

ARTICLE 6. VENTILATION

(5.1.1). §C26-258.0 Ventilation Required.-

- a. Structures or parts of structures, including those portions of multiple dwellings used for business purposes, constructed after January first, nineteen hundred thirty-eight, shall be provided with ventilation in rooms and spaces as prescribed in this article and in accordance with rules of the board.
- b. In the application of these provisions, any room or space or portion of which more than fifty percent of its story height, between floor and ceiling, is below the level of the nearest point of the nearest curb, shall be considered as having insufficient ventilation for use as living quarters where any person or persons may sleep or be domiciled and such use shall be unlawful.
- c. Systems of mechanical ventilation installed to comply with the provisions of this article shall be kept in continuous operation at all times during the normal occupancy of the structure.
- d. In the application of this article, stationary windows and stationary sash shall be construed as wall area and shall be given no credit as means of ventilation.

(5.1.2). §C26-259.0 Design and Installation of Means of Ventilation.-

- a. Design and installation. The design and installation of the means for ventilation or air conditioning shall be as required by this article and as prescribed in the rules of the department.
- b. Fire protection. Where a mechanical ventilating system is installed to ventilate the business or public portions of a structure other than water closet compartments and the ventilating system is used to ventilate spaces on more than one floor by means of recirculation of air whether or not the system of ventilation is required by law, the fans of the system shall be arranged to shut down automatically by means of an approved thermostatic device or other adequate fire detecting devices approved by the board, whenever the temperature of the air in the system exceeds 125 degrees Fahrenheit. For this purpose, an approved thermostatic device which cannot be set to operate at a temperature in excess of 125 degrees Fahrenheit, shall be located in the system at a suitable point in the return air duct, ahead of the fresh air intake. The thermostatic device shall be either of a type that is manually reset, or the control system shall be so arranged that some manual operation is required to restart the fan after the thermostat has operated. Where such ventilating systems are installed in buildings equipped with automatic sprinklers or manual or automatic fire alarm systems located on the same floor or floors as the ventilating system, provision shall be made to stop the fans automatically when the sprinkler or fire alarm systems operate.
- c. Where a mechanical ventilating or air conditioning system with recirculation of air from one space to another is used to ventilate a lobby or passageway from the stairs or elevators leading to a street or leading to the exterior of a building, an effective means of detecting and controlling the spread of smoke in the ventilating or air conditioning system shall be provided. Smoke detecting equipment shall not be required where a separate ventilating system is provided for the lobby, so constructed that no air is recirculated from the lobby to spaces outside of the lobby. Also, in any public building or part of a public building as defined in section C26-235.0, except schools in which regular, supervised fire drills are held, where a ventilating system or air conditioning system with recirculation of air from one space to another is used to ventilate spaces on more than one story, means of detecting and

controlling the spread of smoke shall be provided. The installation of the smoke detecting equipment shall be in accordance with the rules of the board, or in the absence of such rules, in accordance with the rules of the department.

Smoke detecting devices shall be located in the main supply duct on the down stream side of the filters, so located as to operate reliably in case of smoke in any part of the air stream. The sensitivity of the smoke detecting device shall be such that a reduction of less than four percent in light beam intensity will not result in operation. The device shall operate whenever there is a reduction in the clear beam light intensity not exceeding two per cent per foot of length of the light beam, or a maximum of thirty-six per cent total light cut-off. Devices shall be of a type and be so installed as to minimize the possibility of operation due to accumulation of dust, deterioration of the equipment, fluctuation in electric current supply or to any other condition in system operation not associated with fire or smoke. Smoke detection equipment shall be arranged so that audible or visual signals will indicate any condition which would interfere with proper operation of the smoke detecting equipment. The owner shall have such equipment inspected at least semi-annually and maintained in proper operative condition. Smoke detector devices shall be approved by the board. Where the requirements of this section as to sensitivity are not applicable as a standard for a type of smoke detecting device, the board shall establish other adequate standards for such devices. Other smoke detecting or fire detecting equipment may be used when approved by the board. The smoke detecting devices shall control the spread of smoke by stopping the ventilating fans.

(5.1.3). §C26-260.0 Where Special Ventilation is Required.-Where excessive heat may be created to the detriment of the occupants, or where steam, gases, vapor, dust or other impurities in the air, which may be injurious to health, may be generated in the course of commercial or other activities, rooms shall be ventilated in such manner as to prevent harm to any person therein.

(5.1.4.1). §C26-261.0 Rooms in Residence Structures Constructed After January First, Nineteen Hundred Thirty-eight.-

a. Windows required.-

1. Living rooms shall have one or more windows opening directly upon a street or other public space or upon a court located upon the same lot or plot as the structure and conforming to the requirements of section C26-269.0, provided that the width of such street or open space shall be at least the minimum required by section C26-269.0, except as otherwise specifically stated in this section.

2. Windows in each room shall have an area between stop beads of at least one-tenth the floor area of the room. At least fifty percent of the required window area shall be available as clear ventilating area.

b. Minimum Dimensions of Rooms-Living rooms shall have a minimum clear width of six feet in any part, a minimum clear floor area of sixty square feet, and a minimum clear ceiling height of eight feet for the minimum area; except that in any alteration to a building, which building was completed before January 1, 1948, the minimum clear ceiling height of seven feet for a minimum area shall be permitted provided, however, that the alteration shall have been completed prior to July 1, 1965.

(5.1.4.3). c. Alcove Rooms.-Residence buildings occupied by two families or less, may have living rooms without windows as prescribed in subdivision a of this section, provided that every such room opens, without obstruction, directly into another room which has one or

more windows opening directly to the outer air as prescribed in subdivision a of this section, of at least one-tenth of the combined area of the two rooms, and that the opening between such rooms is sixty square feet or more in area.

(5.1.5). §C26-262.0 Ventilation of Toilets.-Every bathroom, toilet room or other room containing one or more water-closets or urinals, placed in any structure after January first, nineteen hundred thirty-eight, shall be ventilated in at least one of the following ways:

(5.1.5.1). 1. Windows Opening to Outer Air.-By one or more windows, opening to a street or to a yard or court of lawful dimensions on the same lot or plot. Such window or windows shall have a clear area between stop beads of at least ten percent of the floor area. At least fifty percent of the required area shall be clear ventilating area but every window shall be at least three square feet in area and at least one foot in width.

(5.1.5.2). 2. Windows Opening on Vent Shafts or Courts.-

a. By a window of the size specified in paragraph one of this section, opening on a vent shaft which extends to and through the roof, or into a court of lawful dimensions and which has a cross-sectional area of at least one-fifth of a square foot for every foot of height, but at least nine square feet and, unless such shaft opens to the outer air at the top, there shall be a net area of fixed louvre openings in the skylight equal to the required shaft area.

b. A shaft or court as referred to in this section shall mean a shaft or court on the same lot or plot with the structure.

(5.1.5.3). 3. Individual Vent Flues or Ducts.-

a. By an individual vent flue or duct extending independently of any other flue or duct to and above the roof and having a cross-sectional area of at least one square foot for one or two water-closets or urinal fixtures and one-third of a square foot additional for each additional water-closet or urinal fixture.

b. Vent flues or ducts passing through two or more successive floors or through one or more floors and the roof shall run in a shaft or shafts constructed as prescribed in sections C26-638.0 through C26-647.0.

c. Each flue or duct shall be equipped with an automatic closing fire damper where such flue or duct enters the shaft enclosure and, such flue or duct shall be equipped at its upper termination, with a wind-blown ventilator cap. Such damper and cap shall be designed in accordance with the rules of the board.

d. When two or more such flues or ducts are enclosed in a single shaft, each shall be covered with fire-retarding materials as prescribed by the rules of the board.

(5.1.5.4). 4. Skylights.-By a skylight in the ceiling, having a glazed surface of at least three square feet and arranged so as to provide fixed ventilating openings of at least one and one-half square feet to the outer air above the roof of the structure or into a court or yard of lawful dimensions, for one or two water-closets or urinal fixtures and one square foot additional for each additional water-closet or urinal fixture.

(5.1.5.5). 5. Mechanical Exhaust Ventilation.-

a. By some approved system of mechanical exhaust ventilation of sufficient capacity to exhaust at least forty cubic feet of air per minute per water-closet and per urinal for public toilet rooms, and at least twenty-five cubic feet per minute per private interior bathroom.

b. Separate exhaust flues shall be provided for every two hundred fifty feet of height of structures, and such flues shall be of approved construction.

(5.1.5.6). 6. Openings into Interior Bathrooms and Water-closet Compartments. Interior bathrooms and water-closet compartments shall have fixed openings from adjacent rooms or corridors, or from other approved sources, ample to provide a sufficient inflow of air to make exhaust ventilation effective.

(5.1.5.7). 7. Use of Pipe Shafts for Ventilation.-It shall be unlawful to use pipe shafts as ventilating shafts.

(5.1.6). §C26-263.0 Ventilation of Inside Locker Rooms.-Inside locker rooms and other similar inside rooms shall be provided with exhaust ventilation giving at least two changes of air per hour.

(5.1.7). §C26-264.0 Ventilation of Refrigerating Plants.-Refrigerating plants shall be ventilated in accordance with the provisions of title C of chapter nineteen of the code.

(5.1.8). §C26-265.0 Ventilation of Inside Cooking spaces.-

a. Inside spaces where cooking of any kind is done shall have a mechanical exhaust ventilation of three cubic feet of air per minute for each square foot of floor area, but in any case at least one hundred fifty cubic feet of air per minute. Such exhaust shall be collected in a sheet metal flue connected to an independent common flue in a fireproof shaft. Such flues shall be of No. 16, U.S. gage sheet steel, or terra cotta, and shall be connected to a separate fan.

b. When two or more such flues are enclosed in a single shaft, each shall be covered with fire-retarding materials as prescribed by the rules of the board.

(5.1.9). §C26-266.0 Index For Ventilation.-Spaces above or below grade, with or without windows, designed for human occupancy only, except for special occupancy structures provided for in section C26-749.0, or as otherwise prescribed in sections C26-261.0 or C26-262.0 shall have ventilation either from windows or from mechanical means, or from both, in accordance with the following index and requirements:

1. Cubic foot contents per person plus ten times floor area per person in square feet plus one hundred times the entire masonry window openings per person in square feet equals index.

(5.1.9.1). 2. Rooms With Windows.-In rooms with windows:

a. If the index is less than 300, there shall be supplied an amount of fresh air equal to two and one-half cubic feet per minute per square foot of floor area, and an air exhaust of two cubic feet per minute per square foot of floor area.

b. If the index is between 300 and 520, there shall be supplied an amount of fresh air equal to two cubic feet per minute per square foot of floor area, and an air exhaust of one and one-half cubic feet per minute per square foot of floor area.

c. If the index is between 520 and 850, there shall be supplied an amount of fresh air equal to one and one-half cubic feet per minute per square foot of floor area and an air exhaust of one and one-quarter cubic feet per minute per square foot of floor area.

d. If the index is between 850 and 1,650, there shall be required an air exhaust of one cubic foot per minute per square foot of floor area.

e. If the index is above 1,650, mechanical ventilation shall be unnecessary.

f. In order to be credited as such under the provisions of this article, a window shall open directly upon a street or other open public space or upon a court, located on the same lot or plot, and conforming to the requirements of section C26-269.0 for courts.

g. Show windows and other stationary windows shall be considered as wall area in calculating the index.

(5.1.9.2). 3. Rooms Without Windows.-In rooms without windows:

- a. If the index is below 850, the requirements shall be the same as for rooms with windows.
- b. If the index is between 850 and 1,650, there shall be supplied an amount of fresh air equal to one cubic foot per minute per square foot of floor area and an air exhaust of one cubic foot per minute per square foot of floor area.
- c. If the index is over 1,650, there shall be supplied an amount of fresh air equal to one-third cubic foot per minute per square foot of floor area, and an air exhaust of one-third cubic foot per minute per square foot of floor area.
- d. Interior partitions shall have transoms or equivalent openings, and when partitions occur thirty feet or more away from a window or similar opening, the room so formed shall have ventilation based upon the index without windows.

(5.1.9.3.) 4. Ventilation for School Structures.-School structures shall be ventilated in accordance with the following requirements:

- a. In classrooms and other rooms of instruction, and administrative rooms. Where the index is above 1,650, no mechanical ventilation is required. Classrooms and other rooms of instruction and administrative rooms, where the index is below 1,650, shall have a supply of outdoor air of fifteen cubic feet per minute per occupant and mechanical exhaust. Where windows are used as the source of supply air, mechanical exhaust shall be fifteen cubic feet per minute per occupant. When outdoor air is supplied by mechanical means, the exhaust shall be at least 80 percent of the supply.
- b. Lockers, wardrobes or wardrobe rooms shall be ventilated, as specified in section C26-263.0 of the administrative code and where these spaces are included in or are adjacent to a classroom, the exhaust air from the classroom under regulation jointly determined by the Board of Education and the Commissioner of Health may be used for such ventilation.
- c. Auditoriums, assembly rooms, and other rooms where there are more than 75 occupants, shall have a supply of outdoor air of not less than fifteen cubic feet per minute per occupant, and mechanical exhaust. Where windows are used as the source of the supply air, mechanical exhaust shall be at least fifteen cubic feet per minute per occupant. When outdoor air is supplied by mechanical means, the exhaust shall be at least 80 percent of the supply.
- d. In rooms where there is danger of large concentrations of toxic substances, or where strong odors or overheating is likely to occur, special ventilating systems, with mechanical exhaust adequate to relieve these conditions, shall be provided. The exhaust from these rooms shall be independent of the exhaust systems serving other parts of the building.

(5.1.10). §C26-267.0 Ventilation of Garages.-

- a. Spaces below grade with or without windows, designed for live storage of five or more vehicles propelled by gasoline engines or other internal combustion engines and operated within the storage space under their own power, shall have provision for at least four changes of air exhaust per hour by mechanical means, with provision for a corresponding air inflow from an uncontaminated source. Two changes of the four shall be taken from near the floor.
- b. Spaces above grade with or without windows, designed for the same purpose, shall have provision for at least four changes of air per hour by mechanical means or, shall have adjustable openings near the floor on all outside and court walls. Adjustable openings shall measure at least six inches by four inches and be within six inches above the floor. Such

openings shall be placed between wall columns, and shall be placed sixteen feet or less apart where the columns do not occur. Such spaces shall also be subject to the requirements of section C26-260.0.

c. Elevator pits below floor levels shall have mechanical exhaust ventilation taken from near the bottom of the pits.

RULES FOR THE VENTILATION OF GARAGE SPACES BELOW GRADE

In order to secure the intent and purpose of Section C26-267.0 of the Administrative Code of The City of New York and in the absence of rules of the Board of Standards and Appeals and pursuant to the provisions of Section 885 of the New York City Charter, the following rules are hereby promulgated to become effective February 15, 1954:

1. *Whenever the floor of a garage designed for the live storage of five (5) or more motor vehicles is more than two (2) feet below curb, ventilation shall be provided as required by the provisions of subdivision a of Section C26-267.0 of the Administrative Code.*

2. *Air exhaust ducts shall terminate above the roof of the garage or the roof of the building or shall terminate at least ten (10) feet above the curb in an exterior wall adjoining a legal street, yard or court. No air exhaust duct shall terminate within fifteen (15) feet of a window in another building, nor within fifteen (15) feet of a window in the residence portion of the same building.*

3. *The ventilation system shall comply with the "RULES RELATING TO REQUIRED VENTILATING SYSTEMS" of the Department of Housing and Buildings.*

(5.1.11). §C26-268.0 Human Occupancy-Plans for structures, designed for human occupancy, and filed with the department, shall have designed thereon the number of persons which the rooms and various spaces are planned to accommodate and shall contain a simple description of the system of mechanical ventilation, if any, to be installed in the structure. One and two family dwellings are exempted from the requirements of this section.

(5.1.12). §C26-269.0 Courts.-

a. In structures erected after January first, nineteen hundred thirty-eight, a court required by subdivision a of section C26-261.0, shall have a width at every point of at least one inch for each foot that such point is distant from the lowest part of such court, and in no case shall such width be less than three feet, except that in structures of not more than 30 feet in width the minimum width of a court shall be not less than three feet and, except as otherwise specifically provided herein for one-family dwellings. Such a court shall be open and unobstructed to the sky for the required widths from its lowest point, except for ordinary projections such as window sills, belt courses and similar ornamental projections to a maximum extent of four inches. When a court is located on the side of a lot or plot, the lot line shall be: deemed an enclosure of such court, but when a court opens on a street or open public space, such street or open public space may be considered as part of that court.

b. In one-family structures, erected after January first, nineteen hundred thirty-eight to a height of not more than two stories and twenty-seven feet the court required by sub-division a of section C26-161.0 may be less than four feet in width but shall in any case be two feet or more in width, provided there is a public space or street or a court of at least two feet in width on the opposite side and cross-ventilation from one side to the other is provided for by windows on both sides.

(5.1.13). §C26-270.0 Structures on the Same Lot or Plot.-If more than one structure is placed on any lot or plot after January first, nineteen hundred thirty-eight, or, if any structure is placed

on the same lot or plot with a previously existing structure, the several structures, may, for the purposes of this article, be considered as a single structure.

(5.1.14). §C26-271.0 Effect of Alterations Upon Structure Ventilation.-It shall be unlawful to alter any structure in a manner which would reduce the size of any room or the amount of window space below the requirements of section C26-261.0, or which would create any additional room unless such additional room is made to conform to the requirements of section C26-261.0, except that such rooms may be of the same height as existing rooms in the same story. It shall be unlawful to enlarge any structure or to diminish the lot or plot on which such structure is located so as to reduce the dimensions of any court below the requirements of section C26-269.0.

RULES RELATING TO THE INSTALLATION OF VENTILATING AND AIR CONDITIONING SYSTEMS

(Filed with City Clerk June 1, 1959)

By virtue of the authority vested in the Commissioner of Buildings, pursuant to the provisions of Section 885 of the New York City Charter and Section C26-259.0-a of the Administrative Code and in order to provide for the enforcement of the provisions of the Administrative Code, the Multiple Dwelling Law and the Labor Law in relation to ventilation, the following rules are hereby promulgated to become effective June 1, 1959. The Rules Relating to Required Ventilating Systems, filed with the City Clerk July 8, 1957, are hereby rescinded.

A. PURPOSE

1. These rules set forth some of the requirements for the installation, operation and maintenance of ventilating and air conditioning systems. They shall apply to any required system of ventilation or air conditioning hereafter installed or altered, to the installation of any voluntary ventilating or air conditioning system or air conditioning unit, and to the alteration of an existing voluntary ventilating system, air conditioning system, or air conditioning unit which will subject any part of a structure to heavier loads than it was designed to carry, or will create new openings in floors and roofs, or in walls or partitions required to have a fire resistive rating. Rules 45 and 48 shall not apply to a separately ventilated individual bathroom or a cooking space. Other rules shall be applicable to such installations to the extent required by the borough superintendent.

2. APPLICABLE LAWS AND RULES. It is required that every installation of ventilating and air conditioning equipment, and the operation and maintenance of same, and all work in connection therewith, shall comply with the provisions of laws which prescribe the structural requirements, the laws relating to protection of structures against the spread of fire, the laws relating to egress, as well as laws and rules governing ventilation and air conditioning.

B. DEFINITIONS

3. A REQUIRED VENTILATING SYSTEM is one installed to provide ventilation where required by law. Those parts of a voluntary ventilating or air conditioning system which are connected to or may affect the functioning of a required ventilating system shall be deemed to be a required ventilating system.

4. A VOLUNTARY VENTILATING SYSTEM OR AIR CONDITIONING SYSTEM OR AIR CONDITIONING UNIT is one installed voluntarily and is not required to provide ventilation in compliance with the requirements of the law.

5. AN ALTERED VENTILATING SYSTEM OR AIR CONDITIONING SYSTEM is one in which duct work is relocated or in which additional duct work is installed to service additional space.

6. THE INDEX OF VENTILATION. Cubic foot contents per person plus ten times floor area per person in square feet plus one hundred times the entire masonry window openings per person in square feet equals index (Section C26-266.0-1 Administrative Code).

Where interior partitions with transoms or equivalent openings occur less than thirty feet from a window, one index of ventilation may be figured for both rooms based on the window area, total floor area, and the total number of occupants of both rooms, provided that transoms or equivalent openings in the partitions, when substituted for window areas, are sufficient to give the same index number based on the area of the inner room and the number of its occupants.

7. PLENUM CHAMBER. An air compartment or chamber to which one or more ducts are connected and which forms part of an air distribution system.

8. The term "HALLWAY" shall mean an enclosed hall or corridor leading to a stairway, fire tower, or other required exit, (Section C26 81.0 Administrative Code).

9. The term "PUBLIC HALLWAY" shall mean a corridor or hallway leading directly to a stairway, fire tower or other required exit, within a story of a structure which is occupied by more than one tenant or lessee or within a structure defined as a public building by, and included in, Section C26-235.0-a of the Administrative Code (Section C26-81.0 Administrative Code).

10. The term "PASSAGEWAY" shall mean an enclosed passage or corridor connecting a stairway, fire tower or elevator with a street or open space communicating with a street (Section C26-110.0 Administrative Code).

11. A "STAIR ENCLOSURE" is the fire resistive or fireproof partition required by the Administrative Code to be built around stairways and fire towers and passages or corridors used to reach the street after entering a stairway or fire tower.

12. A "FIRE DAMPER" is a damper arranged to automatically seal off air flow through a part of an air duct system, so as to prevent the passage of heat and smoke.

13. A "FIRE PARTITION" is a partition provided for the purpose of protecting life by furnishing an area of exit or refuge, and having a fire resistive rating of at least three hours (Section C26-64.0 Administrative Code).

14. A "FIREPROOF PARTITION" is a partition, other than a fire partition, provided for the purpose of restricting the spread of fire, and having fire resistive rating of at least one hour (Section C26-70.0 Administrative Code).

15. A "FIRE WALL" is a wall provided primarily for the purpose of resisting the passage of fire from one structure to another or from one area of a structure to another, and having a fire resistive rating of at least four hours (Section C26-68.0 Administrative Code).

C. APPLICATION AND PERMIT

16. APPLICATION AND PERMIT REQUIRED. No ventilating or air conditioning system shall be installed or altered until an application has been filed and approved by the Borough Superintendent and a permit to do the work has been obtained, except that:

I. Voluntary installation of air conditioning units without ducts, where no part of a structure will receive a greater load than is legally permissible.

II. Voluntary ventilating systems or air conditioning systems which serve only one story of a building, and which do not reduce the existing ventilation of any room or space below that required by law.

-may be installed without a permit provided such installations are not made within public hallways, passageways or stairways, that floors, roofs, walls or fire resistive partitions will not be pierced, and that lot line windows are not used for ventilation or air conditioning.

17. INSTALLATION IN CONNECTION WITH ACTIVE NEW BUILDING OR ALTERATION APPLICATION. *The plans for any ventilating system or air conditioning system may be filed as part of and be included in any new building or alteration application or as a subsequent amendment to such application while it is still active. Where a ventilating or air conditioning system is a required system and the plans are to be filed as an amendment, the plans and the application filed with the new building or alteration application shall bear a prominent note, "Plans of ventilating or air conditioning system will be filed as an amendment and approval obtained before work on such system is started."*

18. INSTALLATION IN EXISTING BUILDING. *A separate alteration application shall be filed for the installation or alteration of a ventilating system or air conditioning system in an existing building not in process of alteration.*

19. FIGURING COST OF ALTERATION. *In estimating the cost of an alteration which requires a permit to install, the fee to be paid to the department shall include the cost of all ventilating and air conditioning equipment called for in the application and plans filed in the department, and the cost of the installation thereof.*

20. SCOPE OF PLANS. *The plans filed shall show the location and dimensions of all ducts, location of fire dampers, motors, fans, filters, or where such equipment is in an assembled unit, the type, capacity, approximate size of the unit and maximum weight, the methods of supports of ducts, fans and motors, locations of smoke detecting devices and all other pertinent data. The materials of ducts, duct lining, duct insulation and enclosure, and fire retarding materials shall also be shown on plans except where such data is furnished by filing copies of the pertinent clauses of the specifications. For required ventilating systems, the plans shall also show the fresh air intake, the location, size and openable area of all windows, the size of yards and courts on which windows open, the index for ventilation including the basis of computation, and the amount of air to be exhausted or provided for each room or space, the capacity in cubic feet per minute at a specified static pressure of each fan and the horse-power of each fan motor, and such additional matter as the superintendent may require. Where any device is required to be of an approved type, the type and the manufacturer's name shall be given.*

21. FILING APPLICATIONS. *Applications for the approval of ventilating and air conditioning installations shall be filed by registered architects or licensed professional engineers. Where no structural work is involved such applications may be filed by a person qualified to design ventilating and air conditioning systems acceptable to the borough superintendent. Such person shall file Statement, Form B (Form No. 18) and state his qualifications. Under the term "structural work" shall be included the piercing of any wall or partition that is required by law to have a fire resistive rating. Application for the approval of a minor alteration may be made on a building notice provided that, if the applicant is not a registered architect or professional engineer, he shall state his qualifications on Statement, Form B, as required above.*

22. AMENDMENTS TO PLANS. *Before any departure from approved plans are made in the construction of any building, amendments and plans shall be filed and their approval obtained as required by Section C26-178.0 of the Administrative Code. This requirement applies to the ventilating and air conditioning work, as well as to structural and architectural.*

23. CERTIFICATION OF PLANS. *The applicant who filed the ventilating and air conditioning application or amendment shall certify:*

I. that if the work is carried out in accordance with the plans and specifications filed by him, it will comply with the requirements of all applicable laws and rules.

II. that the plans filed by him agree as to the arrangement of rooms and windows with the layout of the building or, in the case of a new building or alteration, with the architectural plans.

Unless time permits a more complete examination, the examiners shall check the plans to make certain that all fire protection devices are shown or called for, and then place the approval stamp on the plans. The final approval will be issued only after the system has been installed, inspected and tested, as required by Rules 45 and 47, and the report required by Rule 48 has been filed.

D. CONSTRUCTION DETAILS

24. MATERIALS OF DUCTS.

a. Ducts shall be constructed entirely of incombustible materials such as iron, steel, aluminum, or other material approved by the Board of Standards and Appeals. Their construction shall comply with the "Standards of the National Board of Fire Underwriters for the Installation of Air Conditioning and Ventilating Systems of Other Than Residence Type" (NBFU Pamphlet No. 90-A), or the "Standards of the National Board of Fire Underwriters for the Installation of Residence Type Warm Air Heating and Air Conditioning Systems" (NFBU Pamphlet No. 90-B), whichever is applicable. Ducts may be part of the building structure if their construction consists of not less than three-quarter inch thick cement or gypsum plaster on metal lath applied to incombustible supports, except where combustible supports are permitted by the Administrative Code.

b. Ducts used to exhaust interior cooking spaces shall comply with Section C26-265.0-b of the Administrative Code.

c. Vibration isolation connectors shall be made of woven asbestos, but convectors not exceeding ten inches in length may be of approved flameproof fabric, except in kitchen exhausts where they shall be woven mineral fibre having a smooth, cleanable surface.

25. LININGS FOR DUCTS. *Only fire resistive materials approved by the Board of Standards and Appeals shall be used to line ducts. Pending the approval of such materials by the Board, such materials listed in the Fire Underwriters' Laboratories, Inc., Fire Protection Equipment List, under the heading "Building Materials, Hazard Classification (Fire)" may be used.*

26. SUPPORTS OF DUCTS.

a. Except as otherwise hereinafter provided ducts shall be supported from the sides of concrete beams by expansion bolts or hung from the steel reinforcement of concrete floor and roof construction, or from concrete slabs by devices approved by the Board of Standards and Appeals. The use of expansion bolts in cinder concrete slabs is prohibited. Where supported from wood beams, duct supports shall be secured to their sides by lag screws, except that nails may be used where the cross-sectional area of the duct does not exceed two square feet.

b. Ducts shall not be hung from or supported by suspended ceilings except that ducts whose cross-sectional area does not exceed two square feet may be hung directly from or be directly supported by the purlins of a suspended ceiling provided such purlins are hot rolled one-and-one-half inch by one-eighth inch angles or one-and-one-half inch hot rolled channels weighing 0.85 pounds per foot.

c. For ducts not exceeding two square feet in area, hangers shall be metal not less than one-sixteenth inch in thickness. For larger ducts, hangers shall be metal not less than one inch by one-eighth inch or its equivalent area. Hangers shall be fastened to the sides of the duct and for ducts over forty-eight inches wide, the hangers shall be brought down the sides and turned under and fastened to the bottom of the duct also. Where the cross-sectional area of a duct exceeds eight square feet, it shall be braced by angles or other adequate reinforcement around all four sides of the duct, spaced not more than four feet apart. Where the cross-sectional area of a duct exceeds ten square feet, hangers shall be spaced not more than four feet apart along the length of the duct. A vertical duct shall be supported at each floor level by angels not less than one inch by one inch by one-eighth inch fastened to opposite sides of the duct. Sections of ducts containing filters, coils, or fans shall be provided with metal framing and hangers of adequate strength to support such equipment. Provision for such support shall be shown on the plans.

27. ENCLOSURE OF DUCTS.

a. Ducts passing through two or more floors, or through a floor and a roof, and having a cross-sectional area of more than two square feet shall be enclosed in shafts complying with the requirements of sub-article 5 of Article 11, Chapter 26 of the Administrative Code. Where the cross-sectional area is two square feet or less, such ducts may be fire-retarded with metal or gypsum lath and one inch of cement or gypsum plaster, or with other material of equivalent fire resistance, placed as close as possible to the duct with a close fitting sleeve in the floor and the space between the duct and the sleeve filled solidly with inert incombustible material for the full depth of the floor. In multiple dwellings, the enclosures of ducts shall comply with the requirements of the Multiple Dwelling Law where such requirements are more restrictive.

b. Ducts installed for the ventilation of new water-closets or kitchenettes in old-law tenements or converted dwellings shall be enclosed as follows: Any side of a duct exposed in a room or in a shaft shall be covered with one inch thick cement mortar on ribbed metal lath. Any side of a duct placed against an existing wood lath and plaster partition shall be protected at such partition by plaster boards one-half inch thick with joints pointed. Any side of a duct which will be enclosed by a new stud partition shall be covered either with one-inch thick cement mortar on metal lath or two one-half inch thick layers of plaster board with joints pointed or staggered. Ducts installed within shafts having a one hour fire resistance rating need not be separately enclosed. No fire retarding required between the adjacent sides of ducts. Where the ducts pass through the floor or roof construction they shall be protected with not less than two layers of one-half inch thick plaster boards or one-inch thick cement mortar. All the spaces between a duct and any adjacent floor beams or roof beams must be filled with either of the above materials. The details of the enclosure of such ducts are shown on drawing of departmental standards dated May 11, 1938.

c. Ducts which pass through a boiler room and which serve other parts of a building shall be made smoke-proof and shall be enclosed in materials having a one-hour fire resistive rating where they are located within the boiler room.

28. OPENINGS IN VENTILATING SHAFTS. *Where a duct serves two or more floors, approved fire dampers shall be provided at each direct outlet from a shaft on a supply system or on each direct inlet to a shaft on an exhaust system and in each branch duct at its junction with a shaft or a vertical duct in a shaft, except that fire dampers shall be not required in branch ducts having a cross-sectional area of less than twenty square inches, which supply only air conditioning units*

discharging air at not over four feet above the floor. Where a duct enters a shaft in which the flow of air exhaust is upward and the air flow and the shaft run directly to the roof, if the cross-sectional area of the branch duct is not more than fifty square inches, and it is carried up inside of the shaft for a distance not less than twenty-two inches, no damper shall be required. A duct which pierces the first floor only and which is not enclosed in a shaft shall be provided with an approved fire damper at the floor opening.

29. OPENINGS FOR VENTILATION IN WALLS AND PARTITIONS.

a. Openings in Fire Walls. No duct shall pierce a fire wall in which there is an opening used as a horizontal exit. An opening for ducts in a fire wall through which there is no horizontal exit shall not exceed forty-eight inches in greatest dimension. The distance between any two openings shall be not less than three feet. The duct through the fire wall shall be constructed, and the openings shall be protected by approved fire dampers on each side of the wall, as shown on Figures No. 2 and No. 3 of the National Board of Fire Underwriters' Pamphlet No. 90-A, published June, 1957.

b. Openings in Fire Partitions. In a fire partition an opening not exceeding fifty square inches is permitted without fire dampers when required for the passage of ventilating ducts, provided such ducts convey air for ventilation or air conditioning by means of forced circulation. In such a partition there may be openings for ventilating ducts, each not exceeding forty-eight inches in greatest dimensions, provided the openings are protected by approved fire dampers. The distance between any two openings shall be not less than three feet, unless special permission is secured from the superintendent. The ducts shall be constructed according to the standards of the National Board of Fire Underwriters Pamphlet No. 90 of August, 1952 (Section C26-661.0 of the Administrative Code). Such standards are also shown on Figures No. 2 and 3 of Pamphlet No. 90-A published by the same organization in June, 1957, except that only one damper will be required at each opening.

c. Openings in Partitions Enclosing Public Hallways. In a partition enclosing a public hallway, openings for ventilating ducts shall not exceed three square feet in area and each such opening shall be provided with an approved automatic fire damper. This requirement shall not apply to structures used exclusively as schools in which regular supervised fire drills are held (Section C26-662.0 of the Administrative Code).

d. Ducts Passing Through Walls. Where a duct passes through any fire wall or fire partition it shall be provided with a properly constructed sleeve and the space between the sleeve and the masonry shall be tightly caulked with asbestos rope and finished with fire clay.

30. VENTILATING DUCTS AT STAIRWAY EXITS.

a. At Fire Tower. No duct shall penetrate a fire tower.

b. Openings at Passageways. No duct shall open on a required stair enclosure except in the lobby or passageway from the stairs to the street or other exterior exit, where openings not exceeding three square feet in area are permitted provided each opening is protected by an approved fire damper. The distance between any two openings shall not be less than three feet (Section C26-664.1 of the Administrative Code).

c. Enclosure at Passageways. A duct opening on a lobby or passageway shall be enclosed in material having the same fire resistive rating as the stair enclosure for a distance of at least ten feet from the stair enclosure, or to a partition having at least a one-hour fire resistive rating with a fusible link damper where the duct passes through such partition. The thickness and fire resistive rating of the material used to enclose the ducts shall be the same as that required for the protection of structural steel as specified in Section C26-575.0 of the

Administrative Code and as contained in the rules and approvals of the Board of Standards and Appeals. No openings shall be permitted in the fireproofing material enclosing the ducts within such distance. Branches entering the duct within this distance shall also be covered with material having a fire resistive rating the same as that required for the stair enclosures and as specified for the ducts opening on the passageway or lobby (Section C26-664.1 Administrative Code).

d. Crossing Exit Passages. A duct which crosses a public hallways, stair enclosure or passageway from stair to the outside of the building shall be completely separated from such hallway, stair enclosure or passageway by ceiling construction, or completely enclosed with materials, each having the same fire resistive rating as the enclosure of the hallways, stairway or passageway.

Note: The fire resistive ratings of stair enclosures to which reference is made in this Rule No. 30 are those prescribed by subdivision h of Section C26-292.0 of the Administrative Code, and the materials protecting such ducts shall have the same fire resistance as the stair enclosures for the various classes and uses of the buildings.

31. DUCTS IN CEILINGS AND FIREPROOFING.

a. Ducts within Fireproofing of Steel. Ducts shall not be installed in such a way as to impair the effectiveness of the fireproofing around steel or iron structural members. Ducts shall not be placed between the fireproofing and the members protected but they may be placed between beams or joists protected by a fire resistive ceiling.

b. Openings in Ceilings. Openings for ventilation or air conditioning may be made in ceilings which are required to have a fire resistive rating, or in ceilings which form part of an approved floor or roof assembly, only if the following conditions are complied with: the openings are provided with fusible link dampers, they do not exceed one hundred and forty-four square inches in area, and the combined area of such openings for ventilation does not exceed two percent of the area of the ceiling in which the openings are placed. A space of at least twelve inches shall be provided between openings. Ducts located in concealed roof spaces in Class 3 buildings shall be provided with an approved damper at each point of entry and exit and at each fire stop of such concealed roof space. Exhaust openings from such space shall be provided with fusible link registers.

c. Openings for Fire Dampers. Necessary openings in ceilings giving access to fire dampers shall be not greater in area than four hundred square inches and shall be protected by self-closing doors having a fire resistance equivalent to the ceilings in which the openings occur.

32. FIRE DAMPERS.

a. Approved Dampers. Until such time as the Board of Standards and Appeals approves fire dampers it shall be permissible to install fire dampers manufactured in accordance with the standards of the National Board of Fire Underwriters (NBFU Pamphlets 90-A and 90-B) on condition that the installer of the system certifies that the damper conforms to such standards. Such certificate shall be filed at the completion of the installation. Dampers shall close in the direction of air flow. Suitable access doors shall be provided to make all fire dampers in ducts accessible for inspection and servicing.

b. Dampers in Kitchen Ducts. In ducts serving kitchen volume dampers may be located only at the range hood.

c. Installation of Dampers. Fire dampers shall be so arranged that the disruption of the duct will not cause failure to protect the openings through the partitions or walls.

33. TERMINATION OF DUCTS.

a. *Exhaust Ducts.* An exhaust duct to the outer air shall terminate in an exterior wall adjoining street, yard or court, at least ten feet above the sidewalk or ground or above the roof, except that this requirement shall not apply to exhaust ducts serving only the cellars in buildings existing on the day these rules become effective. An exhaust duct shall terminate at least ten feet from any window in another building or from any window in a residential portion of the same building, or from any fire escape, exterior stair, or from a fire tower balcony. No exhaust duct or fresh air intake shall open into a fire tower court which is an inner court, or into an adjoining property.

b. *Opening Protectives.* A duct opening in an exterior wall which is so located that it is required to be protected by an opening protective having a three-quarter hour fire resistive rating by Section C26-649.0 of the Administrative Code shall be provided with an approved fire damper.

c. *Fresh Air Intakes.* Fire dampers shall be provided at fresh air intakes except where in the opinion of the borough superintendent the fire hazard is slight.

34. *FANS, MOTORS AND OTHER EQUIPMENT.* Proper support shall be provided for all heavy equipment such as individual air conditioning units, coils, fans and motors. The present structural parts of a building shall be used to carry such equipment only if the total load carried by each support will not produce stresses in such support exceeding those permitted by the Building Code. When attached to wood beams, suspended fans or motors shall be supported by steel angles or channels attached to the wood beams by lag screws or bolts.

35. *WATER RISERS.* Water risers may be placed within stair enclosures, provided the risers do not encroach upon or reduce the dimensions of the required stair platforms or landings. No water risers are permitted in elevator shafts.

36. *CLEARANCE FOR EXITS.* No air conditioning unit, duct, duct enclosure, motor, fan, water riser or any other part of any ventilating system or air conditioning system shall be placed or installed so as to obstruct an exit to a fire escape, nor shall such equipment be placed in a fire tower or on balcony or vestibule leading to same, or obstruct or reduce below legal width or height any hallway, passageway, stairway or any other means of egress or the access thereto. No self-contained air conditioning unit, nor any part of an air conditioning system containing a refrigerant shall be placed within any entrance hall, public hallway, passageway or stairway, or public vestibule in violation of Article 18 of Chapter 19 of the Administrative Code which governs refrigerating systems.

37. *AIR FILTERS.* Air filters shall be of approved type that will not burn freely or emit large volumes of smoke or other objectionable products of combustion when attacked by flames. Liquid adhesive coatings used on air filters shall have a flash point not lower than 325 degrees Fahrenheit, as determined by Cleveland open cup tested. Air filters and their cleaning and maintenance shall conform to the standards of the National Board of Fire Underwriters for the Installation of Air Conditioning, Warm Air Heating and Cooling and Ventilating Systems (NBFU Pamphlets Nos.90A and 90B).

38. *FIRE PROTECTION.*

a. *Manual shut-off.* Each installation shall be equipped with a manual emergency stop, located at a conveniently accessible point, for quick shutting down of all fans in case of fire.

b. *Thermostatic shut-off.* Where a mechanical ventilating system is installed to ventilate the business or public portions of a structure, other than water closet compartments, and the ventilating system is used to ventilate spaces on more than one floor by means of recirculation of air whether or not the system of ventilation is required by law, the fans of the

system shall be arranged to shut down automatically by means of an approved thermostatic device or other adequate fire detecting device approved by the Board, whenever the temperature of air in the system exceeds 125 degrees Fahrenheit. For this purpose an approved thermostatic device which cannot be set to operate at a temperature in excess of 125 degrees Fahrenheit shall be located in the system at a suitable point in the return air duct, ahead of the fresh air intake. The thermostatic device shall be either of a type that is manually reset, or the control system shall be so arranged that some manual operation is required to restart the fan after the thermostat has operated. Where such ventilating systems are installed in buildings equipped with automatic sprinklers or manual or automatic fire alarm systems located on the same floor or floors as the ventilating system, provision shall be made to stop the fans automatically when the sprinkler or fire alarm systems operate (see Section C26-259.0-b of the Administrative Code).

39. **SMOKE DETECTORS.**

a. *Where required.* Effective means for detecting and controlling the spread of smoke in a ventilating or air conditioning system by stopping the fans of the ventilating system shall be provided under the following conditions:

I. *Where a mechanical ventilating or air conditioning system with recirculation of air from one space to another is used to ventilate an entrance hall, lobby or passageway from the stairs or elevators leading to a street or to the exterior of a building, except where a separate ventilating system is provided for the lobby, so constructed that no air is recirculated from the lobby to spaces outside of the lobby (see Section C26-259.0-c and C26-644.1 of the Administrative Code).*

II. *In a public building, as defined in Section C26-235.0 of the Administrative Code, except schools in which regular, supervised fire drills are held, where a ventilating system or air conditioning system with recirculation of air from one space to another is used to ventilate spaces on more than one story (see Section C26-259.0-c of the Administrative Code).*

III. *Where there is an opening in a fire partition to serve a ventilating or air conditioning system whether or not protected by a fire damper (see Section C26-661-c of the Administrative Code).*

IV. *Where a duct used for ventilating or air conditioning passes through a fire wall.*

b. *Where located.* Photo-electric smoke detecting devices shall be located in the main supply duct on the down stream side of the filters, so located as to operate reliably in case of smoke in any part of the air stream. The sensitivity of the smoke detecting device shall be such that a reduction of less than four percent in light beam intensity will not result in operation. The device shall operate whenever there is a reduction in the clear beam light intensity not exceeding two percent per foot of length of the light beam, or a maximum of thirty-six percent total light cut-off. Devices shall be so installed as to minimize the possibility of operation due to accumulation of dust, deterioration of the equipment, fluctuation in electric current supply or to any other condition in system operation not associated with fire or smoke (see Section C26-259.0-c of the Administrative Code).

Smoke detecting devices not actuated by photo-electric cells shall be placed in locations prescribed by the Board of Standards and Appeals and, in the absence of a ruling by the board, the locations recommended by the manufacturer.

c. *Alarm signals required.* Smoke detection equipment shall be arranged so that audible or visual signals will indicate any condition which would interfere with proper operation of the

smoke detecting equipment. The smoke detecting devices shall control the spread of smoke by stopping the ventilating fans and when actuated shall set off an audible alarm and a visible signal indicating the location of the device (see Section C26-259.0-c of the Administrative Code).

d. Approved types required. All smoke detecting devices shall be of types approved by the Board of Standards and Appeals and shall be installed in accordance with the conditions of the approval and rules of the board. In the absence of such rules promulgated by the board these rules shall govern (see Section C26-259.0-c of the Administrative Code).

e. Number of devices required. The smoke detecting devices installed shall be of sufficient number or capacity to adequately scan the cross-section of the duct at the point where they are installed. Measuring screens by means of which they can be adjusted to the required sensitivity and their adjustment frequently tested shall be made available.

40. LOCAL SUPERVISORY ALARM SYSTEM. *Wherever smoke detectors are required by these rules, arrangements shall be made to give a distinctive visual or audible signal at a local supervisory control board when any condition arises which would interfere with the proper operation of any smoke detecting or fan shut-off devices, or when any defect occurs in the detector, wiring or connections, and shall show the location of any such device whose proper functioning has been interfered with by any cause. Such control board may be included in a control board serving another alarm system in the building. It shall be located in the office of the engineer of the building, or in similar location where it can be under the surveillance of an employee, who shall be trained to take proper action on the receipt of a trouble signal at all times while the building is occupied.*

41. Wiring. *Thermostatic shut-offs for fans, smoke detectors, signal apparatus, actuating devices and the local supervisory control board shall be connected and operation on 120 volt closed electric circuits, and be installed in accordance with the Interior Fire Alarm Rules of the Board of Standards and Appeals and with the Requirements in Relation to the Installation of Automatic Thermostatic Fire Alarm Systems of the Fire Department insofar as such rules and requirements are applicable.*

The thermostatic shut-offs and smoke detecting system, including the fan actuating devices, signals and alarms shall be installed in strict accordance with the manufacturer's wiring diagrams and instructions. All wiring shall be in rigid steel conduits, except that not more than three feet of flexible metallic conduit may be used between a rigid conduit and a detecting device or other apparatus. Conductors shall be not less than No. 16 B. and S. gauge copper wires having rubber insulation.

42. ENCLOSURES OF MACHINERY.

a. Machinery Rooms inside Buildings. Where, for purposes of ventilation or air conditioning, air is being conveyed from one floor to another floor in any building, or the system serves more than a single room in public buildings, including schools, libraries, exhibition buildings, assembly halls, dance halls, theatres, hospitals, asylums, sanitariums and jails, the fans and air handling equipment connected thereto, such as washers, filters and heating and cooling units, shall be located in rooms cut off from other portions of the building by partitions having a fire resistive rating of not less than one hour with fireproof self-closing doors having a fire resistive rating of three-quarter hour at all openings. This requirement shall not apply to fan assemblies and their accessories used in connection with heating or chilled water coils, nor to packaged air conditioning units unless their enclosure is required by Article 18 of Chapter 19 of the Administrative Code or the rules of the Fire Department.

b. Machinery on Roofs. The housing of all ventilating equipment on the roof of any structure shall be constructed of incombustible materials. The enclosure of any ventilating or air conditioning apparatus, including assembled units, exceeding five feet in any dimension, shall have one hour fire resistive rating as required by Section C26-671.0 of the Administrative Code.

E. REQUIRED VENTILATING OR AIR CONDITIONING SYSTEMS EXHAUST AND RECIRCULATION

43. REQUIRED EXHAUST. Required exhaust may be accomplished by raising the pressure within an air conditioned space with consequent leakage through doors and windows or by drawing the vitiated air from conditioned spaces into the return air duct system of an air conditioning unit.

44. RECIRCULATION OF AIR. Air which has been exhausted may be reconditioned by air conditioning apparatus and recirculated as equivalent fresh air, except where drawn from a mortuary or room or space where an objectionable quantity of flammable vapors, flyings, dust or objectionable odors are present. The recirculated air must be supplemented by fresh air which is at least twenty percent of the air required by the ventilation index. Air drawn from an operating room shall not be recirculated to other parts of a building. A ventilating or air conditioning system designed for recirculating air shall be so designed and operated that when the air conditioning process is not in operation, the amounts of air required by the ventilation index for exhaust and for fresh air shall be provided.

F. TESTS OF AND REPORTS ON VENTILATING SYSTEMS

45. INSPECTIONS AND TESTS AT COMPLETION. Upon the completion of a required ventilating and air conditioning system a registered architect or professional engineer or other person having not less than five years' experience supervising the installation of ventilating and air conditioning systems shall inspect the system as installed in any building to check its compliance with all applicable laws and rules. Tests of the equipment shall also be conducted in the presence of such person to ascertain the amount of intake and exhaust for each room and to check the proper functioning of all devices.

46. INSPECTIONS AND TESTS OF FIRE DETECTION DEVICES. The owner shall maintain the thermostatic shut-offs, smoke detecting devices and the local supervisory alarm system in proper operating condition at all times. He shall have such equipment tested at least monthly, employing a competent person or agency to perform this work and shall require that any defect discovered shall be immediately corrected. He shall order the engineer or other person in the building to test the alarm and trouble bells daily, and to keep a written record of such tests.

47. POWER OF SUPERINTENDENT TO ORDER TESTS. The borough superintendent is empowered to order a test of a ventilating or air conditioning system, or any part thereof, when there is any doubt that the system or any of its component parts operate as required by applicable laws and rules. Such tests shall be conducted in the presence of representatives of the borough superintendent and under the direction of a person having qualifications prescribed in above Rule No. 45, who shall make a report of the results of the test to the borough superintendents. All tests and reports thereof shall be made at the expense of the owner.

48. REPORT ON COMPLETION OF TESTS. The registered architect or professional engineer or other qualified person in whose presence the tests of ventilating and air conditioning systems are made, upon completion shall file a certificate that the ventilating and air conditioning

system, including fire dampers, has been inspected by him and meets the requirements of all applicable rules and laws. His report shall also state whether or not the test shows that the amount of supply and exhaust of air complies with such laws and rules and that all smoke and fire detection devices are operating as required by these rules and the law.

49. OWNER'S STATEMENT. A statement shall be filed by the owner of the structure that the system of ventilation will be kept in continuous operation at all times during the normal occupancy of the structure and that if any smoke or fire detection devices have been installed he will employ a competent person or agency to frequently inspect and test such devices and the fan shut-offs actuated by them, and that he will promptly make any necessary adjustments and repairs to keep the ventilating system and all its smoke and fire detection devices and fan shut-offs in proper operating condition.

G. ISSUANCE OF CERTIFICATE OF OCCUPANCY

50. Any application in connection with which a required ventilating or air conditioning system has been installed shall not be signed off as completed and no certificate of occupancy shall be issued unless such system has been installed and tested in accordance with these rules and the required certificate of inspection and test, and owner's statement have been filed. However, a temporary certificate of occupancy for a part of a building may be issued if a report of satisfactory tests relating to that part of the building is filed and the owner's statement has been submitted.

H. SPECIFIC APPLICATIONS

51. VENTILATION OF WATERCLOSET COMPARTMENTS. Hereafter, the use of any device which returns exhausted air after passing through activated carbon filters is not acceptable as providing required ventilation for a watercloset compartment for which a mechanical system of ventilation is required by either the Administrative Code or the Multiple Dwelling Law.

I. EXCEPTIONS

52. Where there is a practical difficulty in carrying out the strict letter of the provisions of these rules, the Borough Superintendent may vary such provisions for a specific installation, provided the necessary safety is secured and the variance is not in conflict with the Administrative Code.