

# CITY CLERK'S DEPARTMENT Access to Information & Privacy

File No.: 04-1000-20-2019-682

December 19, 2019

s.22(1)

Dear <mark>s.22(1)</mark>

Re: Request for Access to Records under the Freedom of Information and Protection of Privacy Act (the "Act")

I am responding to your request of November 1, 2019 for:

Equivalency reports and alternative solution records for 650 West Georgia Street, from January 1, 1974 to December 31, 1994.

All responsive records are attached.

Under section 52 of the Act, and within 30 business days of receipt of this letter, you may ask the Information & Privacy Commissioner to review any matter related to the City's response to your FOI request by writing to: Office of the Information & Privacy Commissioner, info@oipc.bc.ca or by phoning 250-387-5629.

If you request a review, please provide the Commissioner's office with: 1) the request number (#04-1000-20-2019-682); 2) a copy of this letter; 3) a copy of your original request; and 4) detailed reasons why you are seeking the review.

Yours truly,

Barbara J. Van Fraassen, BA Director, Access to Information & Privacy

Barbara.vanfraassen@vancouver.ca 453 W. 12th Avenue Vancouver BC V5Y 1V4

\*If you have any questions, please email us at <u>foi@vancouver.ca</u> and we will respond to you as soon as possible. Or you can call the FOI Case Manager at 604.871.6584.

Encl.

:ma

H. H. ANGUS & ASSOCIATES LTD. - CONSULTING PROFESSIONAL ENGINEERS 1127 LESLIE STREET-DON MILLS, ONTARIO MOC 216 TEL: 449-5050

> October 2, 1974. Our File No. 2319

Armand Konig, Fire Chief, Fire Dept. City Vancouver, 729 Hamilton St., Vancouver 3, B.C.

Re: Vancouver Centre Project

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Gentlemen:

We have pleasure in confirming the substance of a meeting on Monday September 30th at your offices with the following present:

Chief Davis - Vancouver City Fire Dept. Lft. Johnson - """" R. Dumallo - """" R. Shigeishi - H.H. Angus & Associates Ltd.

The meeting was convened at our request to formally resolve the question of the need to provide emergency power to the combined standpipe pump to be located in the basement of this project.

The local mechanical contractors dealing with this project were of the opinion that they had approval to proceed without emergency power. Their letter of September 18, Ref. V6J 4L7, and an approved drawing dated August 30th stamped by Lft. Johnson and R. Dumallo, were presented to the meeting and reviewed.

We confirm your decision that this pump must be provided with emergency power to comply with your City bylaw and the N.B. Code 1970, Art. 3.2.6.11.C.

It was specifically noted by your staff that the stamped approved drawing required compliance with that law and that you were very surprised that this question was raised at all.

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rmand Konig,

Page 2

May we take this oportunity also to confirm that you 1 accept in principle a combined system presented in a ketch form and identified as "Alternate Fire Protection System revised September 24th", providing that the sizes of orifice plate required are identified on the drawings. We are proceeding with the production of a revised set of drawings that will incorporate these revisions. These will be presented to you for examination and approval shortly.

Yours very truly,

H.H. ANGUSY& ASSOCIATES LTD. R.

.cc: R. Gray - H.H. Angus J. Hole - Lockerbie & Hole J. Burnett - Foundation Co. Canada Ltd. A. Cooke - Automatic Sprinkler Ltd. Bill Denier - Vancouver City Develop. Ltd. Hugh Thomas - Bank of Nova Scotia.

RFN/mr

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READ JONES CHRISTOFFERSEN LTD., 1161 MELVILLE ST., VANCOUVER, C.C., VGE 2X7 / 684-8594

DEPT. PERMITS & LICENSES Reg. No. 25214 Rel'd To: 0 N By: 5 C RECEIVED

JUL 18 1974

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Diary

July 17, 1974

The Building Inspector, City of Vancouver, 453 West 12th Avenue, Vancouver, B.C.

Attention: Mr. D. A. Matheson

Dear Sir:

Re: Parking Garage Renovations Seymour Street for Vancouver Centre Development Ltd., Vancouver, B.C. Our Job No. 1820-1

The existing garage was designed by Dominion Construction's engineers to the requirement of Vancouver Building Bylaw #4193, including an allowance for 2 extra floors.

The City of Vancouver may require such extra floors to be built. If so, the existing structure will be good in the east-west direction but will require new earthquake resisting elements in the north-south direction to meet 1970 National Building Code requirements. This, however, is not a concern today, it is a possible future concern.

The stair alteration provides an exit from the main Vancouver Centre project. As such it should provide security under earthquake comparable to that provided by a stair designed to the 1970 National Building Code. No  $S \sim 15$ 

C.

In my opinion these alterations shown on our drawing provide such securi

Yours truly,

READ JONES CHRISTOFFERSEN LTD.

Ľ C. Peter Jones, P. Efg. Vice President.

CPJ:sbgw

CONSULTING ENGINEERS . PARKING PLANNERS

VICTORIA VANCOUVER CALGARY EDMONTON WINNIPEG TORONTO MONTREAL

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**City of Vancouver** 



Fire Department: 900 Heatley Avenue, Vancouver, British Columbia, Canada V6A 3S7, (604) 665-3535

ARMAND KONIG

All correspondence be addressed to the Fire Chief

December 1, 1977

Utterter Gy O Coix FOR CHIEF BENIE

Mr. R. Johansen Operations Manager Vancouver Centre Development Ltd. P. O. Box 11503 Vancouver, B. C. V6B 4N7

Dear Roy:

Through discussions with Capt. Danbert re setting up our operational procedures for this complex, I would bring to your attention a need for a means of direct voice communication between the security desk (lobby) and the fire annunciator, control panel, in the room adjacent to service elevator, ground floor.

This additional communication link would be part of the fire alarm system and should be installed to meet code requirements.

As this building complex and the fire alarm system is presently fitted with firefighters' phones, may I suggest the simplest and an approved method of meeting this requirement would be to install a firefighters' phone at the security desk with the proper connection to the fire alarm panel.

In the interest of improving the Fire Department's operational capabilities within this complex, I would appreciate your cooperation and attention to this matter.

If you require further information please contact Capt. Danbert.

Yours truly, A. Konig

nnuu 55 in

A. Konig / Fire Chief

AK/pm

cc: Capt. Danbert

02+5/77

Christopher Ballyn Architect

Box 11551, Suite 3210 650 West Georgia Street Vancouver, B.C. V6B 4N8 Telephone (604) 687-1781 Telex Number 04-55341

September 14, 1977

Mr. Adrian Geraghty Building Inspector's Department 453 West 12th Avenue Vancouver, B.C. V5Y 1V4

Dear Mr. Geraghty,

TT PERMITS & LICENSES a To AG By:DU RECEIVE SEP 1 5 19/1 Init\_ Diary ..... DATE

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in own prolim file

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Re: Scotiabank - Vancouver Centre Project No. 1102-06

Further to our meeting in your office yesterday afternoon to discuss a proposed replanning of the 34th floor core in order to eliminate the elevator lobby doors I attach herewith a revised version of the sketch I left with you. On it you will note the changes you required to the partitions, doors and smoke exhaust have been incorporated. OK in principle subject she let to my neterions an

650 WCIEDOLA

I believe this new layout then meets with your approval.

Yours truly. Christopher/Ballyn

Ster in Rendering CB/cg Me his no live the Encl. Au my notes an due

8 82136 Doorg knish schedules a Curtain wall b CB wed Neept 6/10/27 City of Vancouver - FOI 2019-682 - Page 5 of 33



. . SHOKE SHAFT E 5 11 Đ\$ HR 2 NEW SMOKE EXHAUST DUCT 1.42 古色证 eloser + laton whether dign www. be normally whether dign www. be normal magnatice whether dign www. be normal magnatice open of clused by onwhere ATH FLOOR open of clused by onwhere ATH FLOOR have open device activated by ORE REPLANING delector to negot Scot JOB 1102-06 VSK (116) SCALE 1/8"=1-0" 17 4 bore 100.14 1997

Thormostat controlling heating cables shall be of the remote bulb type with a 10 foot long capillary tube, range between 30 degrees to 120 degrees F., 30 ampere 120/240 volt contacts which close when temperature falls below setting. A thermostat shall be installed inside building, with capillary tube strapped to pipe.

Thermostat shall be as manufactured by: (g)

Pyrotenax of Canada Ltd. - Cat. No. 8178

Each length of cable shall be checked for continuity, short circuits and grounds, after installation of heating cables and wire and before and after application of pipe insulation. Any damaged or faulty cable shall be replaced immediately. Heating cables shall be installed in accordance with the manufacturer's recommendations, using the manufacturer's approved terminating devices.

FIRE ALARM AND EMERGENCY COMMUNICATION SYSTEM 59. General

Provide necessary equipment for a complete integrated fire alarm and emergency communication system as shown on the Drawings and as specified herein. The system shall be C.S.A. and

U.L.C. approved. System Operation

Fire Alarm System

If, on any floor of the building, an alarm is caused by (b) actuation of any of the following devices:

pulling manual station

operation of an automatic fire alarm detector

- operation of a sprinkler flow valve
- operation of the kitchen hood system (space only)

operation of a smoke detector

the following shall occur:

An evacuation alarm will sound on all alarm bells

- on that floor only, and an alert alarm will sound on all alarm bells on all other floors and in service spaces.
- The evacuation alarm will consist of continuous sounding of the alarm bells for 5 minute period.
- The alertalarm will consist of 3, 5 second soundings with a 10 second pause between
- Immediately an alarm is sounded the zone will be recorded on remote annunciators.
- Fans shall be automatically turned off.
- The link on the hatch at the top of each of the two smoke shafts shall be released permitting these doors to spring open. Links to be supplied by others at 24 volt
- Trouble buzzer shall sound continuously after alarm has timed 'out' until devices or device which originated alarm have been reset.

11144 Citzer 4\*29

PROJECT 1102

PAGE 16A-65

Should any other zone be operated subsequent to the first zone, it shall be automatically annunciated and the bells will ring for another 5 minutes from time

Emergency Communications System shall operate as follows: Automatic silencing control of Fire alarm warning device

upon use of emergency paging system. Devices are to sound automatically after emergency page. Selective zone paging by lighted pushbutton located at main annunciator. Emergency all-call over all speakers simultaneously by operation of single lighted pushbutton or selector switch. Emergency floor telephones with facilities to communicate privately with main annunciator. Call in from any handset shall cause the respective light and chime

o: buzzer to operate.

The entire assembly shall be mounted in a standard 55-7200 Control Equipment Unelco cabinet. This cabinet shall be a free standing cubicle The front door of the cabinet shall have a durable baked on contempra brown enamel finish with top and bottom natural anodized aluminum trim. A full length monitoring window of unbreakable UPVC shall form part of that door and shall provide clear and complete presentation of all zones and functions of the system without the need of opening the door. The door shall be fur-

nished complete with a lock and two keys. Contacts for fan shut down shall be provided as indicated. They shall be of normally closed type. Fan bypass switches shall

be provided for each group of fans as indicated. Pilot lights shall be arranged on front of panel to indicate normal "power on" and "system trouble" complete with cut-

An alarm light and trouble light shall be provided for each off self restoring push.

zone in the system as well as a "lamp test switch". Circuitry shall be provided to cause a trouble buzzer in control panel and remote buzzers at annunciators to sound when an open circuit ground exists anywhere in system. Presence of such faults shall not cause a false alarm to be sounded.

Re-lamping shall be a simple operation that can be performed from the front of the unit without the need of removing any

panel section or without necessitating any special tool. Smoke detection control equipment shall be housed and in-

tegrated with the fire alarm controls. The control panel shall be designed to include the follo-(k)

wing:

Number of smoke detection circuits

Number of box (station) circuits Number of future box circuits (wiring, terminals

and space only)

Number of future signal circuits (wiring, terminals

and space only) Number of general alarm areas.

Number of fan shutdown contacts

Number of fan bypass switches

Voltage 120/240 - 3 wire - 60 Hz

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PAGE 16A-66

 A transformer shall be provided rated 600/120/240 volt single phase and shall be sized to continuously supply power for all Fire Alarm bell and trouble circuits and all smoke detection equipment. Transformer will be fed from emergency circuits.
 (m) A tuner and Muzak Interface shall be incorporated into the control equipment so that background music can be provided on the speakers in the Main corridor in the first basement, ground, second, third and garden areas.

(n) An AM-FM Tuner shall be a Rauland (SRX133) or approved equal, designed specifically for continuous duty service.

(c) It shall be completely transistorized for reduced power consumption and greater life expectancy. Tuners employing tubes, which require frequent replacement, will not be accepted.
(p) The AM portion shall have a tuning range of 550 to 1675 KC, a sensitivity of at least 10 microvolts for 20 DB signal-to-noise ratio, and a bandwidth of no more than 6 KC.

(q) The FM portion shall have a tuning range of 88 to 108MC, a sensitivity of at least 2 microvolts for 20 DE quieting (2.5 microvolts for 30 DE quieting), and a bandwidth of at least 400 KC.
(r) The frequency response shall be at least plus or minus 1 DE from 20 to 20,000 cycles, with distortion of less than 1 per cent at rated output.

(s) The Muzak Interface Panel to connect background music with emergency communication system shall be complete with switching to automatically silence all background music during an emergency and include balanced 600 OHM input matching transformer to accept Muzak from Bell Telephone lines.

Alarm Initiating Devices

(t) Manual pull stations shall be open circuit, pull lever type. They shall be type #470-Y.

(u) Automatic thermal detectors shall be mounted on suitable mounting plates with finish ring. Where shown in proximity to unit heaters, detectors shall be located at least 10 feet from such unit heaters and out of indirect heat. Detectors shall be located 5 feet from any air handling diffusers or grilles. Type \$581 rated at 135 degrees F. fixed temperature and 15 degrees F. per minute rate of rise, shall be used where normal temperature fluctuations exist, but ambient temperatures do not exceed 100 degrees F. Type \$584 rated at 190 degrees F. fixed temperature shall be used where violent temperature fluctuations exist, but normal temperatures exceed 100 degrees F, but do not exceed 150 degrees F.

(v) Sprinkler flow valves provided by the Contractor under Mechanical Division in sprinklered areas, shall be wired up and connected to fire alarm zones shown under this Division.

(w) Product of combustion detectors shall by pyrotronics #D1-2S for surface ceiling mounted or pyrotronics #DA-1 for duct mounting complete with duct castings and sampling tubes. The detector shall operate on the ionization principle and shall be activated by the presence of combustion products. The detector head shall be a plug-in unit containing two ionization chambers, amplifier-switching circuit and an indicator lamp. The unit shall contain no moving parts. One chamber shall be forsfire

PROJECT 11.02

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detection and the second chamber shall function as a reference, to stabilize the detector for changes in environmental temperature, humidity and pressure. It shall be possible to electrically check the detectors sensitivity as required. The measurement of detector sensitivity shall provide a precise electrical value as read on the test set meter. The amplifier switching circuit, in the detector head, shall be entirely solid-state. It shall operate with a detector line voltage 22VDC. The lamp in the detector line shall light to indicate the initiation of the alarm. It shall be possible to connect a remote lamp to the detector. The detector base shall have terminals for making all connection; no soldering shall be required. It shall be possible to secure the detector in the base with a concealed socket head screw to prevent unauthorized temperaing. If maintenance is required, the disassembled detector shall be capable of normal handling without causing damage to components, such as field effect transistors. Fan Shutdown

(x) Necessary double voltage relays required for fire and smoke alarm fan shutdown feature shall be provided. Relays shall be of normally energized multipole contact type with individual poles in a Mylar enclosure. Relays shall be grouped adjacent to Motor Control Centres or starters. Relays shall be connected into control circuits of starters under this Division and each pole identified by fan it controls.

Lobby Control Console

(y) The fire alarm annunciator panel shall be completely supervised for lamp burn out and shall be flush desk mounted in conjunction with the central control console manufacturer's design. Annunciation shall be 2 inch by 1/2 inch rectangular white with black lettering "Back-lit" indicators. The unit shall contain an F-24 trouble unit, a lamp failure/test lighted push button and a guarded switch to initiate evacuation alarm in all areas for 5 minutes. Carry a Cash Allowance of \$600.00 for graphic map showing floors, 2nd basement to 4th floor inclusive. Map: to be located on console,

(z) The fire alarm annunciator panel in the Engineer's office shall have the same number of zones, to be complete with trouble unit, a lamp failure/test lighted push button. The unit shall be completely supervised as mentioned in the previous paragraph. Panel shall be finished in "Anodized Bronze". Emergency Communication System

(aa) Both the emergency communications and fireman's telephone shall be completely supervised.

(bb) The supervisory controls for the above shall electronically monitor all external wiring to the emergency speakers and telephones for opens, shorts or grounds. An open short or ground on the external wiring shall illuminate the appropriate zone lamp at the annunciator and shall cause a trouble indication. (cc) The supervisory controls shall also detect connection faults to the pre-amplifier and power amplifier, failure of the audioamplifying circuitry, external microphone wiring from the master control unit to the pre-amplifier, and all indicating lamps on the master montrol unit. Any of these faults shall illuminate a troubl hamp and shall sound a trouble signal on the fire alarm system.

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(dd) The emergency communication system control panel shall be flush desk mounted in conjunction with the fire alarm annunciator. Selection of paging areas shall be by pushbuttons or selector switches which illuminate when operated. These illuminating type push buttons shall be square or rectangular. The lifting of a remote telephone handset shall cause a corresponding yellow lighted This button or selector switch when push button to illuminate. actuated shall put the console operator in direct communication with the calling telephone. The console shall also contain a telephone chime or buzzer and system busy light. Paging shall be via a hand held push to talk mike and cradle assembly with coiled retractible cord.

(ca) Areas to be individually selected:

Penthouse and Penthouse Mezzanine 34th floor to 19th floor incl. 18th floor to 2nd floor incl. Ground Floor First Basement Second Basement Stairways (all, top to bottom)	<ul> <li>1 pushbutton switch</li> <li>1 pushbutton per floor</li> <li>1 pushbutton per floor</li> <li>1 pushbutton</li> <li>1 pushbutton</li> <li>1 pushbutton</li> <li>1 pushbutton</li> <li>1 pushbutton</li> </ul>
Stairways (all, top to boutomy	- 1 pushbutton

#### The Console shall contain: (ff)

Lighted green pushbuttons for paging speakers. Lighted yellow pushbuttons for floor telephones. One lighted red pushbutton for signal silencing. One communication system power on light. One light for "Fire Alarm System Power "ON".

# Main Power Amplifier

(gg) Power amplifier shall be fully solid-state equal to Unelco Strom Model #1626 or Edwards 6701-024 with self protecting design using no protective circuits. Power output shall be 250 watts each at less than 1% distortion. Frequency response shall be 20 to 20,000 Hz + 1 db. Phase shift shall be linear and constant within ± 5 deg. From 150 MW to rated output. Input shall be 50 K unbalanced convertible to balanced bridging or balanced matching by Strom TB-1012, transformer. Standard output shall include 4, 8 and 16 OHM's as well as 25 V and 70 V. Provide plug-in paging

Telephone system power supply and control shall be Unelco mike pre-amplifer. (hh) Strom #PST-2061.

(ii) In all corridors and lobbies provide ceiling speakers com-Speakers plete with baffle and back boxes. In finished areas speakers shall be flush; in unfinished areas they shall be surface type. The baffle shall be 12" square fabricated of steel with an attractive metal grille perforated in a uniform geometric pattern. Firish shall be flat white with no screws or mounting clips showing.

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The speaker shall be 8 inch complete with matching transformer. Speaker shall be of a cone type low profile with a frequency response of 50 to 18,000 Hz rated at 12 watts continuous. Sound pressure level at 4 feet shall be at least 94 db with 1 watt input. . (jj) In all stairwells provide loudspeaker horns. These horns shall be #RPD-78 with a frequency response of 275 to 14,000 Hz, dispersion angle minimum of 105 degrees. The driver unit line matching transformer and power selector switch shall be mounted in a housing. It shall have a power rating of 15 to 20 watts (speech/music). The loudspeaker mounting assembly shall be furnished with horizontal and vertical adjusting bracket. Outdoor horn speakers shall be weatherproof. Floor Telephones

(kk) Remote telephone handsets shall be Northern Electric type designed for flush wall mounting and/or fire hose cabinet mounting as indicated on the Drawings. The handset and cradle assembly shall have a 5 foot coiled retractible cord. Cradle shall house DPST hookswitch. Where a flush mounted handset is indicated on the Drawings, the entire handset shall be mounted in a steel wall emergency phone box. Fabrication shall be of heavy gauge steel complete with a lockable hinged front door c/w break glass window (finish shall suit fire hose cabinet finish). Wiring

(11) Wiring shall be installed in accordance with recommendations of Manufacturer. Wiring for box circuits shall be No. 14 gauge, 600 volt, solid copper, one red and one black. Automatic detectors and manual stations shall be connected between red and black conductors at each outlet, and connected to the four terminal screws provided, red to red, and black to black. Wiring for signals shall be No. 14 gauge, 600 volt, solid copper blue insulation. Wiring for annunciators shall be No. 14 gauge, 600 volt, solid copper. Wiring for smoke detectors shall be No. 14 gauge, 600 volt, solid copper. Entire installation shall be done under supervision of Manufacturer. Telephone system wiring shall be Belden \$8761 of equal. Number 18 wire may be used for wiring of box circuits, annunciators and smoke detectors if allowed by special inspection.

Terminal Cabinets

(mm) The terminal cabinets shall be surface or flush with approximate dimensions of 18" x 18" x 4" and screw type indexed terminals. End of line devices on each fluor shall be mounted in these terminal cabinets.

Manufacturers Verification

(nn) Make a complete inspection of all installed fire alarm equipment including each and every component such as manual stations, signals, thermal detectors, products of combustion detectors and control equipment to ensure the following:

That the system is complete in accordance with Specifications

- That the system is connected according to U.L.C. requirements
- That the system is installed in accordance with Manufacturers recommendations.

PROJECT 1102

PAGE 16A-70

That the regulations concerning the supervision of components have been adhered to (e.g. stations, detectors, bells and chimes.) and are properly wired and supervised.

(co) Any subsequent changes necessary to conform to the above shall be done with technical advice supplied by the Manufacturer. (pp) During the period of inspection, the manufacturer shall be supplied 1 Electrician and 1 Helper together with any required equipment such as ladders and scaffolding.

(qq) On completion of the inspection, supply to the Architect a certificate, together with detailed inspection record sheets showing location of each device and certifying the test results per unit, confirming that the system is installed supervised and operates in accordance with the clause "Manufacturers Verification".

Costs involved in this inspection, including the Manu-(rr) facturer's cost, shall be included in the total Tender Price of Division 16.

(ss) Manufacturer shall instruct Owner's operating staff on operation and maintenance of system. Manufacturers

(tt) Systems and its components, including Control panels shall be as manufactured by:

Unelco Limited Edwards of Canada Ltd.

(uu) Smoke Detection System shall be as manufactured by:

Pyr-a-larm as supplied by Pyrotronics Canada Ltd.

(vv) Surface mounted ionization detectors shall be as manufactured by:

Pyr-a-larm - Model #D125

(ww) Receased gailing mounted detectors shall be as manufactured by:

Pyr-a-larm - Model #D12F

(xx) Duct type detectors shall be as manufactured by=

Pyr-allarm - Model #DA-1

60. BUZZER SYSTEMS Buzzer systems shall be provided as shown on Drawings and (a) as specified herein. System shall operate on 24 volts A.C. and shall consist (b) of the following components:

Buzzers shall be as manufactured by: Edwards No. 115-2 Unelco

PROJECT 110P

PAGE 16A-71

(c) Buzzers shall be mounted 12" below ceiling.

(d) Buzzers, shown to be flush mounted, shall be installed in a recessed box mounted behind a suitable stainless steel grills,
(d) Transformers shall be 120 volts to 24 volts, Edwards No.
998 mounted in ceiling space. Transformers shown in plaster ceilings shall be mounted behind access panels.

(f) Pushbuttons shall be mounted 6'-0" high on No. 147 plate and shall be as manufactured by:

Edwards No. 620 Unolco

61. ALARM & MONITORING SYSTEM

(a) A complete alarm and monitoring system shall be provided as shown on Drawings and as specified herein.

(b) The system shall include an annuaciator and necessary wiring.
(c) The operation and visual alarm shall be registered on annunciator when any of the following events take place:

- The oil thermometer of any power transformer

exceeds its safe operating temperature (total of 5) Automatic transfer switches are on the "emergency"

feed position (total of four)

An O.S. & Y valve has been operated.

- The oil level in the Diesel Day Tanks is low. (d) It shall be possible to silence the alarm by operating a silencing switch on the annunciator. Operation of silencing switch shall cause a light to be illuminated to indicate that the alarm has been silenced and the alarm condition still exists. Light associated with the particular device, that had operated, shall remain illuminated until a reset button corresponding to that device has been operated on annunciator.

(e) It shall be possible to separately de-activate the alarm for any individual device. In the de-activated position, a light shall be illuminated on the annunciator.

(f) Annunciator shall be flush-mounted on wall in Engineer's office and shall be in anodized bronze with non-breathing trim. It shall contain one indicating light for each item, and shall be provided for 25% spare capacity. Each light shall be operated by a suitably sized relay.

(g) The wiring for the O.S. & Y values shall be supervised,
i.e. the associated relays must be of the normally energized type.
(h) The O.S. & Y. values and high water alarms are provided
with suitable contacts by the Contractor under Mechanical Division.
They shall be wired up and connected to the annunciator under this Division.

(i) Wiring shall be installed in conduit.

(j) Annunciator shall be C.S.A. approved, capable of working on a 120 volt emergency A.C. supply and shall be as manufactured by:

Unelco Ltd. Edwards of Canada Ltd.

PROJECT 1102

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DIRECTOR R.V. Heber, P.Eng. J ASSISTANT DIRECTORS: K.D. Armstrong — License & Business Tax Division N. McClellan — Property Use Division R.L. Maki, P.Eng. — Permits & Inspection Division

#### June 8, 1983

Yoneda & Assoc. Consulting Professional Engineers 2629 Arbutus Street Vancouver, B. C. 963 3Y4

Dear Sir:

# Re: Your letter of May 30, 1983, Requesting the Deletion of Sprinkler in the Computer Room for Dennison Mines Ltd. at the Vancouver Centre. A Halon 1301 System Was Suggested as an Alternate Equivalent. 650 W. Georgia

NFPA 13 requires sprinklers in all spaces accessible to storage, therefore, it is a general requirement to include sprinklers in computer rooms. Concerned individuals have pointed out that water damage in computer rooms is not desirable. In general, we agree. To date however, the solution accepted has been the installation of Halon 1301 systems in combination with high temperature sprinkler heads. Some designers were still not satisfied with this solution. They submitted preaction sprinkler systems in combination with Halon systems. Such preaction systems were dry until special fire detectors charged the system with water. The reason for this precaution was to avoid water damage in the event of accidental damage to any of the sprinkler heads. Yet another system was the Viking Firecycle II system. It is a preaction system which limits the amount of water damage by cycling sprinkler heads with computer room ceiling temperature levels. Such systems are generally installed without a Halon 1301 system.

Halon 1301 systems installed without sprinkler back-up systems can and do often fail to function properly. The prime reason is loss of halon through doors, air conditioning systems, open ceiling spaces, etc. Rekindling of combustible materials often occurs and without a

0013' 1242

# City of Vancouver

#### DEPARTMENT OF PERMITS AND LICENSES

City Hall, 453 W 12 Ave., Vancouver, British Columbia Canada V5Y 1V4. (604) 873-7011

Please refer to: Mr. A. Weber 873-7401

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sprinkler system as a back-up, such fires may spread to other occupied parts of the building.

Air conditioning systems are an integral part of computer rooms. In the event of a fire, fans serving such rooms cannot instantly shut down. Therefore, motorized dampers are required which act at least as fast as the halon system.

Power to all equipment in the computer room must be terminated to insure that rekindling temperatures are not maintained.

Walls for the computer room must be full height (floor slab to floor or roof slab), and be adequately sealed with fire rated smoke dampers at all openings.

Doors to computers must be of the self-closing type with panic hardware.

Even where precautions such as those cited above are taken in the design and installation of Halon 1301 systems, they are susceptible to mechanical modification of the HVAC systems. Such modifications are generally performed by persons with no knowledge of such fire protection systems. Sprinkler modification on the other hand are performed by qualified sprinkler fitters possessing Provincial trade qualification certificates for that type of work.

A larger percentage of all halon systems installed fail their initial acceptance test.

Halon systems also take time to recharge and often computer rooms are placed back into service without a functioning fire protection system.

In view of the above considerations, sprinkler systems are required in computer rooms. Attached to this letter you will find further documentation to support this position.

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Yours truly,

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R. V. Hebert, P. Eng. Director and City Building Inspector

RVH:AW:mm

cc: R. L. Maki P. Engbrecht R. W. Rush W. Liu A. Geraghty

Attach.

# YONEDA & ASSOCIATES

Consulting Professional Engineers

2629 Arbutus St., Vancouver, B.C. V6J 3Y4 (604) 733-3412

May 30, 1983

Mr. R.V. Hebert, P. Eng., Director Department of Permits and Licenses City of Vancouver 453 West 12th Avenue Vancouver, B.C. V5Y 1V4

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באשיריים []	
AETURN	D. C. C. C.

Re: Vancouver Centre - Computer Room Tenant: Denison Mines Ltd.

Dear Sir:

We wish to make an appeal to the present halon system installed in the computer room of Denison Mines Ltd. on the 14th floor of Vancouver Centre to replace the sprinkler system within the room.

Modern technology has progressed at a very rapid rate in where the present computers installed in buildings are so complex that they store millions of information at the touch of a finger. If this information should be destroyed by some means, the majority of information would never be replaced and the time spent to obtain and record the information could never be replaced. An accidental discharge of a sprinkler head within the computer room would virtually destroy the complete computer and all its data.

The halon system installed in the computer room is ideal for areas housing electronic equipment, records and irreplaceable materials. Even the most sensitive computers can continue to operate within the Halon 1301 atmosphere, keeping down time and business interruption to an absolute minimum. In concentrations normally required for extinguishing fire, Halon 1301 is non-suffocating and low in toxicity. Underwriters' Laboratories classify it as Group 6 - the least toxic and safest gaseous agent available today. Being relatively clear, Halon 1301 does not materially reduce visibility in an area, and so does not impede evacuation or the activities of fire fighters. Fire extinguishment can begin immediately on detection of combustion, holding fire damage to a minimum. It interferes with the combustion process itself by inhibiting the chemical reaction of fuel and oxygen and extinguishes the fire almost instantaneously. Mr. R.V. Hebert, P. Eng., Director May 30, 1983 Page 2

For the above tenant, the computers are installed in a separate room of approxiamtely 750 sq. ft. The computers installed within the room are worth millions of dollars. An alternate solution must be considered by authorities to ensure that computer equipment be properly protected by means other than sprinkler systems.

The halon system installed within the computer room has been designed to meet the following requirements:

- All walls housing this computer room are installed to the underside of the concrete floors. Therefore, when halon is discharged, halon will be contained within the room for a period of 10 minutes.
- Discharge nozzles are located within the room and under the suspension floor. Halon is discharged into the room and as well, below the floor suspension in 10 seconds.
- 10 Ionization detectors are located within the room to sense both heat and smoke. Any one detector will alarm and set off the halon system.
- 4. Alarm horns are located within the adjacent areas.
- 5. Any detections will sound an alarm at the main fire annunciation panel located at ground floor. This fire annunciation panel is manned on a 24 hour basis. A separate alarm is installed directly to the fire annunciation panel from the computer room therefore, quick response by personnel will be present.
- A control panel complete with standby battery and automatic charger will ensure constant power to the halon system.
- A manual discharge pull station is located outside the computer room, for manual control by personnel.
- The printers are located outside the computer rooms therefore, any paper is generally outside the computer area.

3.8 Jag wont 24 Spars

All building material within the room is non-combustible.

Mr. R.V. Hebert, P. Eng., Director May 30, 1983 Page 3

We feel consideration should be given to approving the installation of a halon system in the computer room in lieu of sprinklers in a sprinklered building. The halon system will protect the computer equipment, contents within the room and give an early warning to the fire department. The effectiveness of a halon system will not damage any of the computer equipment and still give proper protection within the room. We know the codes do not relate to alternate solutions to sprinkler systems however, codes do not keep abreast of the changes as rapidly as changes by modern technology.

We request your favourable consideration in approving the halon system to replace the sprinkler heads within the computer room. Should you require additional information, please do not hesitate to contact our office.

Yours very truly,

YONEDA AND ASSOCIATES

Lloyd Andrukow, C.E.T.

LA/mb

cc: Vancouver Centre, Mr. Norm Meers

Rolf Jensen & Associates, Ltd.

FIRE PROTECTION ENGINEERS . BUILDING CODE CONSULTANTS

RECEIVED MAR 131989 PERMITS & LICENSES DEPT.

March 10, 1989

Mr. Ky Chan Plan Checker Permits & Licenses Department City of Vancouver City Hall - East Wing 453 West 12th Avenue Vancouver, B.C. V5Y 1V4

RE: OPEN STAIR FLOORS 30, 31 AND 32 VANCOUVER CENTRE 650 WEST GEORGIA STREET (BA 210739)

Dear Mr. Chan:

We have been requested by Harper Gray Easton & Company to prepare this report dealing with a proposed equivalency approach to building code compliance for the open stair connecting floors 30, 31 and 32 of the above noted building. The designers for this project are The Spiro Group.

We have reviewed this project only as it relates to the proposed building code equivalency. Building Code and fire protection features not related to the building code equivalency are not addressed in this report, and have been assumed to be in compliance with the appropriate codes and standards. It is the Architects' and Engineers' responsibility to ensure that the project correctly reflects the fire protection features described in this report. All reference numbers indicated in this report refer to the Vancouver Building Bylaw No. 6134, unless otherwise indicated.

Please see Page 5 of this letter for reaching (March 28/89).

601 West Cordova Street, Suite 400 • Vancouver, B.C. V6B 1G1 • (604) 689-9099 • FAX (604) 687-3478

Mr. Ky Chan

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Page 2 V-2632 March 10, 1989

Equivalency - It is proposed to apply the requirements of Sentence 3.2.8.1.(7) of the Building Bylaw (as reproduced below) to the proposed floor openings on an equivalency

(7) Except as provided in Sentence (8), openings for escalators and inclined moving walkways need not conform to the requirements in Articles 3.2.8.2. to 3.2.8.9 provided 'a)

the opening for each escalator or walkway does not exceed 10 m2, the openings are protected in conformance with the Sprinkler-Vent (b) Method, the Spray Nozzle Method, Rolling Shutter Method or Partial Enclosure Method as described in Subsection 6-1.2 of NFPA 101, "Code for Safety to Life from Fire in Buildings and Structures," or to the method described in Section 4-4.8.2.3. of NFPA 13, "Installation of Sprinkler Systems,"

(c) the building is sprinklered, and
(d) the building is classified as Group A, Division 1 or 2, Group D or Group E major occupancy.

In accordance with Sentence 3.2.8.1.(7) the floor opening will contain a stairway which is similar to escalators or moving walkways.

in accordance with Clause 3.2.8.1.(7)(a), the floor opening for the stair will be approximately 70 sq.ft. (8.5 sq.m.) which is less than 108 sq.ft. (10 sq.m.).

Page 3 V-2632 March 10, 1989

Mr. Ky Chan

In accordance with Clause 3.2.8.1.(7)(b), the floor opening for the stair wil' be protected with the method described in Paragraph 4-4.8.2.3 of NFPA 13 - 1985, "Standard for the Installation of Automatic Sprinkler Systems" (see Appendix A to this letter).

In accordance with Clause 3.2.8.1.(7)(c), the building is sprinklered.

In accordance with Clause 3.2.8.1.(7)(d), the building is classified as Group D, Major Occupancy.

Exit Separation - Provisions will also be made for ensuring that potential smoke movement through the floor openings will not affect occupants travelling to exits during emergency evacuation. Generally, this can be accomplished by ensuring that the open stair is positioned remotely from the exit stairs using a spatial separation distance of 1/2 the maximum diagonal dimension of the floor area. In the case of this project, it is not possible to directly satisfy this guideline since the open stair is within 1/2 the maximum diagonal or 70 ft. (1/2 x 140) of the exit stair.

The intent of this protection will be achieved by providing a smoke separation, as shown on the drawings of Floors 31 and 32 in Appendix B. No protection will be provided on the 30th Floor as the open stair will only affect smoke travel from the lower floor to the upper floors and not vice versa as smoke rises due to its heat. On the 31st floor, a smoke separation in the form of a vestibule will be provided near the freight elevator as shown on the drawing. This will ensure the path that smoke could travel from the open stair to an exit would be in excess of the 70 ft. required for this floor. Doors to this vestibule will swing in the direction of exit travel. On the 32nd floor, this separation will be provided by a smoke separation in Room 3201, to separate it from the corridor, and a smoke separation door adjacent to Room 3202 as shown on the drawing.

Smoke Separations - will consist of a solid floor to ceiling partition of non-fire rated noncombustible construction. Doors in the smoke separations will be of equivalent construction and equipped with an automatic self- closing device, and a latch and gasket to maintain the doors smoke tight. Smoke separation doors will be equipped with magnetic hold-open devices where the tenant might require them to be held open. The doors which will be provided with magnetic hold-open devices are identified on the attached drawings. Upon activation of the building fire alarm system (first stage), the magnetic hold-open devices will be released and the doors will be returned to their closed position.

Page 4 V-2632 March 10, 1989 Mr. Ky Chan

Egress Routes - In addition, as a guideline, the open stair will be positioned at least 19.7 ft. (6 m) away from one egress route for each room on Floors 31 and 32. On the 31st Floor, in addition to the smoke separations discussed previously, the open stair will be provided with full height glazing creating a smoke separation on three sides of the open stair. This will provide the required 6 m separation from the egress route for rooms 3102E. The egress route for room 3103 will be protected by a smoke separation door between the door to the room and the open stair.

On the 32nd Floor, a door will be provided from Room 3213 to the corridor adjacent to the service core. This will ensure that the occupants of this room have an egress route which does not pass by the open stair.

The open stair will be provided with full height glazing on the 32nd Floor such that the path that smoke would travel will be at least 19.7 ft. (6 m) from the floor opening to an 915 mm (36 in.) wide egress route from Room 3207. This distance will be measured around the full height glazing at 550 m from the glazing around two right angles. This is in recognition that smoke will travel forward from the opening faster than it will turn the corner to travel behind the open stair. This approach for measuring the distance for smoke travel is recognized by Sentence 3.4.2.2.(2) of the Building Bylaw.

In addition, full height glazing will be provided on Floor 31 which will require smoke to travel up the stairs along the path of the stairs, effectively increasing the distance that smoke would have to travel from the 31st Floor to the 32nd Floor.

Room 3208 will be provided with a second door to Rocm 3207. This door will not be lockable, and will be labelled on both sides with a sign "Keep Clear - Fire Exit".

<u>Smoke Detectors</u> - Smoke detectors, connected to the building fire alarm system, will be provided at the ceiling level of the interconnecting floor opening at the perimeter of the floor opening (ceiling level of Floors 30 and 31). These detectors are intended to provide occupants of floor areas with advanced notice of a fire condition prior to smoke spread via the open stair.

Page 5 V-2632 March 10, 1989

Mr. Ky Chan

<u>Cross-over Floors</u> - Floors 32 and 27 are designated as cross-over floors. The smoke separation on floor 32, as described earlier in this letter, will ensure that occupants transferring from one stairwell to the other on floor 32 would not be affected by any smoke movement via the open stairs.

On the basis of the fire protection features to be provided for the open stair, it is considered that the proposed floor openings for the stairway will satisfy the intent of the requirements of the Vancouver Building Bylaw No. 6134.

<u>Certification</u> - Should this approach to Building Code compliance be acceptable, we will be performing a site review of this equivalency, once completed and will provide the Permits & Licenses Department with a letter certifying that the installation complies with the recommendations of this letter.

Once you have had a chance to review this proposal, we would appreciate receiving confirmation of the acceptability of this approach, at your earliest convenience.

Yours truly, ROLF JENSEN & ASSOCIATES, LTD.

rdrew Hornerworld

Andrew D. Harmsworth, B.Sc.

Reviewed by: ROLF JENSEN & ASSOCIATES, LTD.

David W. Graham, P.Eng.

ADH/dgb

cc: Rick McKillop - The Spiro Group

March 28, 1989

Acceptable in principle.

R. L. Maki, P. Eng. for R. V. Hebert, P. Eng. DIRECTOR and CITY BUILDING INSPECTOR

cc: Rolf Jensen & Associates, Ltd. R. W. Rush K. Y. Chan

- R. Wood/DBI
- FILE

RLM:1c



September 11, 1989

Mr. R.L. Maki, P.Eng. Assistant Director Permits & Licenses Department City of Vancouver City Hall - East Wing 453 Wesc 12th Avenue Vancouver, B.C. V5Y 1V4

RE: OFFICES OF HARPER GREY EASTON VANCOUVER CENTRE -: 650 WEST GEORGIA

Dear Mr. Maki:

We have been asked by the Spiro Group, Interior Designers for the above noted project, to prepare this letter report on the use of electro-magnetic locks on the night security doors to the elevator lobby on the 31st floor of the above noted building.

For security purposes, it is desired to provide security doors for the elevator lobby as indicated in the attached sketch. These doors will only be locked during non-office hours and therefore the occupant load of the lobby will be extremely low when the doors are locked.

Sentence A-3.4.7.12.(14) of the Appendix to the Vancouver Buildi Bylaw, reproduced below, indicates that egress doors may be locked provided the only occupants of the area are authorized personnel possessing keys which enable them to exit through doors locked for security purposes.

A-3.4.7.12.(14) Readily Openable Exit Doors. Tumpieces of a type which must be rotated through an angle of more than 90° before releasing a locking bolt are not considered to be readily openable.

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Locking of Doors. When a building or a part of a building is not occupied it is acceptable to have exit doors locked for security purposes. The use of the word "occupied" in this instance would apply to a person or persons using the building during normal hours of operation and at any other time when the building is in use, e.g., a grocery store may be occupied outside what are considered normal hours of operation by night staff who stock shelves or take inventory, or a school classroom may be rented at night for meetings. A building may be considered "not occupied" if the only occupants are authorized security personnel who had keys, or special devices, that would enable them to exit from any door that was locked for security purposes. It is also possible that one part of a building may be "occupied", e.g., a may be theatre in a mall complex, and the remainder of the building, e.g., the mall stores, which would not be accessible to the theatre occupants, may be "not occupied", e.g., only security or janitorial personnel.

# Mr. R.L. Maki, P.Eng.

In the case of this building, security personnel are stationed on the ground floor to restrict access to the upper floors after hours to authorized personnel only. However as it is possible that persons not having the appropriate key may potentially step cff the elevator on this floor and be stranded in the event of a power failure or elevator recall, emergency egress for this space will be provided.

In order to provide this emergency egress, it is proposed to apply Sentence 3.4.7.12.(15) of the Vancouver Building Bylaw No. 6134, reproduced below, on an equivalency basis.

(15) Electromagnetic locks that do not incorporate latches, pins or other similar devices to keep the door in the closed position may be installed on exit doors other than doors leading directly from a Group F, Division 1 occupancy provided

- (a) the building is equipped with a fire alarm system,
- (b) the locking device releases immediately
  - (i) upon activation of a fire alarm signal,
  - (ii) in the event of a power failure, and
  - (iii) upon actuation of a manually operated switch accessible only to authorized personnel.
- (c) a force of not more than 90 N applied to the door opening hardware initiates an irreversible process that will release the locking device within 15 s and not relock until the door has been opened,
- upon release, the locking device must be reactivated manually by the actuation of the switch in Subclause (b)(iii), and
- (e) a legible sign is permanently mounted on the *exit* door to indicate that the locking device will release within 15 s of applying pressure to the door-opening hardware,

except that Clauses (c), (d), and (e) do not apply to a Group B Division 2 occupancy where patient safa may be compromised by uncontrolled egress. (See Supplementary Apper A.) Electromagnetic locking devices

Page 2 V-HGE.SP

September 11, 1989

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### Mr. R. L. Maki, P.Eng.

Page 3 V-HGE-SP September 11, 1989

In conformance with Sentence 3.4.2.12.(15), the office space is classified as a Group D occupancy and is not a Group F, Division 1 occupancy.

In conformance with Clause 3.4.7.12.(15)(a), the building is equipped with a fire alarm system.

In conformance with Clause 3.4.7.12.(15)(b), the locking device releases immediately:

- i) upon activation of a fire alarm system,
- ii) in the event of a power failure, and
- iii) upon actuation of a manually operated switch accessible to authorized personnel to be located in the secretary's desk adjacent to the doors.

In conformance with Clause 3.4.7.12.(15)(d), upon release the locking device must be reactivated manually by the actuation of a switch noted in Clause 3.4.7.12.(15)(b).

As this door is not an exit door and does not, nor is it required to, swing in the direction of exit travel it is impractical to comply with Clause 3.4.7.12.(15)(c). In lieu of this, it is proposed to provide a fire alarm pull station adjacent to the doors within the elevator lobby to enable persons trapped in the lobby to initiate an alarm and release the door.

In conformance with the intent of Clause 3.4.7.12.(15)(e), a sign will be placed on the doors reading "To release doors, pull fire alarm, then pull doors forward".

It is considered that in the unlikely event that a person or persons are trapped in the elevator lobby, the electro-magnetic locks, installed as described in this letter, will provide persons trapped within the elevator lobby with a level of fire safety equal to that intended by the Vancouver Building Bylaw.

# Mr. R.L. Maki, P.Eng.

Page 4 V-HGE.SP September 11, 1989

As this project is nearly completed, we would appreciate receiving confirmation of the acceptability of this approach at your earliest convenience.

Yours truly, ROLF JENSEN & ASSOCIATES, LTD.

For. Andrew Harmsworth, B.Sc.

Reviewed by:

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David W. Graham, P.Eng.

AH/dgb

cc: Ky Chan - Plan Checker, Permits & Licenses Department Robert Stickney - Building Inspector, Permits & Licenses Dept. Niles Spiro - The Spiro Group



31 St FLOOR



Rolf Jensen & Associates, Ltd.

FIRE PROTECTION ENGINEERS . BUILDING CODE CONSULTANTS

November 30, 1989

PERM	ITS & LICENSES DEPARTMENT
Reg	No: 1103-6
	DEC 0 1 1989
ORI	GINAL TO: PSWRADEY
COF	Y TO:

Mr. Peter Sweeney Permits & Licenses Department City Hall, East Wing 453 West 12 Avenue Vancouver, B.C. V5Y 1V4

RE: OFFICES OF HARPER GREY EASTON VANCOUVER CENTRE - 650 WEST GEORGIA

Dear Mr. Sweeney:

This letter is intended to address an equivalency approach for the provision of electro-magnetic locks on night security doors on the above noted project, as discussed with yourself earlier this month.

For security purposes, it is desired to provided security doors for the elevator lobby on floors 30 and 31 as indicated in the attached sketches. These doors will only be locked during non office hours, and therefore the chance of the lobbies being occupied by other than authorized personnel will be extremely low when the doors are locked.

Sentence A-3.4.7.12.(14) of the appendix to the Vancouver Building Bylaw, reproduced below, indicates that egress doors may be locked provided the only occupants of the area are authorized personnel possessing keys which enable them to exit through doors locked for security purposes.

A-3.4.7.12.(14) Readily Openable Exit Doors. Turpieces of a type which must • be rotated through an angle of more than 90° before releasing a locking bolt are not • considered to be readily openable. •

Locking of Doors. When a building or a part of a building is not occupied it is acceptable to have exit doors locked for security purposes. The use of the word "occupied" in this instance would apply to a person or persons using the building during normal hours of operation and at any other time when the building is in use, e.g., a grocery store may be occupied outside what are considered normal hours of operation by night staff who stock shelves or take inventory, or a school classroom may be rented at night for meetings. A building may be considered "not occupied" if the only occupants are authorized security personnel who had keys, or special devices, that would enable them to exit from any door that was locked for security purposes. It is also possible that one part of a building may be "occupied", e.g., a movie theatre in a mall complex, and the remainder of the building, e.g., the mail stores, which would not be accessible to the theatre occupants, may be "not occupied", e.g., only security or janitorial personnel.

601 West Cordova Street, Suite 470 \* Vancouver, B.C. V6B 1G1 \* (604) 689-9099 \* Fax (604) 689-3021

#### Mr. Peter Sweeney

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> Electromagnetic locking devices

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In the case of this building, security personnel are stationed on the ground floor to restrict access to the upper floors after hours to authorized personnel only. In the unlikely event that a person not possessing the appropriate keys should be in the elevator lobby egress would normally be provided for this space by the elevators, except in the event of a power failure, fire alarm or elevator failure.

It is proposed to provided alternate egress to this space during a fire alarm or power failure only by applying Sentence 3.4.7.12.(15) of the Vancouver Building Bylaw No. 6134, reproduced below, on a equivalency basis to one door on each floor between the elevator lobby and exit.

(15) Electromagnetic locks that do not incorporate latches, pins or other	•
imilar devices to keep the door in the closed position may be installed on	٠
exit doors other than doors leading directly from a Group F, Division 1	•
accupancy provided	٠

- (a) the building is equipped with a fire alarm system,
- (b) the locking device releases immediately
  - (i) upon activation of a fire alarm signal.
  - (ii) in the event of a power failure, and
  - (iii) upon actuation of a manually operated switch accessible only to authorized personnel,
- (c) a force of not more than 90 N applied to the door opening hardware initiates an irreversible process that will release the locking device within 15 s and not relock until the door has been opened,
- upon release, the locking device must be reactivated manually by the actuation of the switch in Subclause (b)(iii), and
- (e) a legible sign is permanently mounted on the *exit* door to indicate that the locking device will release within 15 s of applying pressure to the door-opening hardware,

except that Clauses (c), (d), and (e) do not apply to a Group B Division 2 P occupancy where patient safety may be compromised by uncontrolled egress. (See Supplementary Appendix A.)

In conformance with Sentence 3.4.7.12.(15), the office space is classified as a Group D occupancy and is not a Group F, Division 1 occupancy.

Mr. Peter Sweeney

In conformance with Clause 3.4.7.12.(15) (a), the building is equipped with a fire alarm system.

In conformance with Clause 3.4.7.12.(15) (b), the locking device will release immediately; i) Upon activation of a fire alarm system, ii) In the event of a power failure, and iii) Upon actuation of manually operated switch accessible to authorized personnel to be located in the Secretaries desk adjacent to the doors. A sign will be placed on the doors stating "Exit - Door Will Release in the Event of a Power Failure or Fire Alarm".

In conformance with Clause 3.4.7.12.(15) (d), upon release the locking device must be reactivated manually by the actuation of the switched noted in Clause 3.4.7.12.(15) (b).

It is not practical, or nor is considered necessary to comply with Clause 3.4.7.12.(c).

In recognition that, though extremely unlikely, a person could become trapped in the lobby due to an elevator failure it is proposed to provide a telephone in each lobby which will automatically dial the security desk on the main floor. Security personnel would then be able to remove the person from the lobby. In conformance with the intent of Clause (e) a sign will be placed by each telephone stating "Emergency Telephone - Lifting Handset Calls Security".

Considering that egress is provided at all times except when the building may be considered unoccupied and that the likelihood of a person being trapped in the lobby is extremely low it is considered that the provision of an emergency telephone and electro-magnetic door locks will provide a level of safety for the elevator lobbies equal to that intended by the Vancouver Building By-Law. As this project is nearly completed, we would appreciate receiving conformation of the acceptabibility of this approach at your earliest convenience.

Your truly,

ROLF JENSEN & ASSSOCIATES, LTD.

Andrew Horment

Andrew Harmsworth, B.Sc.

Reviewed by: Robert Heikkila. P.Eng.

AH/rg

