



Fatality Investigation Report  
Worker Fatally Injured from Cinderblock Wall Collapse  
November 20, 2014

## The contents of this report

This document reports Occupational Health and Safety's fatality investigation following a cinderblock wall collapse that occurred on November 20, 2014, in which one worker was fatally injured. It begins with a short summary of what happened. The rest of the report covers this same information in greater detail.

## Incident summary

On November 19, 2014, the maintenance and construction manager (manager) and a temporarily hired worker (worker) began removing cinderblocks from a section of an exterior wall of a commercial building. The section of the wall was being removed to provide an opening for a new bay door.

On November 20, 2014, the manager and worker finished removing the perimeter cinderblocks for the intended door opening. Two structural points of the block columns were filled with concrete and rebar. The concrete was chipped out to access the steel rebar. The steel vertical rebar pieces found in those two points were cut at the 3<sup>rd</sup> course height. This left a freestanding section of cinderblock wall approximately 2.0 metres (m) wide by 3.4 m tall. While the worker was positioned beside the wall, it collapsed onto him. The worker was pronounced deceased at the work site.

## Background information

The Norcal Group is a real estate advisory company providing real estate owners and prospective owners with a comprehensive set of services including property management, real estate sales, leasing, regulatory approvals, market research, property acquisition, project management, asset management and assistance in obtaining financing. The Norcal Group manages office, warehouse and retail space in Canada and the United States. The Norcal Group is comprised of four corporations: Kane Investment Corporation, Norcal Realty & Management Corporation, Cal-Fund Investments Inc. and Norcal Capital Corporation.

Kane Investment Corporation (Kane) was incorporated in December 1986. Kane is based in Calgary, Alberta (AB). Kane is the owner of the commercial building located at 601-28 street north east (St NE), Calgary, AB.

Norcal Realty & Management Corporation (Norcal Realty) was incorporated in June 1986. Norcal Realty is based in Calgary, AB. Norcal Realty is a building management company responsible for leasing and maintaining commercial properties. Norcal Realty was the management company for the commercial building located at 601-28 St NE, Calgary, AB.

Norcal Construction Inc. (Norcal Construction) was incorporated in October 1984. Norcal Construction built commercial buildings for The Norcal Group. Norcal Construction was regularly hired by Norcal Realty to complete construction projects on their existing commercial buildings.

## Final Report

Ricco Holdings Corporation (Ricco Holdings) was incorporated in February 1986. Ricco Holdings is based in Calgary, AB. Ricco Holdings is an owner-operator operation. Prior to April 2004, Ricco Holdings operated a coffee delivery company.

Norcal Realty contracted Ricco Holdings in April 2004 to be their building maintenance manager. Ricco Holdings was retained to coordinate and hire contractors to conduct routine building maintenance. Norcal Realty provided Ricco Holdings a list of approved maintenance contractors to do the maintenance work. Ricco Holdings subsequently became Biz-Werks I C I Services Inc. (Biz-Werks) and was given the Norcal Realty contract to conduct routine building maintenance. The Biz-Werks' owner-operator was tasked with removing and constructing non-load bearing interior walls within the commercial buildings to meet the client's office space needs. The Biz-Werks' owner-operator was given the job title of maintenance & construction manager (manager). The commercial building located at 601-28 St NE, Calgary, AB was one of the commercial buildings Ricco Holdings and Biz-Werks were in charge of managing. Biz-Werks was struck from Alberta's corporate registry on May 2013. Ricco Holdings was struck from Alberta's corporate registry on September 2013.

DreamSpace Interiors Corporation (DreamSpace) is a woodworking company that builds custom cabinets. DreamSpace leased the commercial space at 601-28 St NE from Norcal Realty. DreamSpace requested Norcal Realty install a bay door to accommodate their business needs.

Hasegawa and Associates Ltd. (Hasegawa) is an engineering and planning consulting company. Hasegawa was hired by Norcal Realty to complete the necessary structural engineering and architectural drawings for the new bay door installation project. A City of Calgary building development permit was submitted by Hasegawa for the new bay door installation at 601-28 St NE.

IB Jensen Masonry Ltd. (IB Jensen) is a masonry construction company based in Calgary, AB. The manager contracted IB Jensen, an approved Norcal Realty contractor, to construct a structural support lintel in the cinderblock wall for the new bay door.

1662955 Alberta Inc., operating as Blue Collar Temps, (Blue Collar Temps) was incorporated in March 2012. Blue Collar Temps provides clients with temporary and temp-to-hire skilled and unskilled workers. Blue Collar Temps employs skilled and unskilled workers for their clients in the construction, warehousing, moving and transportation industries.

Norcal Construction regularly hired temporary skilled and unskilled general labour workers from Blue Collar Temps to complete construction related tasks. Norcal Construction temporarily hired skilled carpenters, carpenters' helpers, and zoom boom operators for construction related tasks that required specialized skill sets. Norcal Construction also hired general labourers to complete unskilled construction related tasks including, but not limited to, painting, carpet removal, and demolition of interior walls at commercial properties.

## Final Report

The worker, employed by Blue Collar Temps, was frequently requested by the manager to help complete interior commercial building construction tasks such as painting, carpet removal, and demolition of interior walls. The worker was classified as a general labourer because the worker had no specialized construction trade training. Prior to joining Blue Collar Temps, the worker was a construction labourer and a powered mobile machine operator for an excavating company. The worker also had previous experience in framing, drywall installation, concrete work, delivery driving, and painting.

**Equipment and materials****Cinderblock construction – exterior walls**

The commercial building located at 601-28 St NE, Calgary, AB was constructed of cinderblocks, reinforced with rebar and concrete, and vermiculite insulation. A lintel is a structural requirement of cinderblock walls when an opening in an exterior cinderblock wall is required (Figure 1).



*Figure 1. Cinderblock lintel construction and new bay door installation. View from inside 601-28<sup>th</sup> St NE commercial building.*

A: New lintel construction in existing cinderblock exterior wall  
B: New Bay Door

**Electric demolition hammer**

An electrically powered demolition hammer manufactured by Bosch was used to remove concrete from within the cinderblock structure (Figure 2). It was rented by maintenance and construction manager (manager) from Rogers Rent-All on November 20, 2014, for the cinderblock wall demolition.



*Figure 2. Shows a Bosch electric demolition hammer under collapsed block wall.*



*Figure 3. Shows Craftsman portable electric grinder on Genie scissor lift.*

#### **Portable electric grinder**

A Craftsman 4 ½ inch portable electric grinder, with 4 ½ inch Powerfist cutting wheels, was used to cut through the structural rebar within the cinderblock wall (Figure 3).

#### **Scissor lift**

A Genie GS-1930 scissor lift was used to elevate the workers to the necessary height to remove the necessary cinderblocks (Figure 3).

#### **Reciprocating saw**

A Milwaukee Sawzall 6509 reciprocating saw was used to cut through the structural rebar within the cinderblock wall (Figure 4).



Figure 4. Shows Milwaukee Sawzall 6509 reciprocating saw.

### Sequence of events

On May 23, 2013, as the Norcal Construction Inc. representative, the manager signed a Blue Collar Temps work agreement to be able to periodically hire temporary skilled and unskilled workers.

On August 15, 2014, the application for a development permit for adding an exterior bay door and adding a driveway access was submitted to the City of Calgary by Hasegawa. The application included engineered drawings for the new bay door installation.

Prior to the City of Calgary's issuing a development permit, Norcal Realty contacted Biz-Werks' manager to complete the installation of the new bay door at 601-28 St NE. Norcal Realty maintained an approved building and construction contractor list that Biz-Werks would contact to complete the construction activities.

In October 2014, the manager retained IB Jensen, a Norcal approved contractor, to perform the work for the new bay door installation. IB Jensen and the manager met onsite to discuss the installation dimensions (approximately 3.04 m by 3.65 m) and the work required to build the door opening support lintel.

## Final Report

On October 27, 2014, IB Jensen's masonry crew began to prepare for the installation of the lintel. The masons removed two vertical columns of cinderblocks on the west side of the intended door opening. They cut one of those blocks in half and re-laid them back against the existing wall. This would be the west side of the intended bay door. The masons moved to the east side of the intended bay door opening and started removing cinderblocks at approximately 3.65 m height to facilitate pouring of concrete in the vertical column on the east side of the intended door opening. The masons then removed block courses 21, 20, 19, and 18 to be able to install the new horizontal lintel blocks. The masons cut two vertical concrete rebar supports once the 18<sup>th</sup> block course was removed. The vertical concrete rebar supports had to be cut for the masons to install the new lintel. The new lintel was installed at the 19<sup>th</sup> and 20<sup>th</sup> block courses and filled with concrete (Figure 5). The masons slid a temporary 18<sup>th</sup> block course below the new lintel to support it. This 18<sup>th</sup> block course was not mortared as this course would be removed once the lintel set.

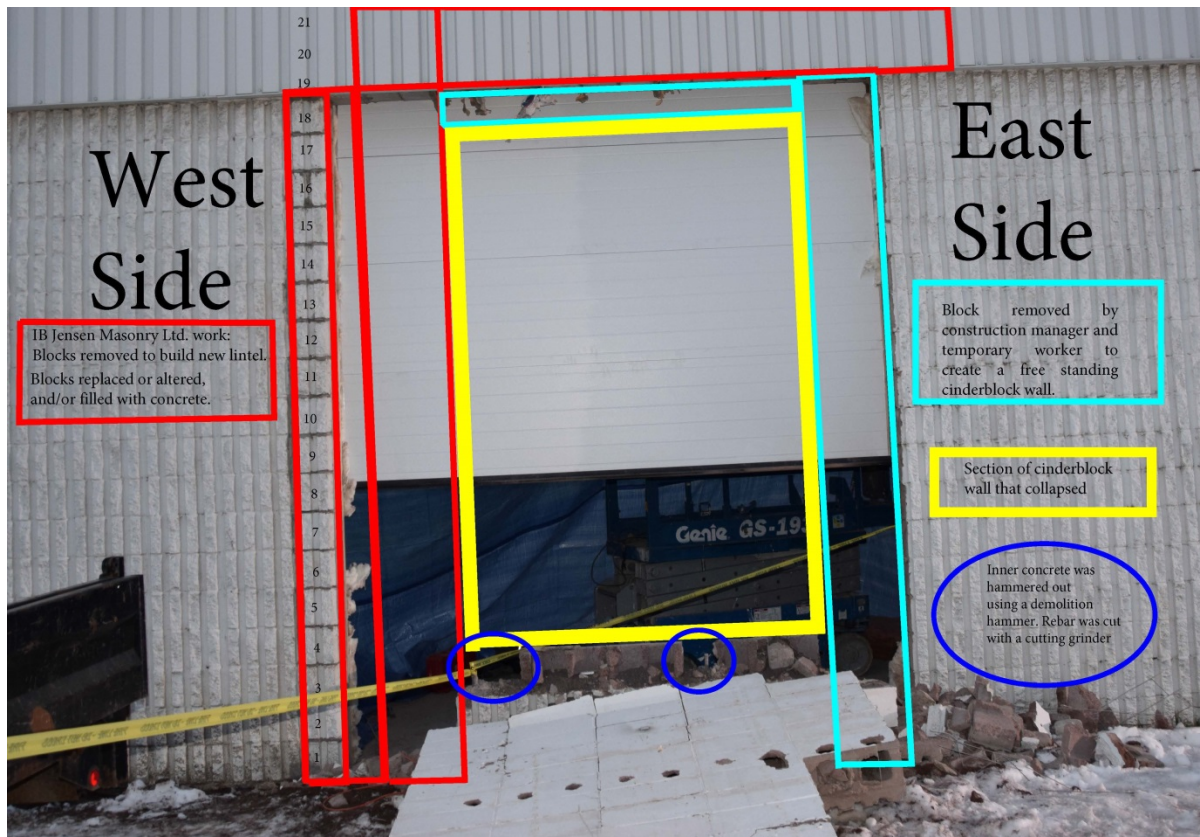


Figure 5. Block removal by IB Jensen (red) and Norcal Construction (blues). The number's 1-21 are the horizontal block courses involved in this door installation process.

The vertical column of missing blocks on the west side of the intended door opening was covered with plywood by the manager. The new cinderblock mortar and lintel concrete now needed to set for several days. In preparation for removing the bay door section of cinderblocks,



## Final Report

the masons removed the wall insulation found within the hollow cinderblock wall cavities. The masons smashed the interior faces of the 9<sup>th</sup> horizontal block course to allow the vermiculate insulation to drain out (Figure 6). The vermiculate insulation was bagged and disposed of.

The manager contracted the bay door installation to Assa Abloy Entrances. The bay door system was installed on the interior of the cinderblock wall by Assa Abloy Entrances on November 18, 2014 (Figure 1).

Prior to November 19, 2014, the manager periodically hired the same temporary general labourer worker to work under him. The worker periodically performed general construction labourer tasks such as painting, carpet removal, and demolition of interior walls. The manager and the worker either worked together or the worker was given directions to complete a specific task independently.

On November 19, 2014, the manager and the worker arrived on site to begin removing the cinderblocks covering the newly installed 3.04 m and 3.65 m rolling overhead bay door. A scissor lift platform was driven into the building to facilitate the cinderblock removal. The worker was primarily left alone to perform this demolition task once the manager explained what work needed to be performed. The worker used a hammer to manually smash the 18<sup>th</sup> course of cinderblock. The block debris was then picked up by hand or shovel, placed into 5 gallon buckets, and then hauled outside to a nearby transport trailer. The worker removed the majority of the temporary 18<sup>th</sup> block course below the new lintel.

On November 20, 2014, the manager and the worker returned to continue with the cinderblock wall demolition work. The manager rented an electric demolition hammer in the morning to expedite the cinderblock removal (Figure 2) and purchased a large tarp. The manager and the worker set up the large tarp on the inside of the building over the bay door area. The tarp was to prevent concrete dust from affecting DreamSpace's adjacent equipment. The scissor lift was positioned inside the tarped area along the wall. Using the scissor lift, the worker completed the removal of the 18<sup>th</sup> horizontal block course using the rented electric demolition hammer. The worker then started demolishing down the far east column which paralleled the newly installed bay door (Figure 5). Once the east cinderblock column was removed, this left a freestanding section of cinderblock wall. This freestanding section of cinderblock wall was structurally supported to the concrete foundation by two internal columns of concrete reinforced rebar (Figure 5).

Along the third horizontal block course, the manager and worker used the rented electric demolition hammer at two points to remove the surface of the cinderblock to be able to chip out the concrete found within the block column. This demolition was required to access the structural steel rebar encased within the concrete (Figure 5 & 6). Once the concrete was adequately removed from the two points, the electric grinder with a cutting wheel and/or a reciprocating saw were used by the temporary worker to cut the vertically situated rebar found within the blocks (Figure 5 & 6). Once the internal rebar was cut this left a free standing 2.0 m wide by 3.4 m tall cinderblock wall.



*Figure 6. Steel rebar encased in concrete within the exterior cinderblock wall.*

*A & B: Two cinderblock columns of the concrete reinforced steel rebar. All pieces of rebar cut.*

The manager then instructed the worker to clean up the concrete and cinderblock debris while he left to attend an appointment with a commercial client. While the manager was away, the worker was working outside next to the wall. At approximately 1:00 p.m., the standing 2.0 m wide by 3.4 m tall cinderblock wall collapsed toward the exterior of the building landing on the worker. No one witnessed the wall collapse.

The manager returned and found the collapsed wall on top of the worker. The manager called 911 at approximately 1:13 p.m. The fire department arrived and required extraction equipment to lift the wall to be able to extract the worker. When the worker was extracted, the worker was pronounced deceased at the work site.

Final Report

**Completion**

Upon completion of the Occupational Health and Safety investigation, the investigative file was sent to Alberta Justice on October 28, 2015 for review.

On November 8, 2016, Alberta Justice completed the review of the case and determined the file did not support any charges under the Occupational Health and Safety legislation.

The file was closed on November 9, 2016.

---

Final Report

**Signatures**

ORIGINAL REPORT SIGNED

June 13, 2017

Lead Investigator

Date

ORIGINAL REPORT SIGNED

June 13, 2017

Manager

Date

ORIGINAL REPORT SIGNED

June 19, 2017

Director

Date