

REPORT TO THE MINISTER OF JUSTICE
AND ATTORNEY GENERAL

PUBLIC INQUIRY

FATALITY INQUIRIES ACT, R.S.A. 1980

CANADA

PROVINCE OF ALBERTA

[1] A Public Inquiry was held at the Provincial Court of Alberta, 323 - 6th Avenue S.E. in Calgary, Alberta, on the 9th day of August 2001, before the Honourable Catherine M. Skene, a Provincial Court Judge, without a jury. The inquiry was held into the death of **ARTHUR FREDERICK RAYNER**, 76 years of age, of 1201 - 115 - 2 Avenue S.W. Calgary, Alberta.

[2] The following findings were made.

Date and Time of Death: April 11, 2000 at 1450 hours

Place: Foothills Hospital, Calgary

Medical Cause of Death: Subdural Haematoma due to Closed Head Injury

Manner of Death: Accidental

Place of Accident: Alberta Trade Centre, 315 - 10 Avenue S.E. Calgary

Time of Accident: 1055 hours

Circumstances Under Which Death Occurred

Summary

[3] On April 11, 2000, the deceased, Mr. Rayner, attempted to enter an office building, the Alberta Trade Centre, at 315 - 10 Avenue, S.E. Calgary, Alberta. As the front door of the office building was being held open for him, Mr. Rayner backed up the

motorized scooter wheelchair he was operating, off the landing, causing him to fall down the stairs at the building's entrance. He struck his head and suffered a closed head injury. The cause of death was a subdural haematoma.

Description of the Building

[4] The Alberta Trade Centre was constructed in approximately 1974. There were 5 steps or risers that one must negotiate to enter the front door of the building. On April 11, 2000, there was also an 'L' shaped wooden wheelchair ramp that allowed access to the landing and front door. There was no evidence led disclosing the date the wheelchair ramp was constructed.

[5] At the time the building was built, there were no specific requirements for barrier-free entrances or entrances suitable for persons with physical, mental or sensory disabilities. It is uncertain whether there were Alberta Building Code sections governing the construction of the wheelchair ramp at the time the ramp was constructed.

1. Door

[6] The door was a double glass door, both doors capable of being opened. The building's maintenance practice was to secure the left door in place and enable only the right door to open. The hardware or lock mechanism was of an overlapping nature. Had the left door been open and the right door secured shut, or both doors open and useable, the doors may not close securely and could remain ajar slightly as the overlapping lock on the right door could prop the left door open.

[7] Both front doors opened out onto the landing. At all times when the right door opened, it obstructed the wheelchair ramp path of travel onto the landing. The door swung open toward the ramp travel path creating a barrier in the otherwise barrier-free path. The hinge side of the right door was approximately 9 inches (23 cm) from the top end of the wheelchair ramp and the right border of the landing.

[8] The door was flush with the building. In other words, there was not a recessed entrance, nor an entrance that extended out beyond the front wall of the building.

[9] The door was manually operated. There was no power or automation to allow easy access and use by disabled or wheelchair bound visitors or residents of the building. The door widths met the requirements of the Alberta Building Code.

[10] Further, when the right (or left) door was open, there would be approximately 4 feet between the end of the door and the top of the stairs.

2. Stairs and Landing

[11] The five-riser (5 steps) stairs appeared to be constructed out of wood, covered with older outdoor carpeting and in need of repair. The stairs and landing were 7 feet 10 inches in width. The depth of the landing was 7 feet from the top of the stairs to the closed doors.

[12] The current Alberta Building Code requires landings to be a minimum size of approximately 5 feet by 5 feet (1500 by 1500 mm).

[13] Although the wheelchair ramp had a railing to prevent the users from falling off the ramp, once the operator of the wheelchair was on the landing, there were no protective devices or warnings (rumble or tactile strips) preventing the wheels of a wheelchair from accidentally going over the edge and down the stairs.

3. Wheelchair Ramp

[14] The wheelchair ramp was added after construction of the building, at an undetermined time. There was no evidence led therefore showing it was built in compliance with the Alberta Building Code in effect at that time. The ramp appeared to have been in place for a number of years. It was right of the front door and was 'L' shaped. The wooden wheelchair ramp had a 90 degree left turn approximately one-quarter to one-third of the way up. After that turn, the wheelchair ramp ran parallel to the front of the building. As stated earlier, the top of the wheelchair ramp was approximately 9 inches (23 cm) from the hinge-side of the right door.

[15] The wheelchair ramp was just more than 3 feet wide (920 mm) and there were wooden handrails on each side.

[16] When the right door was fully opened to 90 or 100 degrees, the wheelchair ramp was blocked. The width of the wheelchair ramp would be obstructed and reduced in width to approximately 26 inches (660 mm) when the door was open.

Motorized Wheelchair

[17] Mr. Rayner was operating a scooter-style motorized wheelchair which was estimated by his daughter, Wendy May Dypolt, to be approximately 4 feet (1.2 m) in length. No evidence was led with respect to the width of Mr. Rayner's wheelchair. Further, there was no evidence led in the Inquiry with respect to the turning radius of this particular motorized scooter wheelchair.

Wheelchair Access Procedure

[18] Taking into consideration the wheelchair ramp accessing the side of the landing, the right door being the only access into this entrance, the right door opening out and toward the ramp, and the right door blocking the ramp, the only way Mr. Rayner could access this building, with or without someone holding the door open for him, would be by executing a three-point turn. By three-point turn, I mean that Mr. Rayner would have to drive his motorized scooter wheelchair forward up the ramp and slightly past the closed door, and then backward toward the stairs, followed by driving it forward to enter into the door of the building. There was very little room for error on Mr. Rayner's part, before his back wheels would leave the landing and fall down the stairs.

[19] Although not directly in evidence, it would appear from the configuration of this landing, door and wheelchair ramp, on April 11, 2000, a wheelchair operator may also have to back up and execute a three-point turn to exit the building and drive down the wheelchair ramp.

Alberta Building Code

[20] The term "barrier free" in the current Alberta Building Code references that a building and its facilities can be approached, entered and used by persons with physical, mental or sensory disabilities. There are current Code sections that govern entrances or landings (3.8.1.2), doorways (3.8.3.3) and the design of a ramp (3.8.3.4).

[21] The current Alberta Building Code, subsection 3.8.1.3, states,
“(1) Except as permitted by Subsection 3.8.3, every *barrier-free* path of travel shall provide an unobstructed width of not less than 920 mm for the passage of persons using wheelchairs.”

Subsection 3.8.3.4.(1)(a) states,

“(1) A ramp located in a *barrier-free* path of travel shall

(a) have a width of not less than 870 mm between handrails,”

I find that the configuration of the ramp and door did not conform to the current Alberta Building Code. As stated earlier in this report, the wheelchair ramp would be obstructed and reduced in width to approximately 26 inches (660 mm) when the right door, the only operable door, was opened.

[22] Subsection 3.8.3.4.(1)(c) deals with landings at the top and bottom of ramps. It states,

“(1) A ramp located in a *barrier-free* path of travel shall

(c) have a level area not less than 1500 by 1500 mm at the top and bottom and at intermediate levels of a ramp leading to a door, so that on the latch side the level area extends not less than

(i) 600 mm beyond the edge of the door opening where the door opens towards the ramp”

[23] The current Code has requirements for space on the open or latch side of the door, but does not appear to require a set back or clearance from the hinge side and the access ramp. There does not appear to be sections that govern the configuration seen in this accident, that is, a landing with a side access ramp, including side access to the door and the hinges of the door being closest to the ramp.

Accident

[24] At approximately 1055 hours (10:55 a.m.) on April 11, 2000, Arthur Frederick Rayner was operating his wheelchair, which was a scooter-style motorized vehicle. He approached an office building, Alberta Trade Centre at 315 - 10 Avenue S.E. Calgary, Alberta, housing several City of Calgary offices, including the Calgary Poppy Fund. It was his intention to enter and make a contribution to the Calgary Poppy Fund which had its office on the main floor.

[25] The Alberta Trade Centre was wheelchair accessible. Mr. Rayner drove his motorized scooter wheelchair up the wheelchair ramp, which was in part parallel to the building, leading toward the front double glass doors. Raymond Bruce Neitz, a courier delivering and picking up City of Calgary mail, had entered the building just as Mr. Rayner was driving up the wheelchair ramp. Mr. Neitz stopped to hold the door open for him, from the inside the building. Mr. Rayner was unable to easily execute the 90 degree right turn into the door. As Mr. Neitz stated at p. 5, line 19 to 22 of the Inquiry Transcript,

"And he came up to the door and it was it like -- the doors were wrong (indiscernible) were wrong, 'cause the way he had to back his -- back his chair up to come in the door..."

[26] With the intent to perform a three-point turn and enter the building, Mr. Rayner put his wheelchair into reverse and backed up. The wheelchair's back wheels travelled the depth of the landing and fell off onto the stairs. Mr. Rayner fell backwards, down the stairs, striking the back of his head at the bottom of the stairs. The wheelchair landed on top of him. Mr. Neitz and many others went to his aid. An ambulance was called and Mr. Rayner was transported to the Foothills Hospital.

[27] Initially, Mr. Rayner was sitting up when the ambulance arrived at the Alberta Trade Centre. His physical condition deteriorated rapidly while en route and at the Foothills Hospital. He was taken off his respirator at 1305 hours (1:05 p.m.) and he died of his injuries at 1450 hours (2:50 p.m.) that same day.

Post-Accident Changes to Door and Landing

[28] After the death of Mr. Rayner, the left-hand door, or the door furthest away from the wheel chair ramp has been made the active or dominant door. The overlapping locking hardware has been reversed and placed on the left door. The right door is secured in place, but capable of being opened if unlatched. The left door is now automatic and operated by a power control for disabled access.

[29] The landing has been replaced with a new landing and stair setup. According to the Safety Codes Officer, the new landing has increased the depth from the top of the stairs to the closed door by 2 or 3 feet (.6 or .9 m). The original wheelchair ramp, including the side access to the landing, remains the same.

Recommendations for the Prevention of Similar Deaths

[30] A combination of design and user complications contributed to this unfortunate accident. There was a barrier to Mr. Rayner's access, which led to a series of events that ultimately caused Mr. Rayner to fall off the landing and down the stairs. The landing, doorway and ramp of this building did not comply with the current Alberta Building Code (ss. 3.8.1.3 and 3.8.3.4(1)(a)). I recommend that the Code be reviewed and amended, if necessary, to govern and prevent the configuration and circumstances that

arose when Mr. Rayner attempted to enter the Alberta Trade Centre on April 11, 2000.

[31] The facts that complicated Mr. Rayner's access into the building included: the wheelchair ramp's access to the side of the landing; the wheelchair ramp's access to the side of the door; the wheelchair ramp's proximity to the side of the building; the depth of the landing; the door opening toward the wheelchair ramp; the door, when opened obstructing the wheelchair ramp; the edge of the door, when opened, being only 4 feet from the stair edge of the landing; the requirement that Mr. Rayner make a 90 degree turn to exit the ramp and enter the doorway; the length of his motorized scooter wheelchair and, in order to enter the building, Mr. Rayner being required to back up his wheelchair.

[32] The right and only workable door to the building opened and obstructed the travel path of the ramp. **My recommendation**, which appears to have been implemented, is the active or dominant door, on the building in question, should be changed to the left door. The overlapping lock mechanism on the right door would have to be replaced with another locking system to allow both doors to close without obstruction. Since the wheelchair ramp allowed access to the landing from the side, and the right door when opened obstructed the wheelchair ramp, the right door should remain secured in place at all times, unless directly supervised.

[33] The landing was not big enough for the motorized scooter wheelchair Mr. Rayner was operating. It has been enlarged since the accident. **I recommend** the depth of the landing on the building in question, from the top of the stairs to the door, be increased from its April 11, 2000 depth to accommodate all users of the building, including those people operating manual or motorized wheelchairs or being pushed in a manual wheelchair. Consideration should be given to the various sizes of wheelchairs, some of which may be approximately 4 feet (1.2 m) in length. Further, the determination of the appropriate depth of the landing should take into consideration the fact that the operators of the motorized wheelchairs may have varying degrees of competence in their operation, including, but not limited to, experience in operation, reaction time and depth perception.

[34] **I further recommend** that the width of the landing be increased, if necessary, to accommodate all sizes and types of wheelchairs.

[35] Wheelchair ramps should be designed and constructed so that there is no requirement for wheelchair operators to back up to either enter or exit a building, in particular, where there are stairs in the immediate vicinity.

[36] The evidence at the Inquiry was that the configuration of the wheelchair ramp, door and landing in question, although complying with most sections of the current Alberta Building Code, was inconvenient and difficult. Ease of use and convenience to the users should be considered by the designers and builders of barrier-free, wheelchair or disability access systems, in addition to access alone, or minimum compliance with the Alberta Building Code. The system in place at this building on April 11, 2000, although allowing access to the building by wheelchair users, was not wheelchair friendly.

SUBMITTED and DATED at Calgary, in the Province of Alberta, this 17th day of September 2001.



C.M. SKENE

A Judge of the Provincial Court of Alberta