
MEMORANDUM

July 8, 2010

TO: Mayor and Council

CC: Penny Ballem, City Manager
David Mclellan, General Manager, Community Services

FROM: Will Johnston, P.Eng, Chief Building Official
Peter Judd, P.Eng., City Engineer

SUBJECT: Incident Review of Demolition at 1104 Hornby Street

This memo provides a summary of an “Incident Review” led by the Chief Building Official and City Engineer of a public safety incident whereby two exterior walls of a building at 1104 Hornby Street fell into the adjacent streets during demolition activities on Thursday, June 10, 2010 at approximately 5:30 pm. The subject building is located at the south east corner of Hornby and Helmcken Streets. The demolition company responsible for the demolition is Global Excavating & Demolition Limited (Contractor) and the property owner/developer for this site is James Schouw & Associates.

The protection of the public around work sites is paramount and it is something that the City takes seriously. Over the past 14 years, over 11,000 demolition permits have been issued in the City at an average rate of 772 demolition permits per year. The vast majority of these permits are for one and two family dwellings. Since 1996, demolition permits for buildings other than one and two family dwellings account for 5 to 12 percent of all demolitions. Concerns and issues related to demolitions in the City have been limited. Concerns heard by our office with respect to the demolition of one and two family dwellings relate to civil matters between property owners resulting from damaged fences, sidewalks and/or landscaping on adjacent properties. The concerns for sites other than one and two family dwellings primarily relate to trucks entering and leaving the work site. Through the truck and construction program as well as an interdepartmental coordinated compliance approach, many of these issues have been addressed successfully. Fortunately, incidents such as the one at 1104 Hornby are not the norm as most demolitions are carried out without incident. It should also be noted that safety on a work site is a role shared by many parties - the property owner, contractors, City Officials and WorkSafe BC.

Shortly after becoming aware of this incident the City Manager directed the Chief Building Official, City Engineer and General Manager of Community Services to undertake a review of

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the procedures followed by City staff in order to fully understand what happened and ascertain whether improvements should be made to current City processes related to demolitions.

The results of this “Incident Review” and changes to clarify City’s processes are summarized below:

A. General Permit Information

A demolition Permit was issued to James Schouw & Associates (Developer & Property Owner) on May 7, 2010 to demolish an existing two storey commercial building of un-reinforced masonry construction at 1104 Hornby Street. The demolition contractor identified on this permit is Global Excavating & Demolition Limited (Contractor). Since 1995 the City has issued 14 demolition permits to this Contractor. With the exception of this subject permit, all of these permits are for the demolition of single-family homes. Up until this incident, City Staff were not aware of any issues related to the Contractor. At this time the Contractor has one outstanding permit for demolition in the City of Vancouver - work has not commenced under this permit pending the outcome of this review. The Contractor currently holds a valid City of Vancouver Business license.

B. Demolition Activities Leading up to the Incident

The Contractor commenced demolition on the subject site at approximately 7:00 am on Thursday, June 10, 2010. Prior to the start of demolition, the Contractor stated that parking was removed from both sides of the streets adjacent to the site and traffic lanes adjacent to the site were closed to vehicular traffic. In addition, the sidewalks directly adjacent to the site were closed to the public and pedestrians were directed to the opposite sides of the streets. Signage was provided at the end of the blocks in order to direct pedestrians accordingly and three certified flag persons were on site to direct traffic. The contractor indicated that they had difficulty managing vehicular and pedestrian traffic during the demolition. At approximately 5:30 pm the north face of the building’s exterior wall fell into Helmcken Street causing minor damage to both the city sidewalk and a light standard. It was also reported that there was minor damage to a car driving past the site when this wall fell into the street. Approximately ten minutes later demolition resumed and the west exterior wall of the building fell into Hornby Street breaking a city light standard from its base as it fell into the street. Minor damage was also reported to the city sidewalk on the west side of the building. There were no reports of injuries. Staff estimate the total cost of damages to city property to be less than \$10,000.

C. Staff Actions Following Notification of Incident

This incident was brought to the attention of the Chief Building Official early Friday, June 11, 2010. In order to address public safety concerns, the Contractor was instructed by Staff to remove all debris from the street and sidewalk and cease all demolition activities while securing the site. As a further precaution, the Contractor was told that work could not continue on this site, as well as for any other city permits held by the Contractor, until the Chief Building Official completed an investigation and was satisfied that the Contractor was addressing all required safety requirements. The Contractor has complied with this direction.

D. Review of Current By-law Requirements for Demolition Permits

The basic framework for the Building By-law in relation to demolition was developed over 40 years ago with minor amendments over the years to address specific concerns. The following

is a list of the current by-law and process requirements that must be in place for demolition sites:

- Demolition Permit,
- Demolition Contractors must hold a valid City of Vancouver Business License,
- Construction Safety Program (Program addresses public safety in and around a work site including a traffic management plan, and a method of deconstruction),
- Engineering Clearance (includes payment of applicable damage deposits),
- If applicable, a Temporary Special Zone Permit (closure of City sidewalks and/or streets adjacent to the work site), and
- Final District Building Inspector Clearance (prior to commencement of work).

The clearance from the District Building Inspector is intended to provide a final verification that all of the necessary safety requirements are in place prior to the commencement of work.

E. Review of Requirements for Subject Demolition

Through this Incident Review, including discussions with the Contractor and Property Owner, it was determined that the following by-law and process requirements were in place for this site:

- Demolition permit,
- Valid Business License for Contractor,
- Engineering Clearance (including collection of damage deposits), and
- Temporary Special Zone Permit (closure of city sidewalks and parking on both sides of the streets adjacent to the site)

The Contractor violated the following by-law and process requirements:

- Construction Safety Program, and
- Final District Building Inspector Clearance (prior to commencement of work)

F. Contractor's Understanding of City Requirements

On Tuesday, June 15, 2010 the Chief Building Official along with Engineering Services and Licenses & Inspections Staff met with the Contractor and Property Owner to discuss the incident. During these discussions, the Contractor confirmed that "Item E" above is an accurate reflection as to what requirements were in place for this site. The Contractor further clarified that while they did not have a written Construction Safety Plan in place, the plan was discussed with their staff - the Contractor believed that this was an acceptable approach. The Contractor indicated that he did not receive final clearance from the District Building Inspector. It should be noted that during the meeting of June 15, 2010 the Chief Building Official informed the Contractor that his permit for this site and the other site where work has yet to start were suspended until Construction Safety Plans are submitted and accepted by Staff and all damages to City property resulting from this incident are paid.

G. Analysis of City Regulations and Processes

After reviewing this incident it is evident that City practice with respect to demolitions has evolved whereby the City relies to a significant extent on experienced contractors and professionals to provide compliance assurance. As noted above, the basic framework for the Building By-law was developed over 40 years ago with minor amendments over the years to address specific concerns. Over time the City, like most other local governments, has relied more heavily on specialists (contractors and professionals) to provide assurance that regulations are being met. Demolition work requires specialized expertise and the City relies on this expertise to provide assurance that the outline for the work to be done, including

Construction Safety Plans, is acceptable. This is not unlike the approach to most safety requirements in the By-law for complex buildings. While Staff believe that the current by-law requirements and our experience over many years indicates that this approach is adequately addressing safety in and around a demolition site, based on this incident, improvements can be made to clarify current requirements for all parties involved - Permit, Inspection, and Engineering Staff; Contractors; and Property Owners. When examining this particular incident it is evident that there was some misunderstanding with respect to the demolition process and City requirements. To this end, the City will immediately implement improvements to our processes based on the learning from this incident.

H. Changes to City Process for Demolition Permits

Creating an overly onerous permit process as a result of an unprecedented incident such as this is not warranted as it could have an adverse impact on an industry that is working without significant problems. That said, Staff have identified a number of process changes that will help to strengthen our demolition permit and oversight process. Staff have initiated the following:

- At the time of permit application, the property owner is now required to sign a declaration to verify that a Construction Safety Plan is in place including the name of the Construction Safety Officer.
- Preparation of an explanatory brochure illustrating City requirements for all parties involved in demolition work in the City. This brochure will be provided to applicants at the time of permit issuance and made available on the city's website.
- An internal workshop for all City departments involved with demolition permitting and inspections is being organized to ensure that roles and responsibilities of each department are clearly understood and to explore the feasibility of further process improvements. This workshop will also address Departmental notification of incidents such as this.

The method of determining compliance with City regulations on a work site is a trust based system using an inspector's judgement and experience as well as the consideration of risk. This is a common approach for local government as regulations move from ones that are prescriptive to outcome based in nature. Using this approach and considering that most demolitions in the City are not a problem, Inspectors will now initiate a more detailed review for demolition permit applications based on the following risk factors:

- Type of demolition - large complex buildings.
- Location - demolition sites adjacent to major streets with significant vehicular and pedestrian travel and/or within close proximity to property lines.
- Contractor Experience - contractors unfamiliar to Inspectors and/or contractors with little experience with the type of demolition proposed.

When such risk factors are identified, a plan can be put in place by the District Building Inspector for closer oversight and assurance of compliance with all the permitting elements required by the by-law. Finally, through this incident and our review, the issue of delay in the notification of the Office of the Chief Building Official in regard to this incident was also a concern. We will be putting in place more robust processes to ensure that this does not recur.

I. Implications for Global Excavating & Demolition Ltd.

This review demonstrates a need to set stringent requirements before this Contractor is allowed to carry out future work in the City. As a result, the City will only permit the Contractor to carry out work under the following conditions:

- The Contractor must retain the services of a professional engineer to review all construction safety plans and oversee all permitted demolition work.
- The Contractor will not be permitted to proceed with demolition work until Staff have closely reviewed and accepted all plans and documentation in support of their application.
- Staff will closely monitor all permit applications for this Contractor and should they have any concerns with their application, it will be refused.
- Failure to comply with these conditions or should future concerns become evident, the Contractor's Business License will be at risk.

It should also be noted that Staff have closely reviewed the documentation submitted to complete the demolition work at the subject site. After a detailed review of these plans, staff have accepted the plans. The Contractor has engaged the services of a professional engineer to oversee the demolition work and paid for all damages to City property as a result of this incident. In addition, a City Inspector will be on site to monitor compliance when demolition work commences. These plans have been reviewed and accepted by WorkSafe BC. The above noted conditions have been reinforced through the Contractor's Business License.

Conclusion

The incident that occurred on June 10, 2010 at 1104 Hornby Street was fortunately not the norm as hundreds of demolitions are carried out in the City every year without incident. Demolition work is a specialized field and the City relies on contractors and professionals to provide assurance that City requirements are being met. As such these contractors and professionals are responsible for ensuring compliance while city inspectors monitor the process. Staff believe that the City regulations are sound, however staff will use the learning from this incident review to strengthen the demolition process to ensure that the regulations, including roles and responsibilities of all parties, is clearly understood. In addition, Inspectors will initiate more detailed reviews and oversight for demolition permits having increased risks to public safety.

With respect to Global Excavating and Demolition Limited, they have done limited work in the City of Vancouver and with the exception of this site, their work has related to the demolition of single family homes. The contractor failed to meet all City requirements - they did not have a formal construction safety plan in place and were not successful in obtaining clearance from the Building Inspector prior to starting work. Staff have reviewed and accepted the Contractor's construction safety plan for the remaining demolition work at 1104 Hornby Street and have required the Contractor to engage the services of a professional engineer to oversee the work. A professional engineer has reviewed and accepted the plans for this site and will oversee the remaining demolition work. The Contractor has paid for all damages to City property resulting from this incident. The City will lift the suspension today so that work can resume on this site. The City will only permit this Contractor to carry out future work in the City under stringent conditions. These conditions are reflected through the Contractor's Business License. Since the Contractor has not been able to carry out work in the City since June 10, 2010 as a result of permit suspensions, the Chief License Inspector did not feel it was warranted to suspend the business license for a period of time. The actions noted above have achieved the same result as a business license suspension. That said, should the Contractor fail to comply with these requirements or demonstrate any future concerns, their business license will be at risk. It should also be noted that as of July 2, 2010, staff were advised by WorkSafe BC that they have reviewed and accepted the Contractor's revised demolition plan.