

WORKER FALLS FROM SCAFFOLD

Date of Incident: September 11, 2007

Type of Incident: Fatality

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SECTION 1.0 DATE AND TIME OF INCIDENT

1.1 September 11, 2007 at approximately 3:15 p.m.

SECTION 2.0 NAME AND ADDRESS OF PRINCIPAL PARTIES

2.1 Owner

2.1.1 Greenboro Estate Homes
808 – 55 Avenue N.E.
Calgary, Alberta
T2E 6Y4

2.2 Prime Contractor

2.2.1 Greenboro Estate Homes
808 – 55 Avenue N.E.
Calgary, Alberta
T2E 6Y4

2.3 Contractor

2.3.1 M & B Exteriors Ltd.
538 Hamptons Drive N.W.
Calgary, Alberta
T3A 6A1

2.4 Employer

2.4.1 Westcan Stucco Wire Ltd.
#305, 537 – 14 Avenue S.W.
Calgary, Alberta
T2R 0M7

2.5 Supplier

2.5.1 This section is not applicable to this incident.

2.6 Worker

2.6.1

2.7 Others

2.7.1

Calgary Police Service
133 – 6 Avenue S.E.
Calgary, Alberta
T2G 4Z1

SECTION 3.0 DESCRIPTION OF PRINCIPAL PARTIES

- 3.1 Greenboro Estate Homes is a home building company and is a member of the Unity Builders Group, a real estate management company that oversees various homebuilder companies in Canada and the United States.
- 3.2 M & B Exteriors Ltd. is a contractor hired by Greenboro Estate Homes to complete all phases of exterior stucco work.
- 3.3 M & B Exteriors Ltd. hired Westcan Stucco Wire Ltd. to install black paper and stucco wire. Westcan Stucco Wire Ltd. employs up to ten workers during the busy construction season.
- 3.4 Worker 1 () had been employed with Westcan Stucco Wire Ltd. for approximately 7 years, and had performed similar work for a total of 20 years. There was no record found that Worker 1 () had received formal training on the safe erection of scaffolds.

SECTION 4.0 LOCATION OF INCIDENT

- 4.1 The incident occurred on a residential construction site located at 11 Cranridge Bay S.E., Calgary, Alberta in the Cranston subdivision (Refer to Attachment A – Map and Attachment B – Photograph 1).

SECTION 5.0 EQUIPMENT, MATERIAL AND OBSERVATIONS

5.1 Equipment and Material

- 5.1.1 Equipment involved in the incident was a single pole metal scaffold erected by Worker 1 () and Worker 2 () of Westcan Stucco Wire Ltd. The main components of the scaffold were steel poles, base plates, clamps, iron wall tie-ins and scaffold planks (Refer to Attachment B – Photograph 2 and Attachment C – Diagram).
- 5.1.2 The scaffold poles were erected vertically between 3.1 and 4.5 meters apart with similar horizontal steel members fastened at approximately 1.5 meters above ground level. Iron wall tie-ins were fastened at heights of approximately 2.1 meters and 3.15 meters. A

laminated scaffold plank 3.6 meters long and 0.24 meters wide was placed across the second level iron wall tie-ins at a height of 3.15 meters. No method of securement was in place for the scaffold planks, which were installed individually on the iron wall tie-ins.

- 5.1.3 Access to the first working level at a height of approximately 2.1 meters was provided through a scaffold plank that was placed on a two-step aluminum ladder called a “horse”. Access to the second working level of 3.15 meters was gained by climbing up the vertical scaffold pole (Refer to Attachment B – Photographs 3 and 4 and Attachment C - Diagram).
- 5.1.4 The scaffold equipment was owned jointly by the employer (Westcan Stucco Wire Ltd.) and Worker 2 (). There were no manufacturer’s specifications or specifications certified by a professional engineer available at the work site.

5.2 Observations

- 5.2.1 At the time of investigation, the “horse” and scaffold plank providing access to the first working level were removed. An I-beam floor joist was placed across iron wall tie-ins at the first working level between the second and third vertical scaffold poles.
- 5.2.2 The ground was level and compacted where the scaffold was erected.

SECTION 6.0 NARRATIVE DESCRIPTION OF THE INCIDENT

- 6.1 On September 11, 2007 at approximately 7:00 a.m., Worker 1 () and Worker 2 () arrived on site and began installing stucco wire on the house.
- 6.2 At approximately 2:00 p.m., Worker 2 () began installing iron wall tie-ins for the second level of scaffold on the east side of the house at a height of 3.15 meters.
- 6.3 Worker 2 () called Worker 1 () to help him move some scaffold planks from the first level to the second level. Worker 1 () came to assist Worker 2 (). After moving one scaffold plank from the first level to the second level, Worker 2 () turned around to get another scaffold plank. Worker 1 () proceeded to climb up the vertical pole to gain access to the second level.
- 6.4 Worker 2 () heard Worker 1 () swear. Worker 2 () turned around and saw the scaffold plank they had just installed on the second level falling down towards him. Worker 2 () moved out of the way to avoid being struck by the falling scaffold plank. Worker 2 () then looked at Worker 1 () and saw him holding onto the vertical scaffold pole with his hands and one foot on a clamp. Worker 2 () thought Worker 1 () was fine and proceeded to get the next scaffold plank. Worker 2 () glanced back and saw Worker 1 () falling down. Worker 1 () struck the lower steel cross member before he landed on the ground.

- 6.5 Worker 2 (), jumped off the scaffold and rushed over to Worker 1 (), yelling for help. A framer () working at the adjacent house heard the crash and responded to the incident scene. Worker 2 () borrowed a cell phone from the framer () and called 911.
- 6.6 The framer () called his boss () over for assistance. After the boss () arrived, Worker 1 () became unresponsive. Worker 2 (), framer () and boss () rolled Worker 1 () over and observed Worker 1 () had started breathing again. Emergency Medical Services arrived on the scene and attended Worker 1 (). He succumbed to his injuries shortly thereafter.

SECTION 7.0 ANALYSIS

7.1 Direct Cause

- 7.1.1 Worker 1 () was fatally injured when he fell while climbing a scaffold pole from the first level to the second level.

7.2 Contributing Factors

- 7.2.1 There was no access or egress ladder in place for workers to safely move from one level to another level of the scaffold.
- 7.2.2 Scaffold planks were not secured to prevent movement as required by Occupational Health and Safety legislation.
- 7.2.3 There was no record found to indicate that Worker 1 () was formally trained on the safe erection of single pole scaffold.
- 7.2.4 There were no manufacturer's specifications or specifications certified by a professional engineer available at the work site describing the safe erection of single pole scaffold.

SECTION 8.0 FOLLOW-UP/ ACTION TAKEN

8.1 Employment, Immigration and Industry; Workplace Health and Safety Compliance

- 8.1.1 Workplace Health and Safety Compliance (WHSC) received an incident notification on September 11, 2007, responded to the scene, and commenced an incident investigation.
- 8.1.2 WHSC issued the following orders:

- An order for Westcan Stucco Wire Ltd. to complete hazard assessments prior to work resuming.

- An order for Westcan Stucco Wire Ltd. to ensure scaffold is erected in accordance with CSA Standard CAN/CSA-S69.2-M87 (R1998), *Access Scaffolding for Construction Purposes*.
- An order for Westcan Stucco Wire Ltd. to ensure appropriate fall protection is in place when erecting scaffold.
- A stop use order on the single pole scaffold until workers have been adequately trained on the safe erection of scaffold.
- An order for Greenboro Estate Homes to complete an incident investigation, prepare a report and provide a copy of the report to WHSC for review.
- An order for Greenboro Estate Homes to ensure that scaffold at their work sites complies with the requirements of CSA Standard CAN/CSA-S69.2-M87 (R1998), *Access Scaffolding for Construction Purposes*.
- An order for Greenboro Estate Homes to ensure that hazard assessments are completed by sub-contracted employers prior to construction starting at their work sites.

8.1.3 WHSC conducted follow-up inspections with the prime contractor and contractor at work sites where their employers were working.

8.2 Industry

8.2.1 After the incident, Westcan Stucco Wire Ltd. voluntarily stopped work prior to the arrival of WHSC.

8.2.2 Greenboro Estate Homes investigated the incident, prepared a report and submitted a copy to WHSC for review.

8.2.3 The employer's representative (), Worker 2 (), workers from M & B Exteriors Ltd. and the Safety Coordinator of Greenboro Estate Homes () attended a residential scaffold awareness training course held on October 2, 2007. All Greenboro Estate Homes Site Superintendents have attended a residential scaffold awareness course.

8.2.4 Westcan Stucco Wire Ltd. completed a hazard assessment for a new job being started and provided a copy to WHSC for review. Hazard assessments are now being completed by the employer for each construction project.

8.2.5 Greenboro Estate Homes conducted re-orientation of all sub-contracted employers to ensure their awareness of health and safety responsibilities under the Occupational Health and Safety Act, Regulation and Code.

8.2.6 Greenboro Estate Homes now requires all companies involved in scaffold erection on their work sites to prove competency of workers in safe erection of scaffolds.

- 8.2.7 Greenboro Estate Homes conducts work site inspections to ensure proper hazard assessments and fall protection plans are completed by affected employers.
- 8.2.8 M & B Exteriors Ltd. has provided verification to Greenboro Estate Homes of proper completion of safety orientation with sub-contractors.
- 8.2.9 Greenboro Estate Homes representatives have been advised to immediately give stop work orders to any trade who is not in compliance with the Occupational Health and Safety Act, Regulation and Code.
- 8.2.10 M & B Exteriors Ltd. has provided verification to Greenboro Estate Homes that safe work practices for erection of scaffolds are in place and being followed.
- 8.2.11 Greenboro Estate Homes has developed and implemented an inspection protocol and test to ensure the competency of employers erecting scaffolds.
- 8.2.12 Greenboro Estate Homes, M & B Exteriors Ltd and Westcan Stucco Wire Ltd complied with all the orders issued by WHSC.

8.3 Additional Measures

- 8.3.1 The Calgary Regional Homebuilder's Association has distributed an industry bulletin based on information provided by Greenboro Estate Homes.

SECTION 9.0 SIGNATURES

Mervyn Ko, Lead Investigator

Date

Gurdip Sanghera, Reviewer

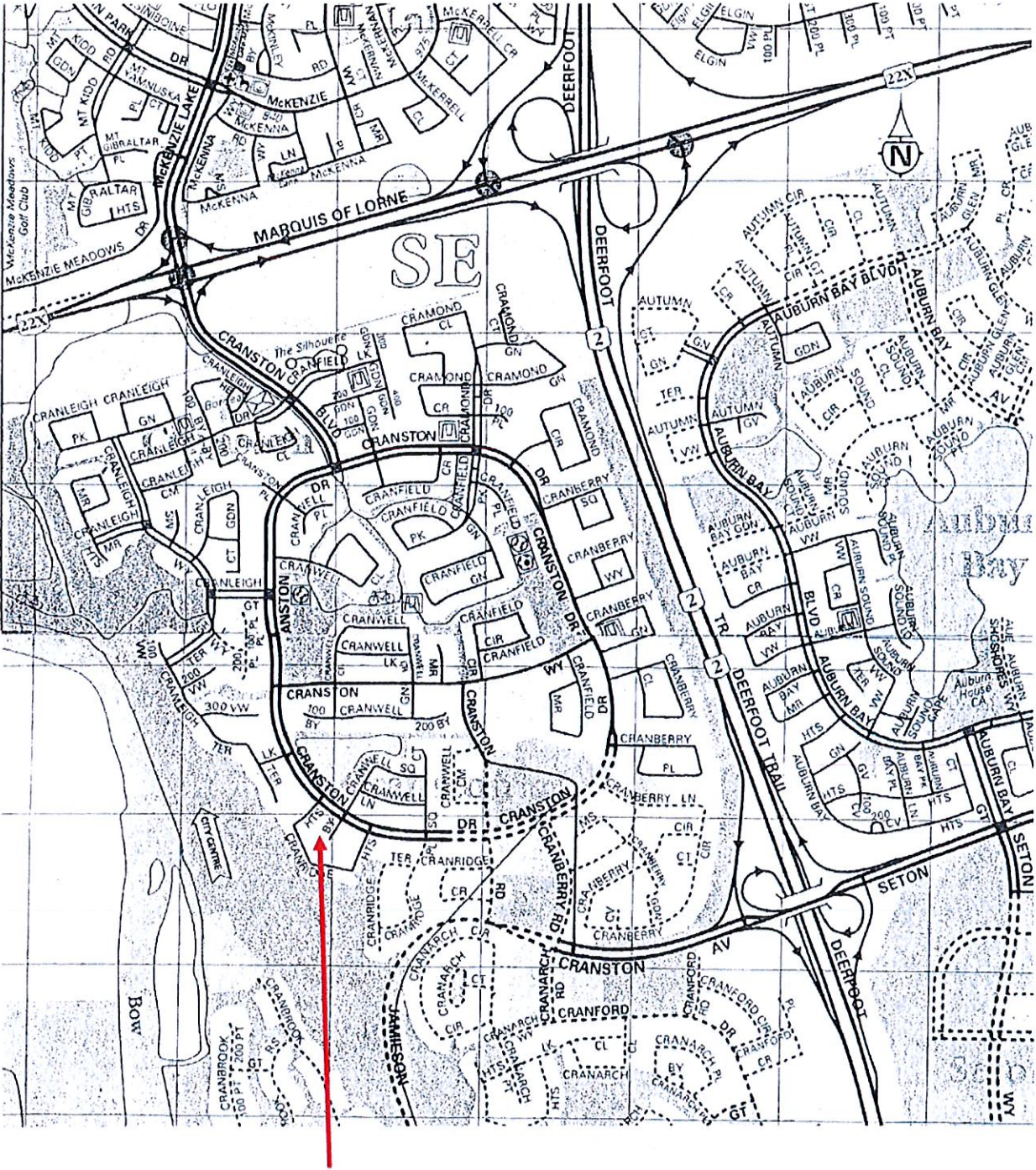
Date

Karen MacDonald, Regional Senior Manager

Date

SECTION 10.0 ATTACHMENTS:

Attachment A	Map.
Attachment B	Photographs.
Attachment C	Diagram.

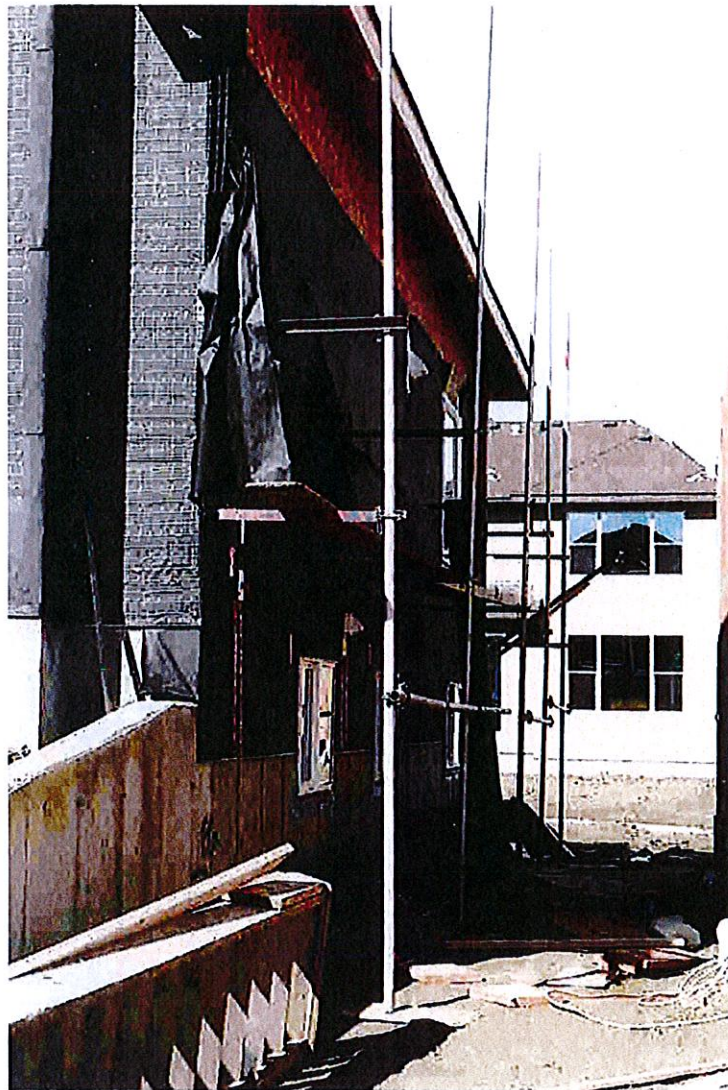


The arrow shows the location where the incident occurred, Cranston subdivision in southeast Calgary.

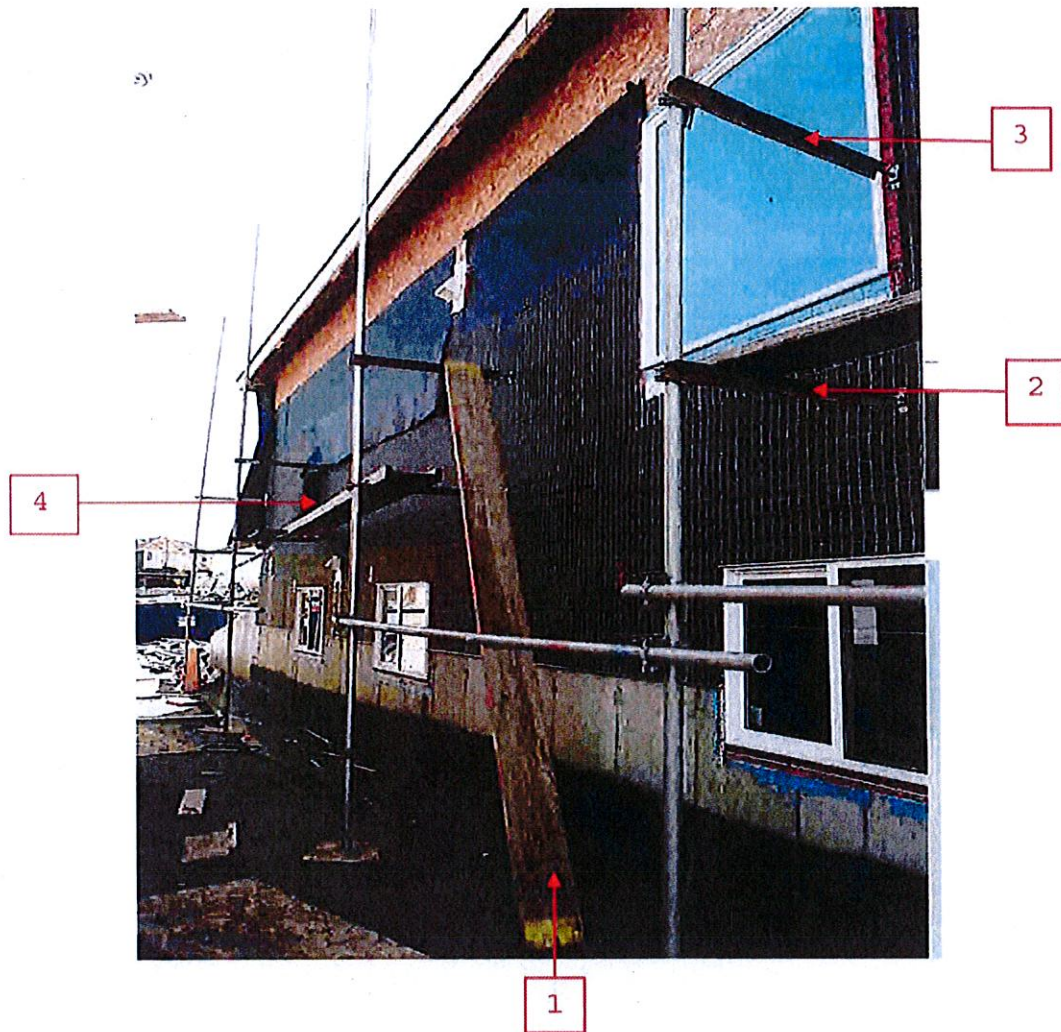


Photograph 1 – Shows the house located at 11 Cranridge Bay S.E., Calgary, Alberta where the incident occurred.

1. Shows the partially erected scaffold

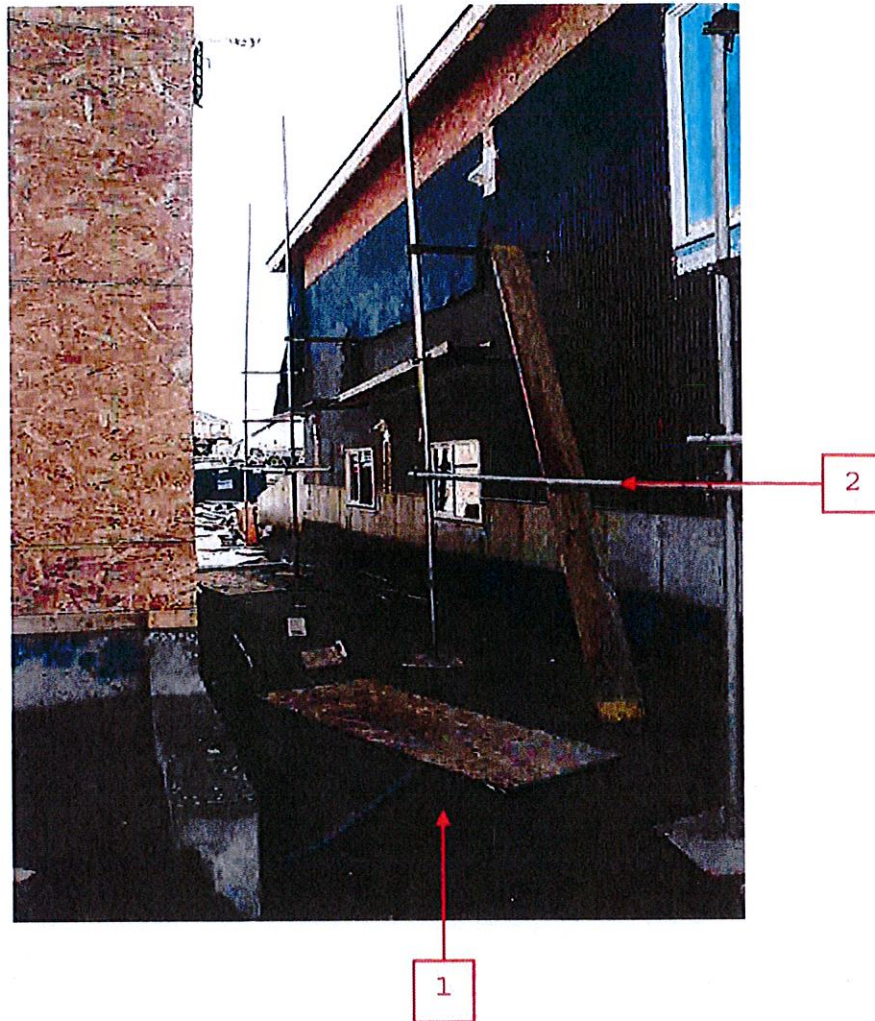


Photograph 2 – Shows a southeast view of the partially erected single pole scaffold.



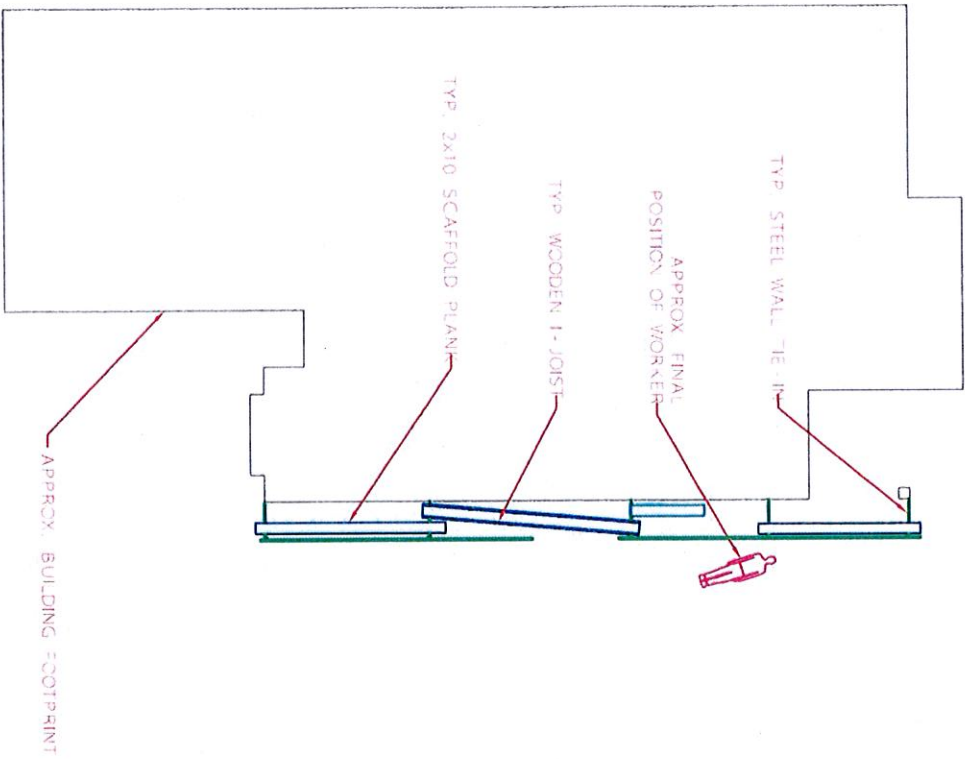
Photograph 3 – Shows northeast view of the incident scene.

1. Shows the scaffold plank that fell when Worker 1 () attempted to access the second level.
2. Shows the level where Worker 1 () was standing prior to climbing.
3. Shows the second level that Worker 1 () attempted to access.
4. I-beam floor joist where Worker 2 () was standing at the time of the incident.

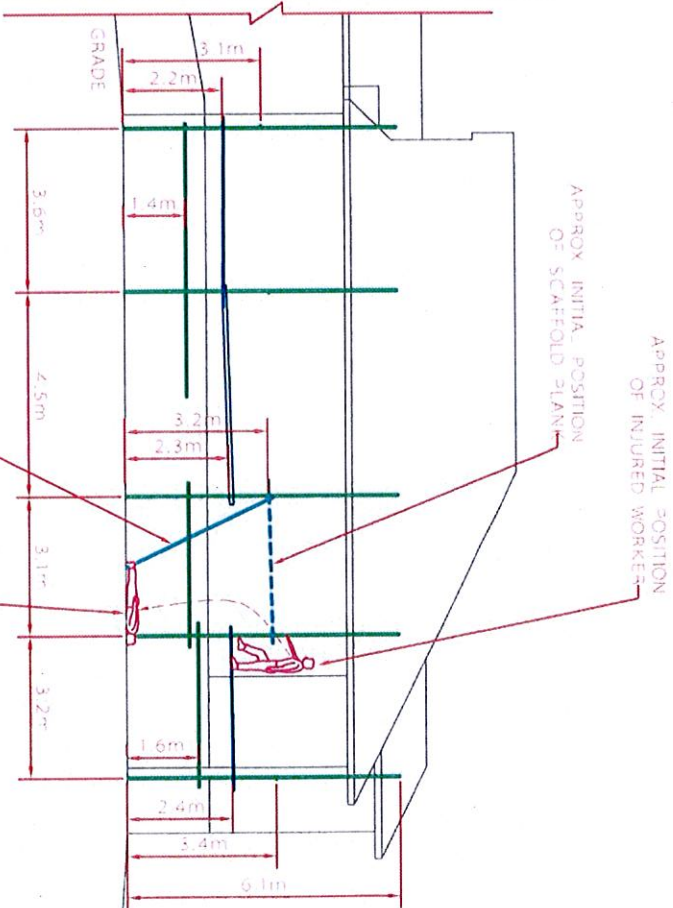


Photograph 4 – Shows northeast view of the incident scene.

1. Shows the approximately location where Worker 1 () landed after he fell.
2. Shows the crossbar that Worker 1 () struck prior to landing on the ground.



PLAN VIEW OF BUILDING



EAST ELEVATION OF BUILDING

MULTIPLE VIEWS OF
CONSTRUCTION SITE
DIAGRAM 1 OF 1

FILE NO: F-315779

ATTACHMENT: C

NAME: WESTCAN STUCCO WIRE LTD.

SCALE: NTS

DATE: 09/11/07