstelsel aangebring word wat 'n toereikende en aanhoudende, hoorbare waarskuwing gee wanneer enige pomp wat in die stelsel geïnstalleer is, aangeskakel word en terwyl dit in werking is.

(6) Elke brandblusstelsel wat met hand-pompaansitmeganismes toegerus is, moet voortdurend met water gevul wees en moet te alle tye onder die toesig en beheer wees van iemand wat ten volle vertrouwd is met alle tegniese besonderhede van die stelsel en die waarskuwingstoestelle.

(7) Geen bepaling van hierdie verordeninge moet so vertolk word dat die installering van aanvullende pompe en tenks op enige plek in 'n gebou hierby verbied word nie.

(8) Elke brandpompverbinding, drukmeter, waterstandwyser, installasiediagram en ander uitrusting wat ingevolge hierdie verordeninge voorgeskryf word, moet op goedgekeurde plekke geleë wees.

Ligging van Terugslagklep.

377. Geen terugslagklep in enige brandblusstelsel mag op so 'n plek geïnstalleer word dat dit die vloeï van water van 'n brandpompverbinding na 'n brandkraan of 'n gemonteerde slangtol wat met sodanige stelsel verbind is, voorkom of belemmer nie.

Verskaffing van Intertelefoonstelsel.

378. Die eienaar van 'n gebou waarin pompe deel van die brandblusstelsel vorm, moet vir die gebruik van die brandweerafdeling 'n intertelefoonstelsel verskaf wat die volgende insluit:

- (a) Muurhandtoestelle of standaard aansluitings vir drahandtoestelle waarmee daar interkommunikasie tussen die hoofingang, van die gebou en alle pomp- en tenkkamers asook tussen alle verdiepings en alle pomp- en tenkkamers bewerkstellig kan word.
- (b) As drahandtoestelle geïnstalleer is, moet daar ten minste drie sulke handtoestelle in 'n geskikte kas by die hoofingang van die gebou gehou word en elke verbindingpunt vir 'n drahandtoestel moet ingesluit wees in 'n goedgekeurde kassie met 'n deurskynende ruit wat maklik gebreek kan word.
- (c) Elke telefoon in 'n pompkamer moet met 'n luidspreker toegerus wees wat kragtig genoeg is sodat 'n stem duidelik op 'n afstand van ten minste 5 m van die luidspreker af gehoor kan word wanneer die pompe in werking is.

Onderhoud van Brandblusstelsels, -Uitrusting en -Toestelle.

379.(1) Die eienaar van 'n perseel waarin 'n brandblusstelsel ingevolge hierdie verordeninge aangebring is, moet sodanige brandblusstelsel, asook alle uitrusting en toestelle wat deel van die stelsel is, te alle tye tot voldoening van die Brandweerhoof in 'n goeie en werkende toestand hou.

(2) Every pump and its driving and starting mechanism in a fire extinguishing system shall be tested at intervals of not more than three calendar months by a suitably qualified person who shall record the results of such tests. Such records shall be kept in the pump compartment envisaged in section 376(3), or in some other safe place on the premises and shall be produced for inspection on demand by the Chief Officer.

(3) In addition to the test referred to in subsection (2), the Chief Officer may at any time direct that the fire extinguishing system, appliance, or warning and communicating device installed in terms of these by-laws be tested in his presence and in such manner and by such person as he may require. Such test shall be carried out and the necessary apparatus supplied at no expense to the Council. Any defect revealed by such test shall be remedied immediately by the owner of the premises.

(4) The Chief Officer may at the request of the owner carry out the test referred to in subsection (3).

(5) The owner or occupier or the person in control, as the case may be, of premises in which any hand extinguisher is provided or installed in terms of these by-laws shall —

- (a) as soon as possible after it has, or would by the exercise of reasonable diligence on his part have come to his notice that such extinguisher is defective, cause it to be repaired or replaced by an effective extinguisher;
- (b) cause every such extinguisher to be tested at intervals of not more than twelve calendar months.

Fire Extinguishing Systems if Municipal Water is not Available or cannot be made Available.

380. If the municipal water supply in any part of the municipality is inadequate to ensure the effective operation of any fire extinguishing system prescribed in terms of these by-laws, or is unavailable or cannot be made available, the Chief Officer may require in respect of any particular premises such fire fighting appliances, equipment or water storage as he may deem necessary: Provided that if an adequate municipal water supply becomes available subsequently, the provisions of these by-laws shall apply save to the extent that the Chief Officer considers the previously installed fire appliances, equipment or water storage to be adequate.

Fire Extinguishing Equipment during Construction.

381. In the case of a building under construction, the owner shall comply with these by-laws in respect of each storey, on the basis that such storey forms part of the building as duly completed in accordance with the approved plans: Provided that the Chief Officer may in respect of any storey relax the requirements of these by-laws having regard to the practicability or otherwise of applying them to the uncompleted building.

(2) Elke pomp en sy dryf- en aansit-meganisme wat deel van 'n brandblusstelsel is, moet met gereelde tussenpose van hoogstens drie kalendermaande deur 'n behoorlik-gekwalifiseerde persoon getoets word en hy moet die uitslag van die toets aanteken. Sodanige verslag moet in die pompkompartement wat by artikel 376(3) voorgeskryf word, of op 'n ander veilige plek op die perseel gehou en op versoek van die Brandweerhoof ter insae getoon word.

(3) Die Brandweerhoof kan te eniger tyd bepaal dat, benewens die toepassing van die toets waarna daar in subartikel (2) verwys word, die brandblusstelsel, -uitrusting of -toestel en waarskuwings- of kommunikasietoestel wat ingevolge hierdie verordeninge geïnstalleer is, in sy teenwoordigheid en op 'n wyse en deur sodanige persoon wat hy bepaal, getoets word. Sodanige toets moet toegepas en die apparaat daarvoor verskaf word sonder dat dit koste vir die Raad meebring, en die eienaar van die perseel moet alle gebreke wat deur sodanige toets aan die lig gebring word, onmiddellik regstel.

(4) Die Brandweerhoof kan die toets waarna daar in subartikel (3) verwys word, op versoek van die eienaar toepas.

(5) Nagelang van die geval, moet die eienaar, die okkupant of die persoon in beheer van 'n perseel waarin 'n handblusser ingevolge hierdie verordeninge verskaf of geïnstalleer is —

- (a) so gou as moontlik nadat hy daarvan bewus geword het, of met redelike sorg daarvan bewus kon geword het, dat sodanige handblusser onklaar geraak het, dit laat herstel of dit deur 'n doeltreffende handblusser vervang;
- (b) elke sodanige handblusser met tussenpose van hoogstens twaalf kalendermaande laat toets.

Brandblusstelsels as Munisipale Water nie Beskikbaar is of Beskikbaar Gestel kan Word nie.

380. As die munisipale watervoorraad in enige deel van die munisipaliteit nie toereikend is vir die doeltreffende werking van enige brandblusstelsel wat ingevolge hierdie verordeninge voorgeskryf word, of nie beskikbaar is of beskikbaar gestel kan word nie, kan die Brandweerhoof ten opsigte van enige besondere perseel bepaal dat die brandblustoestelle of -uitrusting of wateropgaargeriewe wat sins insiens nodig is, op die perseel verskaf moet word: Met dien verstande dat as daar later 'n toereikende munisipale watervoorraad beskikbaar word, die bepalinge van hierdie verordeninge van toepassing word, behalwe in die mate waarin die brandblustoestelle, -uitrusting of wateropgaargeriewe wat reeds geïnstalleer is, na die mening van die Brandweerhoof toereikend is.

Brandblusuitrusting Tydens Bouery.

381. Die eienaar van 'n gebou wat in aanbou is, moet ten opsigte van elke verdieping aan die bepalinge van hierdie verordeninge voldoen op die grondslag daarvan dat sodanige verdieping deel is van die gebou wat behoorlik ooreenkomstig die goedgekeurde planne voltooi is: Met dien verstande dat die Brandweerhoof die bepalinge van hierdie verordeninge ten opsigte van enige verdieping kan verslap indien die toepassing hiervan op die onvoltooide gebou ondoenlik is.

Fire Extinguishing Equipment Services during Demolition.

382.(1) The owner of a building in the course of demolition and the person demolishing the building shall, until the Chief Officer otherwise authorizes, keep in good service and proper working order all service pipes, fitted hose reels, hydrant valves and pump units therein: Provided that any service pipe above the point of connection with a hose reel or hydrant valve on the floor immediately below the floor being demolished, may be removed without the authority of the Chief Officer, but the remainder of the service pipe shall be securely plugged and kept in service.

(2) The owner of a building in the course of demolition and the person demolishing the building in which no fire extinguishing system, equipment or appliance has been installed, shall provide such system, equipment or appliance as the Chief Officer may require.

Premises in which Oil is Heated.

383. Every person in control of premises where oil is heated for preparing food for sale shall provide not less than one dry chemical powder hand extinguisher.

Fire Extinguishing Equipment Required for Changed Use, Increased Area or Increased Height.

384. If the use of any storey or part of a storey is changed, or if the area of floor space devoted to any existing use in a storey is increased, or if the height of any building is increased, and the fire extinguishing equipment required in terms of these by-laws in respect of such changed use or increased area of floor space or increased height is more effective than that previously installed, the Chief Officer may require the installation of the more effective fire extinguishing equipment in the storey concerned or throughout the entire building.

Fire Hazards on Vacant Land or in Premises.

385.(1) Where existing circumstances on any vacant land or in any premises create a fire hazard of whatever nature or may in future create a fire hazard, the Chief Officer may require the owner thereof to eliminate such hazard or provide such fire extinguishing equipment as he may consider necessary.

(2) Where land is used for the storage of combustible material, or as a caravan, mobile home or amusement park, or exhibition ground, or for any other purpose which in the opinion of the Chief Officer constitutes a fire hazard, the owner of such land shall install a sufficient number of hydrant valves and fitted hose reels in such a manner that every part of such land can be reached by hoses attached to such valves or hose reels.

Fire Extinguishing Equipment in Circumstances not Provided for.

386. In circumstances not covered in terms of these by-laws, the Chief Officer may prescribe the quantity and type of fire equipment and extinguishing media or fire alarm system to be provided and such equipment, extinguishing media or fire alarm shall be placed to his satisfaction.

Brandblusuitrusting Tydens Slopingswerk.

382.(1) Die eienaar van 'n gebou wat gesloop word en die sloper daarvan moet, tot tyd en wyl die Brandweerhoof 'n ander opdrag gee, al die brandpype, gemonteerde slangtolle, brandkrane en pompeenhede in die gebou in 'n behoorlik-werkende toestand hou: Met dien verstande dat enige brandpyp bokant die punt waar dit met 'n slangtol of 'n brandkraan op die verdieping net onder die verdieping wat gesloop word, verbind is, sonder die Brandweerhoof se magtiging verwyder kan word, maar dat die oorblywende gedeelte van die brandpype behoorlik afgedig en bruikbaar gehou moet word.

(2) Die eienaar van 'n gebou wat gesloop word en die sloper daarvan moet, as daar geen brandblusstelsel, -uitrusting of -toestel daarin geïnstalleer is nie, sodanige stelsel, uitrusting of toestel verskaf wat die Brandweerhoof voorskryf.

Persele Waarin Olie Verhit Word.

383. Die persoon in beheer van enige perseel waarin daar olie vir die voorbereiding van voedsel wat verkoop word, verhit word, moet ten minste een handpoeierblusser daar verskaf.

Brandblusuitrusting wat Vereis word in die Geval van 'n Verandering van Gebruik, Uitbreiding van die Oppervlakte of van die Hoogte.

384. As die gebruik van enige verdieping of gedeelte daarvan verander, of die vloeroppervlakte wat vir 'n bestaande gebruik in enige verdieping aangewend word, uitgebrei, of as die gebou hoër gebou word, en daar in gevolg hierdie verordeninge toereikender brandblusuitrusting as die bestaande uitrusting vanweë die verandering van die gebruik, die uitbreiding van die vloeroppervlakte of die verhoging van die gebou vereis word, kan die Brandweerhoof bepaal dat die toereikender brandblusuitrusting in die betrokke verdieping of in die hele gebou geïnstalleer moet word.

Brandgevaar op Onbeboude Grond of in Persele.

385.(1) As toestande op enige onbeboude grond of in enige perseel 'n brandgevaar van watter aard ook al inhou of dit in die toekoms kan inhou, kan die Brandweerhoof bepaal dat die eienaar daarvan die brandgevaar uit die weg moet ruim of dat hy die brandblusuitrusting wat die Brandweerhoof nodig ag, moet verskaf.

(2) As die grond gebruik word vir die opberging van brandbare materiaal of vir 'n woonwa, mobiele woning, pretpark- of tentoonstellingsterrein of vir enige ander doel wat na die mening van die Brandweerhoof 'n brandgevaar inhou, moet die eienaar van sodanige grond toereikende brandkrane en gemonteerde slangtolle op sodanige wyse installeer dat elke gedeelte van die grond bereik kan word met brandslange wat aan die brandkrane of slangtolle gekoppel is.

Brandblusuitrusting in Gevalle wat nie Deur Hierdie Verordeninge Gedek Word Nie.

386. In gevalle wat nie deur hierdie verordeninge gedek word nie, kan die Brandweerhoof die hoeveelheid en die soort brandblusuitrusting en -middele of die soort brandalarmsstelsel wat verskaf moet word, bepaal en sodanige uitrusting, middele of stelsel moet tot sy voldoening geïnstalleer word.

MEANS OF EXIT.

Public Buildings and Places of Assembly.

387. All means of exit from any public building as defined in section 1 of Chapter 1 of these by-laws, and all passageways, corridors, stairways and vestibules in such building shall be in accordance with the requirements of Chapter XIV of these by-laws.

Buildings Other than Public Buildings.

388. Every building, other than the buildings and places referred to in section 387, shall be provided with not less than two separate means of exit, other than windows, from the interior of the building to a street, public place or other adequate open air space leading to a street or public place. This requirement shall not apply to single storey outbuildings used together with a dwelling-house, nor to other outbuildings the occupant load of which according to the building plan or assessed in accordance with the provisions of section 401, does not exceed 10.

Means of Exit from Shops.

389.(1) Every shop which is located on the ground storey of any building shall have at least two means of exit to a street, public place or other approved open air space if such shop is used or is intended to be used for trading and has an occupant load greater than 15.

(2) Where the occupant load of any shop referred to in subsection (1) exceeds 200, or where the trading area of such shop extends into and is in direct communication with any lower or higher storey or part thereof whose occupant load together with the occupant load of such shop exceeds 200, one additional means of exit shall be provided for each 100 or part thereof by which the said total occupant load exceeds 200.

(3) The clear width of every means of exit from any shop referred to in subsections (1) and (2) with an occupant load exceeding 15 shall be not less than 1 120 mm.

Means of Exit from Rooms and Other Enclosed Spaces.

390. Where any room or similar enclosed space has an occupant load exceeding 20, such room or space shall be provided with at least two separate doorways which are remote from one another, each of which shall lead to approved means of exit from the building: Provided that these provisions shall not apply to a shop mentioned in section 389, a room or enclosed space in a dwelling unit, or any lobby, foyer or vestibule.

Means of Exit from Basements, Cellars or Parts Thereof.

391. Every basement, cellar or part thereof shall have direct access to a street, public place or other adequate open air space leading to a street or public place by at least two separate stairways or at least two other approved means of exit: Provided that where any basement, cellar or part thereof is used only as a place of safety for the keeping of money or other valuables, the Chief Officer may relax compliance with this section on such conditions as he may prescribe.

UITGANGE.

Openbare Geboue en Plekke van Samekoms.

387. Alle uitgange uit 'n openbare gebou soos omskryf by artikel 1 van Hoofstuk I van hierdie verordeninge, en alle gange, trappe en vestibules van sodanige gebou moet aan die bepalings van Hoofstuk XIV van hierdie verordeninge voldoen.

Geboue Uitgesonderd Openbare Geboue.

388. Elke gebou, uitgesonderd 'n gebou of plek waarna daar in artikel 387 verwys word, moet ten minste twee afsonderlike uitgange, buiten vensters, hê wat uitgang verleen van die binnekant van die gebou na 'n straat, openbare plek of 'n ander toereikende opelugruimte wat toegang tot 'n straat of openbare plek verleen. Hierdie bepaling is nie van toepassing op eenverdiepingbuitegeboue wat saam met 'n woonhuis gebruik word, of op ander buitegeboue waarvan die okkupantetal ingevolge die bouplan of bereken ooreenkomstig die bepalings van artikel 401, hoogstens 10 beloop nie.

Uitgange uit Winkels.

389.(1) Elke winkel wat op die grondverdieping van enige gebou vir handelsdoeleindes gebruik word, of wat daarvoor bedoel is en wat 'n okkupantetal van meer as 15 het, moet ten minste twee uitgange na 'n straat, openbare plek of ander goedgekeurde opelugruimte hê.

(2) As die okkupantetal van enige winkel, waarna daar in subartikel (1) verwys word, 200 oorskry, of as die handelsruimte van sodanige winkel strek tot in, en regstreeks verbind is met, enige verdieping of gedeelte van enige verdieping bo- of onderkant sodanige winkel waarvan die okkupantetal saam met dié van sodanige winkel meer as 200 is, moet daar een bykomende uitgang verskaf word vir elke 100, of gedeelte daarvan, waarmee die genoemde totale okkupantetal 200 oorskry.

(3) Die onbelemmerde wydte van elke uitgang uit enige winkel waarna daar in subartikels (1) en (2) verwys word, en waarvan die okkupantetal 15 oorskry, moet ten minste 1 120 mm wees.

Uitgange uit Vertreke en ander Ingeslote Ruimtes.

390. As die okkupantetal van enige vertrek of soortgelyke ingeslote ruimte 20 oorskry, moet sodanige vertrek of ruimte ten minste twee afsonderlike deuropeninge hê wat weg van mekaar geleë is en wat elkeen na 'n goedgekeurde uitgang uit die gebou lei: Met dien verstande dat hierdie bepalings nie van toepassing is nie op 'n winkel waarna daar in artikel 389 verwys word, of op 'n vertrek of ingeslote ruimte in 'n wooneenheid of enige binneportaal, voorportaal of vestibule.

Uitgange uit Kelderverdiepings, Kelders of Gedeeltes Daarvan.

391. Elke kelderverdieping, kelder, of gedeelte daarvan moet deur middel van ten minste twee afsonderlike trappe of ten minste twee ander goedgekeurde uitgange regstreekse toegang hê tot 'n straat, openbare plek of ander toereikende opelugruimte wat toegang tot 'n straat of openbare plek verleen: Met dien verstande dat as enige kelderverdieping, kelder of gedeelte daarvan slegs as 'n bewaarplek vir geld of ander waardevolle artikels gebruik word, die Brandweerhoof, op voorwaarde wat hy kan stel, die nakoming van die bepalings van hierdie artikel kan verslap.

Means of Exit from Internal Passages and Corridors.

392. Every internal passage or corridor exceeding 15 m in length shall at both ends discharge into an approved means of exit from the building: Provided that where a doorway from any such passage or corridor leads into a room which has an additional doorway remote from the said doorway, and which additional doorway leads to an approved means of exit from the building, the Chief Officer may permit such passage or corridor to discharge into an approved means of exit at one end only.

Accessibility of Exits from the Interior of a Building.

393. (1) All means of exit prescribed in terms of section 388 shall be accessible from every part of the interior of the building.

(2) Where two or more tenants occupy the same building, the means of exit and the routes leading thereto shall be so located and arranged as to permit of unrestricted use by all tenants at all times.

Route to Point of Exit.

394. Where the route to a point of exit is not readily discernible, such route shall be effectively indicated by approved directional signs of approved material and fixed in approved positions.

Exit Routes and Directional Signs to be Lighted.

395. (1) Every passage, corridor, stairway or other route of exit from any building, except a dwelling-house, shall at all times be lighted by natural or artificial lighting, or a combination thereof, of adequate intensity to enable every occupier therein to find his way out of such building.

(2) Where the shortest available route to a stairway is not clearly visible from any point in a storey, directional signs shall be displayed in positions and at heights approved by the Chief Officer. Such signs shall be in letters not less than 75 mm in height and adequately illuminated. Where an emergency lighting system as envisaged in section 399 is provided, the illuminating unit thereof shall be connected to both the normal and the emergency electric lighting system.

Width of Passages, Corridors, Lobbies, Foyers, Vestibules or Stairways forming Part of a Route of Exit.

396. (1) Any passage, corridor, lobby, foyer, vestibule or stairway or any combination thereof which forms part of a route to a point of exit from any building shall not decrease in width along the route of exit.

(2) The minimum unobstructed width of any passage or corridor envisaged in subsection (1) shall be in accordance with the provisions of section 403: Provided that where the use of any passage or corridor is controlled by a door, the width of such passage or corridor shall accommodate a door frame having a clear width of not less than 1,12 m when measured between the inner faces of the jambs or other vertical members forming the doorway.

Prohibited Obstruction.

397. (1) No obstruction other than a fire-resisting door or a draught-and-smoke-excluding-door shall be installed or placed across any passage, corridor or other approach to a stairway or any other means of exit from a building.

(2) No security device of whatever kind shall be fitted to any door referred to in subsection (1) without the consent of the Chief Officer.

Uitgange uit Binnegange.

392. Elke binnegang wat langer as 15 m is, moet aan elke end op 'n goedgekeurde uitgang uit die gebou uitloop: Met dien verstande dat, as sodanige gang deur middel van 'n deuropening verbind is met 'n vertrek wat 'n bykomende deuropening het wat weg van eersgenoemde deuropening geleë is en wat op 'n goedgekeurde uitgang uit die gebou uitloop, die Brandweerhoof kan toelaat dat sodanige gang net by een end op 'n goedgekeurde uitgang uitloop.

Toeganklikheid van Uitgange uit 'n Gebou.

393. (1) Alle uitgange wat by artikel 388 voorgeskryf word, moet van elke binnegedeelte van 'n gebou af toeganklik wees.

(2) As twee of meer okkupante dieselfde gebou okkupeer, moet die uitgange en die roetes daarnatoe so geleë en ingerig wees dat alle okkupante hulle te alle tye vryelik kan gebruik.

Roete na Uitgangspunt.

394. As die roete na 'n uitgangspunt nie maklik sigbaar is nie, moet sodanige roete doeltreffend aangedui word deur goedgekeurde rigtingwysers van 'n goedgekeurde materiaal wat op goedgekeurde plekke aangebring is.

Uitgangsroetes en Rigtingwysers moet Verlig Wees.

395. (1) Elke gang of trap of uitgangsroete uit enige gebou, behalwe 'n woonhuis, moet te alle tye deur middel van kunsmatige of natuurlike lig of 'n kombinasie daarvan, helder genoeg verlig wees sodat elke okkupant sy weg uit die gebou kan vind.

(2) As die kortste beskikbare roete na 'n trap nie duidelik van enige punt in 'n verdieping af sigbaar is nie, moet rigtingwysers op plekke en op hoogtes wat die Brandweerhoof goedkeur, aangebring word. Die letters op sodanige rigtingwysers moet ten minste 75 mm hoog wees, en moet toereikend verlig wees. As 'n noodverligtingstelsel, soos beoog by artikel 399, verskaf is, moet die verligtingseenheid daarvan met sowel die gewone elektriese verligtingstelsel as die noodverligtingstelsel verbind wees.

Wydte van Gange, Binneportale, Voorportale, Vestibules of Trappe wat Deel van 'n Uitgangsroete is.

396. (1) Enige gang, binneportaal, voorportaal, vestibule of trap, of enige kombinasie daarvan, wat deel is van die roete na die uitgangspunt van enige gebou, mag nie langs die uitgangsroete nouer word nie.

(2) Die minimum onbelemmerde wydte van enige gang soos beoog in subartikel (1), moet wees soos dit by artikel 403 bepaal word: Met dien verstande dat waar die gebruik van enige gang deur middel van 'n deur beheer word, sodanige gang 'n deurkosyn moet bevat wat 'n onbelemmerde wydte van minstens 1,12 m het, gemeet tussen die binnevlakke van 'n binnekosyn of ander vertikale dele wat die deuropening vorm.

Verbode Versperring.

397. (1) Geen versperring, behalwe 'n branddeur of 'n trek-en-rookuitsluitende deur, mag in enige gang of ander toegang tot 'n trap of enige ander uitgang uit 'n gebou aangebring of geplaas word nie.

(2) Geen sluittoestel, van watter aard ook al, mag sonder die toestemming van die Brandweerhoof aan enige deur waarna daar in subartikel (1) verwys word, aangebring word nie.

Flame Spread Rating and Smoke Development Rating of Floor and Wall-Coverings, Ceilings and Suspended Ceilings.

398. No material having a flame spread rating greater than 25 or a smoke development rating greater than 50 shall be used as a wall or floor covering, or as a ceiling or suspended ceiling in any or along any route of exit, or in any lobby, foyer or vestibule referred to in section 420(1)(c).

Emergency Electric Lighting System.

399. The Chief Officer may require an approved emergency electric lighting system to be installed in addition to the normal electric lighting system in any building with the exception of a dwelling-house.

Elimination of Dangerous Conditions.

400. Where the Chief Officer finds that any provision of section 389 or section 390 is being contravened, he may give such directions as he deems necessary for the protection of life and property.

STAIRWAYS.

Occupant Load.

401.(1) The occupant load of a storey or part thereof shall be calculated in order to determine the exit facilities which must be provided from any such storey or part thereof.

(2) Where in the opinion of the Chief Officer the occupancy of any storey or part thereof cannot readily be classified by reference to Schedule A to this Chapter, the Chief Officer shall determine the occupant load of such storey or part thereof.

Number of Stairways.

402. Every building, other than a single storey building or public building as defined in these by-laws, shall be provided with stairways as follows:

- (a) Every storey above and every storey below the ground storey shall be served by not less than two separate stairways each discharging either directly or through a lobby, foyer, vestibule or arcade into a street, public place or other adequate open air space leading to a street or public place at ground level: Provided that —
 - (i) where the occupant load of any storey or part thereof exceeds 250, not less than three separate stairways shall be provided;
 - (ii) the upper storey of a duplex flat contained in any building not exceeding three storeys in height above the lowest ground level abutting on the building, or the upper storey of a double storey dwelling-house occupied by a single family, may be served by a single stairway leading to a means of exit from the lower storey of such duplex flat or dwelling-house;
 - (iii) where the topmost storey of any building is reserved exclusively for residential purposes for not more than 10 persons, and if there is available as a place of refuge on the same storey an open air space not smaller in size than the area of such residential accommodation, then such storey may be served by a single stairway leading to the next lower storey or to ground level, as the case may be: Provided further that

Vlamsprei- en Rookontwikkelvermoë in die Geval van Vloer- en Muurbedekkings, Plafonne en Hangplafonne.

398. Geen materiaal waarvan die vlamspreivermoë hoër as 25 of die rookontwikkelvermoë hoër as 50 is, mag in of langs enige uitgangroete, of in enige portaal, voorportaal of vestibule waarna daar in artikel 420(1)(c) verwys word, as muur- of vloerbedekking of vir 'n plafon of hangplafon gebruik word nie.

Elektriese Noodverligtingstelsel.

399. Die Brandweerhoof kan bepaal dat daar in enige gebou, behalwe 'n woonhuis, benewens die gewone elektriese verligtingstelsel, 'n goedgekeurde elektriese noodverligtingstelsel aangebring moet word.

Uitskakeling van Gevaartoestande.

400. Die Brandweerhoof kan, wanneer hy vind dat enige bepaling van artikel 389 of van artikel 390 oortree word, opdragte gee wat hy ter beveiliging van lewe en eiendom nodig ag.

TRAPPE.

Okkupantetal.

401.(1) Die okkupantetal van enige verdieping of gedeelte daarvan moet bereken word sodat die uitgangsgewone wat vir enige sodanige verdieping of gedeelte daarvan verskaf moet word, bepaal kan word.

(2) Die Brandweerhoof bepaal die okkupantetal van enige verdieping of gedeelte daarvan as dit syns insiens nie ingevolge Bylae A by hierdie Hoofstuk gereedlik ingedeel kan word nie.

Getal Trappe.

402. Elke gebou, buiten 'n enkelverdiepinggebou of 'n openbare gebou soos dit by hierdie verordeninge omskryf word, moet soos volg van trappe voorsien word:

- (a) Elke verdieping bokant en elkeen onderkant die grondverdieping moet deur ten minste twee afsonderlike trappe bedien word wat of regstreeks of deur 'n binneportaal, voorportaal, vestibule of arkade uitloop op 'n straat, 'n openbare plek of 'n ander toereikende opelugruimte wat toegang tot 'n straat of openbare plek op grondvlak bied: Met dien verstande dat —
 - (i) as die okkupantetal van enige verdieping of gedeelte daarvan 250 oorskry, daar minstens drie afsonderlike trappe verskaf moet word;
 - (ii) die boonste verdieping van 'n duplexwoonstel in enige gebou met hoogstens drie verdiepings bokant die laagste grondoppervlak aangrensend aan die gebou, of die boonste verdieping van 'n dubbelverdiepingwoonhuis wat deur een gesin bewoon word, bedien kan word deur een trap wat na 'n uitgang uit die boonste verdieping van sodanige duplexwoonstel of woonhuis lei;
 - (iii) as die boonste verdieping van enige gebou uitgehou word uitsluitlik vir woondoeleindes vir hoogstens 10 persone en daar as toevlugplek 'n opelugruimte, waarvan die oppervlakte minstens gelyk is aan die vloeroppervlakte van sodanige woonplek, op dieselfde verdieping beskikbaar is, sodanige verdieping bedien kan word deur een trap wat na gelang van die geval na die eersvolgende verdieping daaronder of na

the entire route from the place of refuge to the stairway shall be uncovered;

- (iv) where the roof of any building is used or is intended to be used for any purpose other than as a place of residence or refuge mentioned in proviso (iii) or other than for the purpose of maintenance or repair, such roof shall be deemed to be a storey, and shall be served by stairways in accordance with the provisions of these by-laws.
- (b) The unobstructed travel distance between any point in a storey or part thereof and a stairway serving such storey or part thereof shall not be more than 45 m.
- (c) Where —
- (i) any alteration made in or to a building causes the existing stairways serving any storey or part thereof to be inadequate; or,
 - (ii) any change in the occupant load causes the existing stairways serving any storey or part thereof to be inadequate; or,
 - (iii) the unobstructed travel distance between any point in a storey or part thereof and a stairway serving such storey or part thereof exceeds 45 m;
- the Chief Officer may require the owner to provide stairways in accordance with these by-laws, or to carry out such alterations as he may deem necessary, or to reduce the occupant load appropriate to the capacity of the existing stairways, as the case may be.

Width of Stairways.

403.(1) The aggregate unobstructed width of stairways to be provided in respect of any storey or part thereof shall be calculated in accordance with the following formula:

$$\text{mula: } \frac{\text{Occupant load of storey}}{40} \times 560 \text{ mm}$$

(2) The minimum width of any required stairway shall be 1 120 mm, except in respect of those stairways referred to in section 402(a) (ii) and (iii) which may have a width of not less than 900 mm.

(3) The aggregate width of required stairways shall be so distributed that the widths of individual stairways serving any storey shall be as nearly as practicable equal to each other, and such widths shall in all cases be in multiples of 560 mm.

(4) Any stairway referred to in this section may be wider than the minimum width required in terms of subsection (2) or the individual width as determined in terms of subsection (3): Provided that the prescribed number of stairways and the width of any remaining stairway shall not be reduced on account of one or more stairways being of greater width.

(5) There shall be no decrease in either the number or the width of stairways in the direction of exit from any building.

die grondoppervlak lei: Met dien verstande voorts dat die hele roete van die toevlugplek af na die trap nie oordek mag wees nie;

- (iv) as die dak van enige gebou gebruik word, of bedoel is om gebruik te word, vir enige ander doel as vir woon- of toevlugdoeleindes, waarna daar in voorbehoudsbepaling (iii) verwys word, of vir 'n ander doel as vir onderhouds- of herstelwerk, sodanige dak as 'n verdieping beskou word en dit ooreenkomstig die bepalings van hierdie verordeninge deur trappe bedien moet word.
- (b) Die onbelemmerde loopafstand tussen enige plek in 'n verdieping of gedeelte daarvan en 'n trap wat sodanige verdieping of gedeelte daarvan bedien, moet hoogstens 45 m wees.
- (c) As —
- (i) enige verbouing in of aan 'n gebou meebring dat die bestaande trappe wat enige verdieping of gedeelte daarvan bedien, ontoereikend is; of
 - (ii) enige verdieping van die okkupantetal meebring dat die bestaande trappe wat enige verdieping of gedeelte daarvan bedien, ontoereikend is; of
 - (iii) die onbelemmerde loopafstand tussen enige plek in 'n verdieping of gedeelte daarvan, en 'n trap wat sodanige verdieping of gedeelte daarvan bedien, 45 m oorskryt;

kan die Brandweerhoof, na gelang van die geval, bepaal dat die eienaar trappe ooreenkomstig hierdie verordeninge moet verskaf, of die verbouings wat die Brandweerhoof nodig ag, moet doen, of die okkupantetal ooreenkomstig die vermoë van die bestaande trappe moet verminder.

Wydte van Trappe.

403.(1) Die totale onbelemmerde wydte van trappe wat vir enige verdieping of gedeelte daarvan verskaf moet word, word volgens die onderstaande formule bereken:

Okkupantetal van Verdieping

$$40 \times 560 \text{ mm}$$

(2) Die minimum wydte van 'n voorgeskrewe trap moet ten minste 1 120 mm wees, behalwe in die geval van trappe waarna daar in artikel 402(a) (ii) en (iii) verwys word, wat ten minste 900 mm wyd moet wees.

(3) Die totale wydte van voorgeskrewe trappe moet so versprei wees dat die wydte van afsonderlike trappe wat enige verdieping bedien, so na as prakties moontlik dieselfde is, en sodanige wydtes moet in alle gevalle veelvoude van 560 mm wees.

(4) Enige trap waarna daar in hierdie artikel verwys word, kan wyer wees as die minimum wydte wat ingevolge subartikel (2) voorgeskryf word, of die wydte van die afsonderlike trappe wat ingevolge subartikel (3) bepaal word: Met dien verstande dat die voorgeskrewe trappe en die wydte van enige oorblywende trappe nie verminder mag word omdat een trap of meer wat nie is nie.

(5) Die getal of die wydte van trappe mag nie die rigting van die uitgang uit 'n gebou afneem nie.

Stairway Enclosures.

404.(1) Save as provided in subsections (2) and (3) —

- (a) every stairway in a building shall be enclosed in a shaft formed by continuous walls made of masonry, concrete or other approved material and so constructed and installed as to have a fire-resistance rating of not less than two hours;
- (b) (i) every shaft enclosing a stairway shall be separate from any shaft enclosing a lift installation;
- (ii) every such stairway and landings therein shall form one continuous means of exit within the same shaft from the topmost storey to ground storey, and from the lowest basement to the ground storey as the case may be, without being intersected by any lobby, foyer or vestibule serving any lift installation;
- (iii) nothing in subparagraph (1) and (ii) shall prohibit the installation of doors affording communication between such stairway and any such lobby, foyer or vestibule;
- (c) every opening in an interior wall of a building to an enclosed stairway, and every opening to such enclosed stairway from any lobby, foyer or vestibule, serving a lift installation shall be fitted with a door —
 - (i) which shall have a fire-resistance rating of not less than one hour;
 - (ii) which shall be self-closing;
 - (iii) which shall be installed so as to open only in the direction of access to the stairway, except at the ground storey where such door or doors shall be installed so as to open only in the direction of exit from the building;
 - (iv) the opening of which when measured between the inner faces of the jambs or other vertical members forming the doorway shall be not less than 900 mm or 80% of the clear width of the stairway, whichever is the greater: Provided that where one such door is impracticable on account of its width, two or more such doors shall be provided, separated from one another by piers or walling made of masonry or concrete;
 - (v) the swing of which shall not in any way reduce the effective width of the stairway.

(2) The provisions of subsection (1) shall not apply to —

- (a) a building which does not exceed three storeys or 12 m in height, whichever is the lesser, above the lowest ground level abutting on the building;
- (b) any stairway constructed for the exclusive use of the occupier of two consecutive storeys.

(3) The provisions of subsection (1)(c) shall not apply to any opening permitting access to an enclosed stairway, if such opening is located in a passage or corridor, the longer side of which abuts on an open air space and which has evenly distributed, unobstructed and permanently open apertures having a total ventilating area of not less than one half of the area of such side.

Trapskagmure.

404.(1) Behoudens die bepalings van subartikels (2) en (3) —

- (a) moet elke trap in 'n gebou ingesluit wees in 'n skag wat gevorm word deur deurlopende mure van baksteen, beton of 'n ander goedgekeurde materiaal en wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste twee uur het;
- (b) (i) moet elke skag wat 'n trap bevat, afsonderlik wees van 'n skag wat 'n hyserinstallasie bevat;
- (ii) moet elke sodanige trap en die bordesse daarvan, in dieselfde skag een deurlopende uitgangsweg van die boonste verdieping tot by die grondverdieping, of na gelang van die geval, van die onderste kelderverdieping tot by die grondverdieping vorm, sonder dat 'n binneportaal, voorportaal of vestibule wat 'n hyser bedien, dit onderbreek;
- (iii) verbied niks wat in subparagrafe (i) en (ii) vervat is, die aanbring van deure wat toegang van sodanige trap tot sodanige binneportaal, voorportaal of vestibule bied nie;
- (c) elke deuropening in 'n binnemuur van 'n gebou wat op 'n ingeslote trap uitgaan en elke deuropening in 'n binneportaal, voorportaal of vestibule wat 'n hyser bedien en wat op sodanige ingeslote trap uitgaan, moet voorsien wees van 'n deur —
 - (i) wat 'n brandweerstandsvermoë van ten minste een uur het;
 - (ii) wat self toegaan;
 - (iii) wat op so 'n wyse gehang is dat dit slegs in die rigting van die toegang tot die trap oopswaai, behalwe op die grondverdieping waar sodanige deur of deure op so 'n wyse gehang moet word dat dit slegs in die rigting van die uitgang uit die gebou oopswaai;
 - (iv) waarvan die deuropening, gemeet tussen die binnevlakke van die binnekosyne of ander vertikale dele wat sodanige deuropening vorm, ten minste 900 mm is, of 80% van die onbelemmerde wydte van die trap, na gelang van wat die grootste is: Met dien verstande dat as dit as gevolg van die wydte van sodanige deuropening ondoenlik is om een deur in te sit, daar twee of meer deure ingesit moet word wat deur beton of gemesselde pilare of mure van mekaar geskei word;
 - (v) wat geensins die effektiewe wydte van die trap verminder as dit oopswaai nie.

(2) Die bepalings van subartikel (1) is nie van toepassing nie op —

- (a) 'n gebou wat van die laagste grondoppervlak aangrensend aan die gebou, hoogstens drie verdiepings of hoogstens 12 m hoog is, na gelang van wat die laagste is;
- (b) enige trap wat vir die uitsluitlike gebruik van die okkupant van twee opeenvolgende verdiepings bedoel is.

(3) Die bepalings van subartikel (1)(c) is nie van toepassing nie op enige deuropening wat toegang tot 'n ingeslote trap verleen, as sodanige opening geleë is in 'n gang waarvan die langste sy aan 'n opeelugruimte grens en reëlmatig verspreide, onbelemmerde ventilasieopeninge het wat permanent oop is en waarvan die ventilasieoppervlakte ten minste die helfte van die oppervlakte van sodanige sy beslaan.

Other Dimensions and Construction of Stairways.

405.(1) Every stairway shall —

- (a) have treads the nosing or front edges of which shall protrude horizontally not less than 230 mm beyond the nosing or front edge of the tread or landing immediately above, and every nosing or front edge aforesaid shall overlap or correspond vertically with the back edge of the next succeeding lower tread or landing, as the case may be. The horizontal measurement of all treads in any one flight of stairs shall be as nearly as practicable equal: Provided that any variation in the protrusion of any one tread shall not exceed 6 mm in relation to the horizontal measurement of the lowest tread;
- (b) have steps rising not more than 190 mm measured vertically between successive treads. The vertical measurement of all steps shall be as nearly as practicable equal: Provided that any variation in the height of any one step shall not exceed 6 mm in relation to the vertical measurement of the lowest step;
- (c) subject to the provisions of subsection (3), consist of straight flights, each containing not less than three and not more than sixteen steps and commencing and terminating on level landings;
- (d) at each change of direction be provided with a level landing which has a width and a length not less than the width of the stairway, and be free of any step or surface irregularity;
- (e) except as permitted in terms of subsection (3), be constructed without winders.

(2) Where a stairway is constructed without risers, the width of the open space between successive treads shall not allow the passage of a sphere having a diameter greater than 125 mm.

(3) Notwithstanding anything to the contrary contained in subsection (1)(c) and (e), an interior stairway may be curved, provided that the narrowest width of every tread is not less than 230 mm and that the horizontal angles between the nosing or front edges of successive steps are uniform and not greater than 15°. Such stairway may comprise more than one flight of stairs, provided the flights are separated by level landings at least 3 m long.

(4) The top step of any stairway leading to a basement or cellar shall not be less than 900 mm from any abutting street or public place, or from any passage, corridor, arcade or other thoroughfare on any property, whether public or private.

Protection of Stairways.

406.(1) Every internal and every external flight of stairs shall be protected with balustrade walls, balusters or other adequate protective structures not less than 900 mm in height when measured vertically from the nosing or front edge of every tread and not less than 1 050 mm high in the case of any landing in such flight of stairs.

(2) The major axis of any opening in such wall, balustrade or other enclosing structure shall lie in a vertical plane, and the dimensions of such opening shall be such as will prevent the passage of a sphere having a diameter greater than 125 mm.

Ander Afmetings en die Konstruksie van Trappe.

450.(1) Elke trap moet —

- (a) loopstukke hê waarvan die neus- of voorrande ten minste 230 mm horisontaal uitsteek voor die neus- of voorrand van die eersvolgende hoër geleë loopstuk of bordes en elke sodanige neus- of voorrand moet, na gelang van die geval, loodreg bokant die agterkant van die eersvolgende laer geleë loopstuk of bordes wees, of dit oorvleuel. Die horisontale afmeting van alle loopstukke in 'n betrokke traparm moet sover doenlik dieselfde wees. Met dien verstande dat geen loopstuk meer as 6 mm van die horisontale afmeting van die laagste loopstuk mag verskil nie;
- (b) treetjies hê, wat, vertikaal tussen opeenvolgende loopstukke gemeet, hoogstens 190 mm styg. Die vertikale afmetings van alle treetjies moet sover doenlik dieselfde wees. Met dien verstande dat die vertikale afmeting van 'n betrokke treetjie nie meer as 6 mm van die vertikale afmeting van die onderste treetjie mag verskil nie;
- (c) behoudens die bepalings van subartikel (3), uit reguit traparms bestaan wat elkeen ten minste drie en hoogstens sestien treetjies het en op gelyk bordesse begin en eindig;
- (d) by elke verandering van rigting van 'n gelyk bordes voorsien wees wat nie smaller of korter as die wydte van die trap is nie, en wat geen treetjie of onreëlmatigheid in sy oppervlak het nie;
- (e) behoudens die bepalings subartikel (3) geen draai-treetjie bevat nie.

(2) As 'n trap met oop stygstukke gebou is, moet die oop ruimte tussen die opeenvolgende loopstukke nie so wyd wees dat 'n sfeer met 'n middellyn groter as 125 mm daar kan deurgaan nie.

(3) Ondanks andersluidende bepalings van subartikel (1)(c) en (e), kan 'n binnetrap met 'n draai gebou wees, mits die loopstukke nêrens nouer as 230 mm, en die herinsontale hoeke tussen die neus- of voorrande van opeenvolgende treetjies ewe groot en hoogstens 15° is. Sodanige trap kan uit meer as een traparm bestaan, mits die traparms deur gelyk bordesse, elkeen ten minste 3 m lank, van mekaar geskei word.

(4) die boonste treetjie van enige trap wat na 'n kelderderdieping of 'n kelder lei, moet ten minste 900 mm van enige aangrensende straat of openbare plek, of van enige gang, arkade of ander deurloop op enige eiendom, hetsy openbaar of privaat, af wees.

Beveiliging van Trappe.

406.(1) Elke binne- en buitetrapparm moet met balustrademure, balusters of ander toereikende beveiligingsstrukture beskerm word wat, vertikaal van die neus- of voorrand van elke loopstuk af gemeet, ten minste 900 mm hoog, en in die geval van 'n bordes in sodanige traparm, ten minste 1 050 mm hoog is.

(2) Die langas van enige opening in sodanige muur balustrade of ander omsluitingsstruktuur moet op 'n vertikale vlak lê en sodanige opening moet nie so groot wees dat 'n sfeer met 'n middellyn groter as 125 mm daar kan deurgaan nie.

Handrails.

407. Every stairway shall have at least one continuous handrail adequately secured to the enclosing wall, balustrade or other protective structure, and where the width of any stairway is greater than 1 120 mm, a handrail shall be provided on each side of such stairway.

Headroom on Stairways.

408. Every stairway shall have a clear headroom of not less than 2,1 m measured vertically from the nosing or front edge of every tread and landing in the stairway.

Material Used for Construction of Stairways.

409. Every stairway shall be constructed of, and be supported by, non-combustible material: Provided that —

- (a) combustible material having a flame spread rating of not more than 25 and a smoke development rating of not more than 50 may be used as veneers on risers and treads made of non-combustible material;
- (b) stairways in a duplex flat contained in a building not exceeding two storeys in height, or in a dwelling house not exceeding two storeys inclusive of any rooms constructed in the roof, may be made of wood.

Doors, Windows and Other Openings in Stairway Enclosures.

410.(1) No door shall open immediately on to any stairway but shall be separated therefrom by a level landing which has no step or other surface irregularity and which has a width and a length not less than the width of the stairway.

(2) No window or other similar hinged device shall be installed in any building unless such window or other similar hinged device when opened, can be secured in a position without obstructing any part of any stairway or landing.

(3) Where any door in any building, except in a dwelling-house or dwelling unit occupied by a single family, controls access to any stairway, such door shall open in the direction of exit and shall have no locks or other fastenings other than an approved security device, where the use of such devices has been permitted in terms of section 413(1)(b).

(4) Any door located within 2 m of, or opening on to, an external stairway shall have a fire-resistance rating of not less than one hour.

(5) Where any window or similar opening, other than a doorway, is located below or within 2 m of any external stairway, such window or opening shall be fitted with a fire-resisting shutter, cover or screen which in the event of fire, automatically and completely closes such opening or window, or such window or opening shall be fitted with fixed metal frames glazed with wire reinforced glass not less than 6 mm thick: Provided that the provisions of subsection (4) and this subsection shall not apply to any doorway, window or other opening located in any wall abutting on a corridor serving as a means of exit from any building of the domestic or office class, nor to air-bricks or other openings fitted with devices through which flames cannot pass.

Stairways Contained in a Service Core.

411.(1) Where two or more stairways are contained in a service core, provision shall be made at each storey

Handrelings.

407. Elke trap moet ten minste een deurlopende handreling hê wat op toereikende wyse aan die omsluitingsmuur, belustrade of ander beveiligingsstruktuur bevestig is, en as enige trap wyer as 1 120 mm is, moet 'n handreling aan elke kant van sodanige trap aangebring word.

Kopruimte van Trappe.

408. Elke trap moet 'n onbelemmerde kopruimte van ten minste 2,1 m hê, vertikaal van die neus- of voorrand van elke loopstuk en bordes van die trap af gemeet.

Materiaal wat vir die Bou van Trappe Gebruik Word.

409. Elke trap moet gemaak wees van en gestut word deur nie-brandbare materiaal: Met dien verstande dat —

- (a) brandbare materiaal met 'n vlamspreivermoë van hoogstens 25 en 'n rookontwikkelvermoë van hoogstens 50 as fineer op loopstukke en stygstukke wat van nie-brandbare materiaal gemaak is, gebruik kan word;
- (b) trappe in 'n duplexwoonstel in 'n gebou van hoogstens twee verdiepings, of trappe in 'n woonhuis van hoogstens twee verdiepings, met inbegrip van enige vertrek in die dak, van hout gemaak kan wees.

Deure, Vensters en Ander Openinge in Trapskagnure.

410.(1) Geen deur mag regstreeks op enige trap oopmaak nie, maar dit moet deur 'n gelyk bordes wat geen treetjie of onreëlmatigheid in sy oppervlak het nie en wat nie korter of smaller as die wydte van die trap is nie, van sodanige trap geskei word.

(2) Geen venster of ander soortgelyke skarniertoestel mag in enige gebou aangebring word nie, tensy dit, wanneer dit oop is, in so 'n posisie bevestig kan word dat dit geen gedeelte van enige trap of bordes belemmer nie.

(3) As die toegang tot enige trap in enige gebou, uitgesonderd 'n woonhuis of 'n wooneenheid wat deur net een gesin bewoon word, beheer word deur middel van 'n deur, moet sodanige deur in die uitgangsrigting oopmaak en mag dit geen slot of ander sluittoestel, uitgesonderd 'n goedgekeurde noodgrendel wat ingevolge artikel 413(1)(b) toegelaat word, bevat nie.

(4) Enige deur wat binne 2 m van 'n buitetrapp geleë is, of op 'n buitetrapp oopmaak, moet 'n brandweerstandsvermoë van ten minste een uur hê.

(5) As enige venster of soortgelyke opening, uitgesonderd 'n deuropening, onder of binne 2 m van 'n buitetrapp geleë is, moet sodanige venster of opening voorsien wees van 'n brandwerende luik, skut of skerm wat in die geval van 'n brand sodanige venster of opening outomaties en heeltemal sal toemaak, of anders moet vaste metaalraam met draadglasruite, ten minste 6 mm dik, in sodanige vensterkosyn of opening aangebring word: Met dien verstande dat die bepalings van subartikel (4) en van hierdie subartikel nie van toepassing is nie op enige deuropening, venster of ander opening in enige muur wat grens aan 'n gang wat dien as uitgang uit enige woon- of kantoorgebou, of op lugstene of ander openinge toegerus met toestelle waardeur vlamme nie kan dring nie.

Trappe in 'n Geboupit.

411.(1) As twee of meer trappe in 'n geboupit geleë is, moet daar in elke verdieping voorsiening daarvoor ge-

for the users of such stairways to transfer from one stairway to another by way of passages or corridors either within such core or external thereto.

(2) Where any such passage or corridor is external to the service core, such passage or corridor shall —

- (a) be enclosed by walls, floors and ceilings of materials so constructed and installed as to have a fire-resistance rating of not less than one hour;
- (b) be accessible to and kept freely available for use by all persons occupying or frequenting such storey by way of doorways, fitted with self-closing doors, having a fire-resistance rating of not less than one hour;
- (c) be isolated from any ducts, pipes or other similar services by materials or devices so constructed and installed as to have a fire-resistance rating of not less than one hour;
- (d) have a clear unobstructed width of not less than 1 120 mm;
- (e) contain no openings other than the doorways mentioned in paragraph (b).

Pressurisation and Ventilation of Stairways.

412.(1) Every shaft enclosing a stairway in a building exceeding 18 m in height above the lowest ground level abutting on the building, shall be provided with mechanical air compressing equipment adequate to raise and maintain the pressure of the air in the shaft at not less than 2.5 mm water gauge greater than the air pressure prevailing in the interior of the rest of the building and which operates continuously, or is made to start automatically and immediately in the event of an outbreak of fire in the building: Provided that the provisions of this section shall not apply to a building the height of which is less than 30 m above the lowest ground level abutting on such building, and which has at least one stairway in a shaft which is permanently ventilated to the open air at each storey by apertures having an effective ventilating area of not less than 2.70 m², or which has an external stairway which is open to the open air throughout its height.

(2) The mechanical air compressing system referred to in subsection (1) shall be separate from and independent of any air conditioning — or ventilating — system in the building, and shall be connected to an emergency electric power supply in addition to the normal electric power supply to which it is connected. Such emergency electric power supply shall be obtained from an approved independent storage or generating plant which shall come into operation automatically and immediately in the event of failure of the normal electric power supply.

(3) No window or other similar opening shall be installed or made in any wall being part of a shaft enclosing any stairway without the prior permission of the Chief Officer.

Accessibility of Stairways.

413.(1) All required stairways shall —

- (a) be accessible and kept available to all persons occupying or frequenting the building and shall be located in approved positions to ensure adequate safety;
- (b) be kept available for entrance to and exit from each storey or part thereof, and shall permit unrestricted communication between storeys: Provided that where

maak word dat die gebruikers van sodanige trappe deur middel van gange wat of binnê of buite sodanige gebou-pit geleë is, van een trap na 'n ander kan gaan.

(2) As sodanige gang buite die gebou-pit geleë is, moet sodanige gang —

- (a) omsluit word deur mure, vloere en plafonne van materiaal wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste een uur het;
- (b) by wyse van selftoemaakdeure met 'n brandweerstandsvermoë van ten minste een uur, toeganklik wees en toeganklik gehou word vir elkeen wat sodanige verdieping okkupeer of daar verkeer;
- (c) deur middel van materiaal of toestelle wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste een uur het, van alle kanale, pype of soortgelyke leidings afgeskei wees;
- (d) 'n onbelemmerde wydte van ten minste 1 120 mm hê;
- (e) geen opening, uitgesonderd die deuropeninge waarna daar in paragraaf (b) verwys word, hê nie.

Drukreëling in en Ventilasië van Trappe.

412.(1) Elke skag wat 'n trap insluit in 'n gebou wat hoër is as 18 m van die laagste grondoppervlak aangrensend aan die gebou, moet voorsien wees van meganiese lugpersuïtrusting wat die lugdruk in die skag, volgens die waterdrukmeter, kan verhoog sodat dit 2,5 mm hoër is as die lugdruk in die binnekant van die res van die gebou, en die druk kan handhaaf, en wat ononderbroke werk of wat so gemaak is dat dit in die geval van 'n brand in die gebou onmiddellik en outomaties aanskakel. Met dien verstande dat die bepalinge van hierdie artikel nie van toepassing is nie op 'n gebou wat laer is as 30 m van die laagste grondoppervlak aangrensend aan die gebou en wat ten minste een trap in 'n skag het wat op elke verdieping permanent geventileer is deur middel van openinge na die buitelug met 'n effektiewe ventilasiëoppervlakte van ten minste 2,70 m² of wat 'n buitelug trap het wat in sy volle hoogte na die buitelug oop is.

(2) Die meganiese lugpersuïtrusting waarna daar subartikel (1) verwys word, moet afsonderlik en onafhanklik wees van enige lugversorgings- of ventilasiëtoestel in die gebou en moet benewens met die gewone elektrisiteitstoevoer, ook met 'n nood-elektrisiteitstoevoer van 'n goedgekeurde kragopgaar- of kragontwikkeltoestel verbinding wees, wat outomaties en onmiddellik aanskakel en die gewone elektrisiteitstoevoer onderbreek word.

(3) Geen venster of ander soortgelyke opening mag in enige muur wat deel is van 'n skag wat enige trap sluit, geïnstalleer of gemaak word nie, tensy die Brandweerhoof se toestemming daartoe vooraf verkry is.

Toeganklikheid van Trappe.

413.(1) Alle voorgeskrewe trappe moet —

- (a) toeganklik wees en beskikbaar gehou word vir almal wat die gebou okkupeer of daarin verkeer en op goedgekeurde plekke geleë wees sodat dit voldoende beveiliging bied;
- (b) beskikbaar gehou word vir ingang en uitgang op elke verdieping of gedeelte daarvan en moet onbelemmerde verbinding tussen verdiepings bied: Met dien verstande dat, as die Brandweerhoof daartoe oortuig is dat die veiligheid van enige verdieping

the Chief Officer is satisfied that the security of any activity carried on in any storey or part thereof, or where the safety of the occupants may be jeopardised, he may permit such stairways to be controlled by doors fitted with an approved security device.

(2) Any additional stairway which is in fact used as a means of exit from a building shall comply with the provisions of subsection (1)(a) and (b), and with the provisions of section 403(2).

Termination of Required Stairways.

414. No required stairway shall terminate in an enclosed public shopping space.

Escalators Not to be Regarded as Stairways.

415. Where any escalator is installed in a building, such escalator shall be adequately protected against damage by fire, but shall not be regarded as a stairway as envisaged in terms of these by-laws.

Escalators between Storeys.

416. Where an escalator serves as communication between any storey and another storey immediately above in a building of not less than three storeys, such higher storey shall be adequately protected at the point at which such escalator penetrates the floor level of such higher storey, by an approved enclosing structure or device, or by lobbies, foyers or vestibules constructed in accordance with these by-laws, or by an approved sprinkler installation.

Ramps.

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417. Where in any building the number of required stairways has been determined, any one such stairway may be substituted by a ramp serving as a means of exit for pedestrians, and having a non-slip surface and a slope not greater than 1 in 8: Provided that any such ramp, shall have a minimum width not less than the width of the stairway so substituted and shall be separated by an adequate barrier from any remaining portion of the ramp which may be used by vehicular traffic.

LIFTS.

Dimensions of Lift-lobbies, Lift-foyers and Lift-vestibules

418.(1) The minimum length of each dimension of the floor area of any lobby, foyer or vestibule envisaged in section 420(1)(c), serving —

- (a) one lift shall be not less than 1,7 m or not less than twice the clear width of the lift doorway, whichever is the greater;
- (b) two or more lifts, placed next to each other, shall be not less than the aggregate of the widths of the doorways of such lifts;
- (c) lifts arranged in opposite banks shall be not less than 2,70 m;
- (d) one lift and affording access to a stairway shall be not less than twice the width of the stairway;
- (e) two or more lifts and affording access to a stairway shall be not less than twice the width of the stairway or the aggregate of the clear widths of the doorways of such lifts, whichever is the greater.

(2) Where side-hung doors are used in lift installations, the dimension referred to in subsection (1) shall be measured clear of any part of the swing of such doors.

gedeelte daarvan plaasvind, of van die okkupante in gevaar gestel kan word, hy kan toelaat dat sodanige trappe beheer word deur middel van deure wat met goedgekeurde sluittoestelle toegerus is.

(2) Enige bykomende trap wat inderdaad as 'n uitgang uit 'n gebou gebruik word, moet aan die bepalings van subartikel (1)(a) en (b) en aan die bepalings van artikel 403(2) voldoen.

End van Voorgeskrewe Trappe.

414. Geen voorgeskrewe trap mag in 'n openbare winkeluimte wat omsluit is, uitloop nie.

Roltrappe word nie as Trappe Beskou nie.

415. Enige roltrap wat in 'n gebou geïnstalleer is, moet toereikend teen brandbeskadiging beveilig word, maar dit word nie as 'n trap, soos ingevolge by hierdie verordeninge beoog beskou nie.

Roltrappe tussen Verdiepings.

416. As 'n roltrap in 'n gebou van ten minste drie verdiepings as verbinding tussen enige verdieping en die verdieping onmiddellik daarbo dien, moet sodanige hoër verdieping op die punt waar sodanige roltrap op die vloervlak van sodanige hoër verdieping uitkom, deur 'n goedgekeurde omsluitingstruktuur of -toestel, of deur binneportale, voorportale of vestibules wat ooreenkomstig die bepalings van hierdie verordeninge opgerig is, of deur 'n goedgekeurde sprinkelbusserstelsel, toereikend beveilig word.

Oplope.

417. As die getal voorgeskrewe trappe in enige gebou bepaal is, kan enigeen daarvan vervang word deur 'n oprit met 'n glyvaste oppervlak wat as voegangeruilgang dien, en wat 'n helling van hoogstens 1 op 8 het: Met dien verstande dat sodanige oprit ten minste so wyd moet wees as die trap wat daardeur vervang is, en dat dit met 'n toereikende versperring van enige oorblywende gedeelte daarvan wat as oprit vir voertuigverkeer gebruik kan word, geskei moet word.

HYSERS.

Afmetings van Hyserbinneportale, -Voorportale en -Vestibules.

418.(1) Die minimum lengte en wydte van die vloeroppervlak van enige binneportaal, voorportaal of vestibule wat in artikel 420(1)(c) beoog word en wat —

- (a) een hyser bedien, moet ten minste 1,7 m wees of ten minste twee maal die onbelemmerde wydte van die hyserdeuropening, na gelang van wat die grootste is;
- (b) twee of meer hysers bedien wat langs mekaar geleë is, moet ten minste gelyk wees aan die totale wydte van die deuropeninge van sodanige hysers;
- (c) hysers bedien wat in teehoormekaarliggende groeperangskik is, moet ten minste 2,7 m wees;
- (d) een hyser bedien en toegang tot 'n trap verleen, moet ten minste gelyk aan twee maal die wydte van die trap wees;
- (e) twee of meer hysers bedien en toegang tot 'n trap verleen, moet ten minste gelyk wees aan twee maal die wydte van die trap of die totale wydte van die deuropeninge van sodanige hysers, na gelang van wat die grootste is.

(2) As syskarnierdeure in hyserinstallasies gebruik word, moet die afmetings waarna daar in subartikel (1) verwys word, buite die swaaihoog van sodanige deure gemeet word.

Stretcher and Fireman's Lifts.

419.(1) Where one or more lifts serve any building, at least one lift car shall be large enough to convey a fully extended 2 m ambulance stretcher in a horizontal position, and the doorway to such lift car and all other doorways giving access thereto shall be wide enough to admit such stretcher.

(2) Where the floor level in any storey in a building is more than 25 m above the street or public place at the lowest point of entry to such building, at least one car of the lifts as required in terms of section 117 under Chapter IX of these by-laws, shall be fitted with an approved switch control system incorporating a key- or toggle-type fire switch fixed in an approved position in a glass fronted box clearly marked 'FIRE SWITCH / BRANDSKAKELAAR' and fitted with a device actuated by the operation of the fire switch, enabling firemen to take control of the lift immediately and without interference by any landing switches.

Such lift car shall —

- (a) be legibly and conspicuously designated 'FIREMAN'S LIFT/BRANDHYSER';
- (b) be capable of being stopped at each storey and shall have access to each part thereof;
- (c) be kept available for immediate use at all times.

(3) Where the lifts referred to in subsections (1) and (2) are inaccessible from any storey or part thereof on account of the construction of the building, an additional lift or lifts shall be provided to afford access to such inaccessible storey or part thereof, and such additional lift or lifts shall comply with the provisions of subsections (1) and (2) and shall be connected to the emergency electric power supply as required in terms of subsection (4).

(4)(a) In all buildings mentioned in subsection (2) there shall be provided in addition to the normal electric power supply an independent emergency electric power supply complying with the following requirements:

- (i) The emergency electric power shall be obtained from an approved independent storage or generating plant which shall come into operation automatically and immediately in the event of failure of the normal electric power supply.
- (ii) The rating and capacity of the emergency electric power supply shall be such as will permit the continuous operation of the fireman's lift or lifts for a period of at least four hours, and permit the operation of all other lifts in the building in accordance with the provisions of paragraph (b).
- (iii) The said storage or generating plant shall be housed in the lift motor room or in such other room in the building as the Council may require.

(b) Every emergency electric power supply installed in pursuance of these by-laws shall have a main lift control mechanism which shall, in the event of failure of the normal electric power supply, bring all lift cars in the building down to the floor of the entrance storey automatical-

Draagbaar- en Brandhysers.

419.(1) As een hyser of meer 'n gebou bedien, moet ten minste een hysbak groot genoeg wees om 'n ambulansdraagbaar van 2 m, wat heeltemal horisontaal uitgestrek is, te vervoer en die deuropening na sodanige hysbak en alle ander deuropeninge wat toegang daartoe verleen, moet wyd genoeg wees sodat sodanige draagbaar daar kan deurgaan.

(2) As die vloervlak van enige verdieping van 'n gebou hoër as 25 m bokant die straat of openbare plek by die laagste ingangspunt tot sodanige gebou is, moet ten minste een hysbak van die hysers wat ingevolge artikel 117 onder Hoofstuk IX van hierdie verordeninge voorgeskryf word, toegerus wees met 'n goedgekeurde skakelaarheerstelsel wat 'n sleutel- of swiktipe brandskakelaar insluit wat op 'n goedgekeurde plek aangebring is in 'n kassie met 'n ruit en met die woorde 'BRANDSKAKELAAR — FIRE SWITCH' duidelik daarop en toegerus wees met 'n toestel wat deur die brandskakelaar in werking gestel word wat 'n brandweerman in staat stel om onmiddellik beheer oor die hyser te neem, sonder inmenging van enige bordesskakelaar.

Sodanige hysbak moet —

- (a) die woorde 'BRANDHYSER — FIREMAN'S LIFT' leesbaar en opvallend daarop hê;
- (b) by elke verdieping tot stilstand gebring word en tot elke gedeelte daarvan toegang bied;
- (c) te alle tye vir onmiddellike gebruik beskikbaar gehou word.

(3) As die hysers waarna daar in subartikels (1) en (2) verwys word, weens konstruksie van die gebou uit enige verdieping of gedeelte daarvan ontoeganklik is, moet een bykomende hyser of meer verskaf word wat toegang tot sodanige ontoeganklike verdieping of gedeelte daarvan verleen en sodanige bykomende hyser of hysers moet aan die bepalings van subartikels (1) en (2) voldoen en met die nood-elektrisiteitstoevoer wat by subartikel (4) voorgeskryf word, verbind wees.

(4)(a) In alle geboue wat in subartikel (2) genoem word, moet daar benewens die gewone elektrisiteitstoevoer 'n onafhanklike nood-elektrisiteitstoevoer wees wat aan die volgende vereistes voldoen:

- (i) Die nood-elektrisiteitstoevoer moet verskaf word deur 'n goedgekeurde onafhanklike kragopgaar- of kragontwikkeltoestel wat outomaties en onmiddellik aanskakel as die gewone elektrisiteitstoevoer onderbreek word.
- (ii) Die aanslag en vermoë van die nood-elektrisiteitsbron moet sodanig wees dat die brandhyse of -hysers ten minste vier uur lank ononderbroke, en al die ander hysers in die gebou ooreenkomstig die bepalings van paragraaf (b) kan werk.
- (iii) Die genoemde noodkragopgaar- of noodkragontwikkeltoestel moet in die hysermotorkamer of in sodanige ander vertrek wat die Raad voorskryf, gehuisves word.

(b) Daar moet met elke nood-elektrisiteitstoevoer ooreenkomstig die bepalings van hierdie verordening verskaf word, 'n hoofhyserbeheertoestel verbind wees sonder dat die werking van die brandhyser of -hysers enigszins belemmer word, alle hysbakke in die gebou, die geval van 'n onderbreking van die gewone elektri-

ly and in rotation, and which shall thereafter switch off the power supply to all such lift cars, leaving all their doors open, but which shall not in any way interfere with the operation of the fireman's lift or lifts.

SMOKE AND DRAUGHT CONTROL AND FIRE STOPPING.

Lift Installations.

420.(1) Subject to the provisions of subsection (2) —

- (a) every lift installation in a building, irrespective of the number of lift cars therein, shall be enclosed in a shaft formed by continuous walls made of materials so constructed and installed as to have a fire-resistance rating of not less than two hours;
- (b) every door controlling access to the interior of a lift car shall have a fire-resistance rating of not less than one hour;
- (c) no lift installation shall communicate with the interior of a building except through a lobby, foyer or vestibule which shall be so constructed as to prevent the passage of smoke thereinto from the interior of the building, and the ceiling, walls and floor thereof shall be of materials so constructed and installed as to have a fire-resistance rating of not less than two hours;
- (d) every opening permitting communication between a lobby, foyer or vestibule referred to in paragraph (c), and the interior of the building shall be fitted with a draught-and-smoke-excluding door which —
 - (i) shall completely close such opening with only such clearance as is necessary for proper operation;
 - (ii) when open, shall have an opening of an unobstructed width of not less than 1,12 m measured between the inner faces of the jambs or other vertical members forming the doorway;
 - (iii) may swing both ways but shall always be capable of opening in the direction of access to the lift;
 - (iv) shall not, unless permitted by the Chief Officer, be fitted with any form of security device;
 - (v) shall be legibly and conspicuously marked 'SMOKE CONTROL DOOR — KEEP CLOSED/ROOKBEHEER DEUR — HOU TOE' in letters not less than 50 mm in height, and may be held in an open position by an approved device which automatically releases and closes the door in the event of fire.

(2)(a) The provisions of subsection (1)(a) to (d) shall not apply to any lift installation in a building which does not exceed 3 storeys or 12 m in height above the lowest level abutting on the building, whichever is the lesser.

(b) The provisions of subsection (1)(c) and (d) shall not apply to any lift installation in which the door giving access to the lift car at each storey opens on to a passage or corridor, the longer side of which abuts on an open air space and which has evenly distributed, unobstructed and permanently open apertures having a total ventilating area of not less than one half of the area of such side.

teitstoevoer outomaties beurtelings na die vloervlak van die ingangsverdieping laat afgaan, en daar die elektrisiteitstoevoer na alle sodanige hysbakke afskakel nadat al die deure oopgegaan het.

ROOK- EN TREKBEHEER EN BRANDAFDIGTING.

Hyserinstallasies.

420.(1) Onderworpe aan die bepalings van subartikel (2) moet —

- (a) elke hyserstel in 'n gebou, ongeag die getal hysbakke daarin, ingesluit word in 'n skag wat gevorm word deur deurlopende mure van materiaal wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste twee uur het;
- (b) elke deur wat toegang tot die binnekant van 'n hysbak behoor, 'n brandweerstandsvermoë van ten minste een uur hê;
- (c) geen hyser toegang tot die binnekant van 'n gebou verleen nie, uitgesonderd deur middel van 'n binneportaal, voorportaal of vestibule wat so opgerig is dat dit nie rook uit die binnekant van die gebou deurlaat nie, en waarvan die plafon, mure en vloer van materiaal moet wees wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste twee uur het;
- (d) elke opening wat 'n binneportaal, voorportaal of vestibule waarna daar in paragraaf (c) verwys word, met die binnekant van die gebou verbind, toegerus wees met 'n trek-en-rookuitsluitende deur wat —
 - (i) sodanige opening heeltemal toemaak met net genoeg speling om dit behoorlik te laat werk;
 - (ii) as dit oop is, 'n opening met 'n onbelemmerde wydte van ten minste 1,12 m het, gemeet tussen die binnevlakke van die binnekosyne of ander vertikale dele wat sodanige deuropening vorm;
 - (iii) na albei kante toe kan oopswaai, maar wat altyd in die toegangsrigting na die hyser moet kan oopmaak;
 - (iv) nie met enige sluittoestel toegerus mag wees nie, tensy die Brandweerhoof dit toelaat;
 - (v) die woorde 'ROOKDIGTE DEUR — HOU TOE/SMOKE CONTROL DOOR — KEEP CLOSED' leesbaar en opvallend in letters ten minste 50 mm hoog het, en wat oopgehou kan word deur 'n goedgekeurde toestel wat in die geval van 'n brand die deur outomaties laat toe gaan.

(2)(a) Die bepalings van subartikel (1)(a) tot (d) is nie van toepassing nie op enige hyserstel in 'n gebou van hoogstens drie verdiepings of 12 m, na gelang van wat die laagste is, bokant die langste grondoppervlak aangrensend aan die gebou.

(b) Die bepalings van subartikel (1)(c) en (d) is nie van toepassing nie op enige hyserstel waarvan die deur wat toegang tot die hysbak verleen, in elke verdieping op 'n gang oopgaan waarvan die langste sy aan 'n opelugruimte grens en reëlmatig verspreide, onbelemmerde ventilasie-opeeninge het wat permanent oop is en waarvan die totale ventilasie-oppervlakte ten minste die helfte van die oppervlakte van sodanige sy beslaan.

(3) Where a shaft enclosing a lift installation does not extend to the roof of a building it shall be covered at the top by materials so constructed and installed as to have a fire-resistance rating of at least 2 hours. The dimensions of any openings in such materials for the passage of cables or other lift operating equipment shall be not greater than is necessary for the proper functioning of such cables or equipment.

Dumbwaiter.

421.(1) Any dumbwaiter passing through one or more storeys shall be enclosed in a shaft which has walls and a covered top of materials so constructed and installed as to have a fire-resistance rating of not less than one hour, and any hatch or doorway providing access to the interior of such shaft shall be fitted with a hatchcover or door having an equivalent or better fire-resistance rating.

(2) The door or hatch of any such dumbwaiter shall be kept closed at all times except when opened for use.

Chutes between Storeys.

422. Where a chute serves two or more storeys in a building of not less than three storeys, such storeys shall be effectively separated from each other at the point where such chute penetrates the floor level of each storey, by approved enclosing structures or devices, or shall be protected by an approved sprinkler installation.

Ventilating or Air Conditioning System.

423.(1) Every pipe or duct for the conveyance of air in a mechanical ventilating or air conditioning system in any building, except a dwelling-house, shall be made of an approved metal or other approved non-combustible material.

(2) Any material used as a lining, covering, insulation or as a means of joining such pipes or ducts as referred to in subsection (1), shall have a flame spread rating of not more than 25 and a smoke development rating of not more than 50: Provided that flexible connector pipes or ducts not exceeding 3 m in length and made of an approved material may be used, if in the opinion of the Chief Officer, such pipes or ducts are essential for the efficient functioning, operation or control of the system.

(3) Pipes or ducts in systems referred to in subsection (1), shall be equipped with approved automatic dampers or other approved devices. Alternatively such systems shall be designed so as to prevent the spread of fire and the transmission of heat, gases or smoke caused by an outbreak of fire, from any storey or part thereof to any other storey or part thereof, or to any lobby, foyer or vestibule mentioned in section 420(1)(c) through such pipes or ducts.

(4) All dampers and heat- and smoke-detecting devices shall be installed, tested and maintained to the satisfaction of the Chief Officer.

Fire Stopping of Concealed Spaces.

424.(1)(a) Concealed spaces within partitions, walls, floors, roofs, roof voids and pipe openings or openings through which pipes, cables, conduits or other services pass in any building, other than a dwelling-house, that would permit the passage of flame, smoke, fumes or hot gases from one storey to another storey or to the roof

(3) As die hyserskagmuur nie tot teen die dak van 'n gebou strek nie, moet dit aan die bokant bedek word met materiaal wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste 2 uur het. Openings wat in sodanige materiaal vir kables of ander hyseruitrusting aangebring moet word, mag nie groter wees as wat vir die behoorlike werking van sodanige kables of uitrusting nodig is nie.

Kostipe Hyser.

421.(1) 'n Kostipe hyser wat deur een verdieping of meer gaan, moet in 'n skag ingesluit wees waarvan die muur en die bo-bedekking van materiaal is wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste een uur het, en 'n luikgat of deur-opening wat toegang tot sodanige skag verleen, moet 'n luik of deur aanhê met dieselfde of 'n groter brandweerstandsvermoë.

(2) Die deur of luik van sodanige kostipe hyser moet altyd toe bly behalwe wanneer dit vir gebruik oopgemaak moet word.

Stortgeute tussen Verdiepings.

422. As 'n stortgeut twee verdiepings of meer in 'n gebou van ten minste drie verdiepings bedien, moet sodanige verdiepings by die punt waar die stortgeut deur die vloervlak van elke verdieping gaan op 'n toereikende wyse, of anders deur 'n goedgekeurde omsluitingstruktuur of -toestel, van die ander verdiepings geskei word of anders moet die verdiepings deur 'n goedgekeurde sprinkelblusserstelsel beveilig word.

Ventilasie- of Lugversorgingstelsel.

423.(1) Elke pyp of kanaal vir die vervoer van lug in 'n meganiese ventilasie- of lugversorgingstelsel in enige gebou, uitgesonderd 'n woonhuis, moet van 'n goedgekeurde metaal of ander goedgekeurde nie-brandbare materiaal gemaak word.

(2) Materiaal wat as voering, bedekking, isolering, of as 'n middel om die pype en kanale waarna daar in subartikel (1) verwys word, aanmekaar te verbind, moet 'n vlamspreivermoë van hoogstens 25 en 'n rookontwikkelvermoë van hoogstens 50 hê: Met dien verstande dat buigsame koppelpype of -kanale wat hoogstens 3 m lank is en van goedgekeurde materiaal gemaak is, gebruik kan word mits sodanige pype of kanale na die mening van die Brandweerhoof vir die doeltreffende funksionering, werking of beheer van die stelsel noodsaaklik is.

(3) Pype of kanale in stelsels waarna daar in subartikel (1) verwys word, moet met goedgekeurde outomatiese dempers of ander goedgekeurde toestelle toegerus wees, of anders moet sodanige stelsels so ontwerp word dat dit die verspreiding van brand en die oordrag van hitte, gas of rook wat in die geval van 'n brand ontwikkel, deur sodanige pype of kanale van een verdieping of gedeelte daarvan na 'n ander verdieping of gedeelte daarvan, of na 'n voorportaal, binneportaal of vestibule wat in artikel 420(1)(c) genoem word, voorkom.

(4) Alle dempers asook hitte- en rookverkliktoestelle moet tot voldoening van die Brandweerhoof geïnstalleer, getoets en in stand gehou word.

Brandafdigting van Verskuilruimtes.

424.(a) Verskuilruimtes in afskortings, mure, vloere, dakke, dakruimtes en openinge waardeur pype, kables, leipype of ander verbruikersleidings in enige gebou, uitgesonderd 'n woonhuis, gaan en wat vlamme, rookdampe of warm gasse van een verdieping na 'n ander verdieping of na die dakruimte, of van een verskuilruimte na 'n

space, or from one concealed space to another concealed space, shall be fire-stopped to form an effective draught barrier with materials so constructed and installed as to have a fire-resistance rating of not less than one hour.

(b) Fire stopping shall not be required where a concealed space is constructed as a shaft having a similar fire-resistance rating.

(2) All ceilings in any building, other than a dwelling-house, shall be made of an approved material.

(3) In any circumstances not provided for in these by-laws, the Chief Officer may require the owner of any building to carry out or cause to be carried out such fire stopping, separation or division of any concealed space or to carry out such other work or alteration he may consider necessary to prevent the passage of flames, smoke, fumes or hot gases, or the concealment of an outbreak of fire in such building.

GENERAL.

Malfunctioning of Fire Alarm Systems.

425. Where the Fire Department responds to a false alarm due to the malfunctioning of any fire alarm system installed in a building, the owner of such building shall be deemed to be responsible for such malfunctioning and liable for the payment of R50 to the Council for each such response.

Prohibited Occupation of Buildings.

426. The owner of any building shall not occupy, nor shall he cause or permit any other person to occupy, such building or part thereof unless —

- (a) the fire extinguishing system, equipment, appliance or warning and communicating device prescribed in terms of these by-laws, or such other temporary fire extinguishing equipment as the Chief Officer may require, has been installed, and approved by the Chief Officer;
- (b) the stairways and other means of exit as prescribed in terms of these by-laws have been completed to the satisfaction of the Chief Officer.

Penalty Clause.

427. Any person who contravenes any provision of the by-laws in this Chapter contained, shall be guilty of an offence and liable on conviction, except where expressly otherwise stated, to the penalties prescribed in section 367 of Chapter XVI of these by-laws.

SCHEDULE A.

Type of occupancy	Unit of Area per person in m ²
Restaurants, dining rooms, lounges, lecture rooms and classrooms	1
Shops used for trading	4
Office, workshop and factory	10
Residential, other than dwelling-houses	20
Warehouse, storage and parking garages	30

ander verskuilruimte kan deurlaat, moet met materiaal wat so gemaak en geïnstalleer is dat dit 'n brandweerstandsvermoë van ten minste een uur het, teen brand afgedig word sodat dit 'n doeltreffende trekafdigting vorm.

(b) Brandafdigting word nie vereis as 'n verskuilruimte 'n skag is waarvan die mure dieselfde brandweerstandsvermoë het nie.

(2) Alle plafonne in enige gebou, uitgesonderd 'n woonhuis, moet van 'n goedgekeurde materiaal gemaak wees.

(3) In gevalle waarvoor daar nie in hierdie verordeninge voorsiening gemaak is nie, kan die Brandweerhoof bepaal dat die eienaar van enige gebou vir sodanige brandafdigting, afsondering of verdeling van enige verskuilruimte moet sorg of sodanige ander werk moet verrig as wat die Brandweerhoof nodig ag om te voorkom dat vlamme, rook, dampe of warm gasse deurge-laai word of dat 'n brand wat in sodanige gebou uitbreek het, onopgemerk bly.

ALGEMEEN.

Foutiewe Werking van Brandalarmstelsels.

425. As die Brandweerafdeling optree na aanleiding van 'n vals alarm vanweë die foutiewe werking van enige brandalarmstelsel wat in 'n gebou geïnstalleer is, word daar gegag dat die eienaar van die gebou vir sodanige foutiewe werking aanspreeklik is en is hy in die geval van elke sodanige optrede aanspreeklik vir die betaling van R50 aan die Raad.

Verbode Okkupasie van Geboue.

426. Die eienaar van enige gebou mag nie sodanige gebou of gedeelte daarvan okkupeer of iemand anders toelaat om dit te okkupeer of iemand anders dit laat okkupeer nie, tensy —

- (a) die brandblusstelsel, -uitrusting, -toestel of verklik-en kommunikasietoestel wat ingevolge hierdie verordeninge voorgeskryf is, of ander tydelike brandblusuitrusting wat die Brandweerhoof mag voorskryf, daar geïnstalleer is en die Brandweerhoof dit goedgekeur het;
- (b) die trappe en ander uitgange wat ingevolge verordeninge voorgeskryf is, tot voldoening van die Brandweerhoof voltooi is.

Strafbepaling.

427. Iemand wat 'n bepaling van die verordeninge vervat in hierdie Hoofstuk oortree, begaan 'n misdryf en is by skuldigbevinding strafbaar, tensy dit uitdruklik anders bepaal word, soos by artikel 367 van Hoofstuk XVI van hierdie verordeninge voorgeskryf.

BYLAE A.

Soort okkupasie	Getal m ² per persoon
Restaurante, eetkamers, sitkamers, lesing-kamers en klaskamers	1
Winkels wat vir handeldryf gebruik word	4
Kantoor, werkplaas en fabriek	10
Woongeboue, uitgesonderd woonhuise	20
Pakhuis, opbergplek en parkeergarage	30

SCHEDULE B.

1	2	3	4	5
Use of floor space in any storey of a building	Height of building in metres	Area of floor space used as specified in Column 1 (square metres)	Type of fire extinguishing equipment to be installed	Additional fire extinguishing equipment required in circumstances provided for in the sections listed hereunder
A. Office, educational, hostel, hotel and residential, excluding dwelling-houses	Not exceeding 6	Exceeding 250 but not exceeding 500	Hand extinguishers	370
		Exceeding 500 but not exceeding 4 000	Hand extinguishers and fitted hose reels	
		Exceeding 4 000	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 6 but not exceeding 18	Not exceeding 1 000	Hand extinguishers and fitted hose reels	
		Exceeding 1 000	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 18 but not exceeding 30	Any area	Hand extinguishers, fitted hose reels and hydrant valves	
Exceeding 30	Any area	Hand extinguishers, fitted hose reels and hydrant valves	369(9), 370 and 376(2) (b)	

BYLAE B.

1	2	3	4	5
Gebruik van vloerruimte van enige verdieping van 'n gebou	Hoogte van gebou in meter	Vloeroppervlakte gebruik soos bepaal by Kolom 1- (vierkante meter)	Soort brandblusuitrusting wat geïnstalleer moet word	Bykomende brandblusuitrusting wat by onderstaande artikels voorgeskryf word
A. Kantoor-, tenues-, hotel en opvoedkundige doeleindes en woondoeleindes, uitsonderd woonhuise	Hoogstens 6	Meer as 250 maar hoogstens 500	Handblussers	370 369(9), 370 en 376(2) (b)
		Meer as 500 maar hoogstens 4 000	Handblussers en gemonteerde slangtolle	
		Meer as 4 000	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 6 maar hoogstens 18	Hoogstens 1 000	Handblussers en gemonteerde slangtolle	
		Meer as 1 000	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 18 maar hoogstens 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle en brandkrane	
Meer as 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle en brandkrane		

1	2	3	4	5
Use of floor space in any storey of a building	Height of building in metres	Area of floor space used as specified in Column 1 (square metres)	Type of fire extinguishing equipment to be installed	Additional fire extinguishing equipment required in circumstances provided for in the sections listed hereunder
B. Manufacture, processing, use, sale or storage of combustible material	Not exceeding 6	Exceeding 100 but not exceeding 250	Hand extinguishers	369(5) and 370
		Exceeding 250 but not exceeding 2 000	Hand extinguishers and fitted hose reels	
		Exceeding 2 000	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 6 but not exceeding 18	Not exceeding 500	Hand extinguishers and fitted hose reels	369(4), 369(5) and 370
		Exceeding 500	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 18 but not exceeding 30	Any area	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 30	Any area	Hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation	370 and 376(2) (b)

1	2	3	4	5
Gebruik van vloerruimte van enige verdieping van 'n gebou	Hoogte van gebou in meter	Vloeroppervlakte gebruik soos bepaal by Kolom 1 (vierkante meter)	Soort brandblusuitrusting wat geïnstalleer moet word	Bykomende brandblusuitrusting wat by onderstaande artikels voorgeskryf word
B. Vervaardiging, verwerking, gebruik, verkoop of opberging van brandbare materiaal	Hoogstens 6	Meer as 100 maar hoogstens 250	Handblussers	369(5) en 370
		Meer as 250 maar hoogstens 2 000	Handblussers en gemonteerde slangtolle	
		Meer as 2 000	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 6 maar hoogstens 18	Hoogstens 500	Handblussers en gemonteerde slangtolle	369(4), 369(5) en 370
		Meer as 500	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 18 maar hoogstens 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle en brandkrane	
Meer as 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle, brandkrane en 'n goedgekeurde sprinkelblusstelsel	370 en 376(2)(b)	

1	2	3	4	5
Use of floor space in any storey of a building	Height of building in metres	Area of floor space used as specified in Column 1 (square metres)	Type of fire extinguishing equipment to be installed	Additional fire extinguishing equipment required in circumstances provided for in the sections listed hereunder
C. Industrial and commercial not involving the use combustible materials	Not exceeding 10	Exceeding 1 000 but not exceeding 4 000	Hand extinguishers and fitted hose reels	370
		Exceeding 4 000	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 10 but not exceeding 18	Not exceeding 2 000	Hand extinguishers and fitted hose reels	
		Exceeding 2 000	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 18 but not exceeding 30	Any area	Hand extinguishers, fitted hose reels and hydrant valves	
Exceeding 30	Any area	Hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation	370 and 376(2) (b)	

1	2	3	4	5
Gebruik van vloerruimte van enige verdieping van 'n gebou	Hoogte van gebou in meter	Vloeroppervlakte gebruik soos bepaal by Kolom 1 (vierkante meter)	Soort brandblusuitrusting wat geïnstalleer moet word	Bykomende brandblusuitrusting wat by onderstaande artikels voorgeskryf word
C. Nywerheids- en besigheidsdoeleindes, mits brandbare materiale nie gebruik word nie	Hoogstens 10	Meer as 1 000 maar hoogstens 4 000	Handblussers en gemonteerde slangtolle	370
		Meer as 4 000	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 10 maar hoogstens 18	Hoogstens 2 000	Handblussers en gemonteerde slangtolle	
	Meer as 18 maar hoogstens 30	Meer as 2 000	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle en brandkrane	370 en 376(2) (b)
Meer as 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle, brandkrane en 'n goedgekeurde sprinkelblusstelsel		

1	2	3	4	5
Use of floor space in any storey of a building	Height of building in metres	Area of floor space used as specified in Column 1 (square metres)	Type of fire extinguishing equipment to be installed	Additional fire extinguishing equipment required in circumstances provided for in the sections listed hereunder
D. Homes for aged persons, hospitals, nursing and maternity homes, mental homes and institutions regulated under the Children's Act or Education Act or Education Ordinance, including nursery schools, crèches and orphanages	Not exceeding 6'	Exceeding 250 but not exceeding 500	Hand extinguishers	370
		Exceeding 500 but not exceeding 2 000	Hand extinguishers and fitted hose reels	
		Exceeding 2 000	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 6 but not exceeding 18'	Not exceeding 1 000	Hand extinguishers and fitted hose reels	
		Exceeding 1 000	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 18 but not exceeding 30	Any area	Hand extinguishers, fitted hose reels and hydrant valves	
	Exceeding 30	Any area	Hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation	

1	2	3	4	5
Gebruik van vloerruimte van enige verdieping van 'n gebou	Hoogte van gebou in meter	Vloeroppervlakte gebruik soos bepaal by Kolom 1 (vierkante meter)	Soort brandblusuitrusting wat geïnstalleer moet word	Bykomende brandblusuitrusting wat by onderstaande artikels voorgeskryf word
D. Tehuse vir bejaardes, hospitale, verpleeg- en kraam-inrigtings, sielsieke-inrigtings en inrigtings ingevolge die Kinderwet of die Onderwyswet of die Onderwysordonnansie, met inbegrip van kleuterskole, crèches en weeshuise	Hoogstens 6	Meer as 250 maar hoogstens 500	Handblussers	370 370 en 376(2)(b)
		Meer as 500 maar hoogstens 2 000	Handblussers en gemonteerde slangtolle	
		Meer as 2 000	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 6 maar hoogstens 18	Hoogstens 1 000	Handblussers en gemonteerde slangtolle	
		Meer as 1 000	Handblussers, gemonteerde slangtolle en brandkrane	
	Meer as 18 maar hoogstens 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle en brandkrane	
Meer as 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle, brandkrane en 'n goedgekeurde sprinkelblusserstelsel		

1	2	3	4	5
Use of floor space in any storey of a building	Height of building in metres	Area of floor space used as specified in Column 1 (square metres)	Type of fire extinguishing equipment to be installed	Additional fire extinguishing equipment required in circumstances provided for in the sections listed hereunder
E. Clubs, restaurants, night clubs, public buildings other than cinemas, theatres and places of public worship	Not exceeding 6	Not exceeding 200	Hand extinguishers	
		Exceeding 200 but not exceeding 1 000	Hand extinguishers and fitted hose reels	370
		Exceeding 1 000 but not exceeding 2 000	Hand extinguishers, fitted hose reels, and hydrant valves	
		Exceeding 2 000	Hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation	
	Exceeding 6 but not exceeding 18	Not exceeding 1 000	Hand extinguishers and fitted hose reels	370
		Exceeding 1 000 but not exceeding 2 000	Hand extinguishers, fitted hose reels and hydrant valves	
		Exceeding 2 000	Hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation	
	Exceeding 18 but not exceeding 30	Not exceeding 2 000	Hand extinguishers, fitted hose reels and hydrant valves	370
		Exceeding 2 000	Hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation	
	Exceeding 30	Any area	Hand extinguishers, fitted hose reels, hydrant valves and an approved sprinkler installation	376(2) (b)."

1	2	3	4	5
Gebruik van vloerruimte van enige verdieping van 'n gebou	Hoogte van gebou in meter	Vloeroppervlakte gebruik soos bepaal by Kolom 1 (vierkante meter)	Soort brandblusuitrusting wat geïnstalleer moet word	Bykomende brandblusuitrusting wat by onderstaande artikels voorgeskryf word
E.	Hoogstens 6	Hoogstens 200	Handblussers	370
		Meer as 200 maar hoogstens 1 000	Handblussers en gemonteerde slangtolle	
		Meer as 1 000 maar hoogstens 2 000	Handblussers, gemonteerde slangtolle en brandkrane	
		Meer as 2 000	Handblussers, gemonteerde slangtolle en 'n goedgekeurde sprinkelblusserstelsel	
Klubs, restaurante, nagklubs, openbare geboue, uitgesonderd bioskope, teaters en plekke vir openbare godsdiensoefeninge	Meer as 6 maar hoogstens 18	Hoogstens 1 000	Handblussers en gemonteerde slangtolle	370
		Meer as 1 000 maar hoogstens 2 000	Handblussers, gemonteerde slangtolle en brandkrane	
		Meer as 2 000	Handblussers, slangtolle, brandkrane en 'n goedgekeurde sprinkelblusserstelsel	
	Meer as 18 maar hoogstens 30	Hoogstens 2 000	Handblussers, gemonteerde slangtolle en brandkrane	370
		Meer as 2 000	Handblussers, gemonteerde slangtolle, brandkrane en 'n goedgekeurde sprinkelblusserstelsel	
	Meer as 30	Enige oppervlakte	Handblussers, gemonteerde slangtolle, brandkrane en 'n goedgekeurde sprinkelblusserstelsel	376(2) (b)."

28. By amending Schedule 2 by —

- (a) the deletion of Appendix I;
- (b) the deletion of Appendix V;
- (c) the substitution in Appendix VI for the figure "R5" of the figure "R16";
- (d) the substitution in Appendix VII —
 - (i) in item 1(1)(a) for the figure "R2" of the figure "R8";
 - (ii) in item 1(1)(b)(i) for the figure "50c" of the figure "R2";
 - (iii) in item 1(1)(b)(ii) for the figure "30c" of the figure "R1,25";
 - (iv) in item 1(1)(b)(iii) for the figure "20c" of the figure "R1";
 - (v) in item 2 for the figure "2c" of the figure "6,5c";
 - (vi) in item 3 for the figure "R2" of the figure "R8";
 - (vii) in item 4 for the figure "R2" of the figure "R8"; and
 - (viii) in item 5 for the figure "R2" of the figure "R8".

29. By the addition after Schedule 2 of the following:

"SCHEDULE 3.

The area referred to in section 240(1) shall be the area bordered by the centre of the following streets, or such other area as the Council may determine from time to time:

1. *On the north:*

- Smit Street, between Twist Street and Wanderers Street.
 Noord Street, between Wanderers Street and Harrison Street.
 Bree Street, between Harrison Street and West Street.
 President Street and Avenue Road, between West Street and Goch Street.

2. *On the west:*

- Wanderers Street, between Smit Street and Noord Street.
 Harrison Street, between Noord Street and Bree Street.
 West Street, between Bree Street and President Street.
 Goch Street, between Avenue Road and Market Street.
 West Street, between Market Street and Anderson Street.
 Ferreira Street, between Anderson Street and Frederick Street.

3. *On the south:*

- Market Street and Main Road, between Goch Street and West Street.
 Anderson Street, between West Street and Ferreira Street.
 Frederick Street, between Ferreira Street and Troye Street.

4. *In the east:*

- Troye Street, between Frederick Street and Bree Street.
 Twist Street, between Bree Street and Smit Street."

The Building and Cinematograph By-laws of the Johannesburg Municipality, published under Administrator's Notice 455, dated 29 September 1941, as amended, are hereby revoked.

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28. Deur Bylae 2 te wysig deur —

- (a) Aanhangsel I te skrap;
- (b) Aanhangsel V te skrap;
- (c) in Aanhangsel VI die syfer "R5" deur die syfer "R16" te vervang;
- (d) in Aanhangsel VII —
 - (i) in item 1(1)(a) die syfer "R2" deur die syfer "R8" te vervang;
 - (ii) in item 1(1)(b)(i) die syfer "50c" deur die syfer "R2" te vervang;
 - (iii) in item 1(1)(b)(ii) die syfer "30c" deur die syfer "R1,25" te vervang;
 - (iv) in item 1(1)(b)(iii) die syfer "20c" deur die syfer "R1" te vervang;
 - (v) in item 2 die syfer "2c" deur die syfer "6,5c" te vervang;
 - (vi) in item 3 die syfer "R2" deur die syfer "R8" te vervang;
 - (vii) in item 4 die syfer "R2" deur die syfer "R8" te vervang; en
 - (viii) in item 5 die syfer "R2" deur die syfer "R8" te vervang.

29. Deur na Bylae 2 die volgende by te voeg:

"BYLAE 3.

Die gebied waarna daar in artikel 240(1) verwys word, is die gebied wat deur die hartlyn van die volgende strate begrens word, of sodanige ander gebied wat die Raad van tyd tot tyd kan bepaal:

1. *Aan die noordekant:*

- Smitstraat, tussen Twist- en Wanderersstraat.
 Noordstraat, tussen Wanderers- en Harrisonstraat.
 Breëstraat, tussen Harrison- en Weststraat.
 Presidentstraat en Avenueweg, tussen West- en Gochstraat.

2. *Aan die westekant:*

- Wanderersstraat, tussen Smit- en Noordstraat.
 Harrisonstraat, tussen Noord- en Breëstraat.
 Weststraat, tussen Breë- en Presidentstraat.
 Gochstraat, tussen Avenueweg- en Marketstraat.
 Weststraat, tussen Market- en Andersonstraat.
 Ferreirastraat, tussen Anderson- en Frederickstraat.

3. *Aan die suidekant:*

- Marketstraat en Mainweg, tussen Goch- en Weststraat.
 Andersonstraat, tussen West- en Ferreirastraat.
 Frederickstraat, tussen Ferreira- en Troyestraat.

4. *Aan die oostekant:*

- Troyestraat, tussen Frederick- en Breëstraat.
 Twiststraat, tussen Breë- en Smitstraat."

Die Bou- en Kinematograafverordeninge van die Munisipaliteit Johannesburg, afgekondig by Administrateurskennisgewing 455 van 29 September 1941, soos gewysig, word hierby herroep.

PB. 2-4-2-19-2

Gedruk vir die Transvaalse Provinsiale Administrasie, Pta., deur Hoofstadpers Beperk, Posbus 422, Pretoria.