

Higher ground

10 scaffold safety essentials

By Michelle Morra

A lot can go wrong when working on scaffolding. On Christmas Eve 2009, four migrant workers fell to their death from a suspended scaffold 13 storeys high after the platform they were standing on snapped. A fifth worker suffered severe injuries. The incident resulted in both criminal and OHS charges being filed against three men and Metron Construction Corp.

Despite the dangers it poses, however, working on a scaffold can be straightforward and safe if everyone involved follows procedures.

Provincial and federal occupational safety laws outline specific duties and responsibilities for employers, supervisors and workers. Knowing the rules and regulations is in everyone's best interest.

1 Ensure everyone is properly trained. Safety regulations require that workers be trained in the design and operation of scaffolding. Training covers important safe work practices such as how to safely get on and off the scaffold (using an access ladder, not the scaffold frame — unless it is specially designed to be climbed and both hands are free to grab the rungs). It should also cover comprehensive fall protection training specific to the type of scaffolding, erecting and dismantling procedures for anyone involved in these activities, and a host of other lifesaving details.

2 Take the time for prep work. Before using scaffolding, make sure the base is sound, level and adjusted; that the legs are plumb and all braces in place; that locking devices and ties are secured; that cross members are level; and that planks, decks and guardrails are installed and secure. Check the location for ground conditions, such as slopes, and stay clear away from hazards such as overhead wires, obstructions and changes in surface elevation.

3 Keep it legal. CSA standard committees have identified “rogue employers” as a significant obstacle to scaffold safety. “These are employers who fly under the radar and operate without a license,” says Jeet Tulshi, a CSA project manager. “They get some pick-up truck, rent a unit and hope they don't get caught. They might import material from offshore and put it together without having it surveyed or reviewed by a professional engineer.” That was the case on Christmas Eve 2009, he says.

4 Know and respect the load capacity. According to the Ontario Ministry of Labour, failure to consider all the loads to which the scaffold may be subjected is one of the top things that go wrong at the design stage. The scaffold must be strong enough and capable of holding the desired weight, otherwise it could collapse. Don't try to fit more workers on the platform than it can handle; don't overload it with equipment and materials; and don't rest anything on the guardrails.

5 Ensure the scaffold is properly secured. The scaffold must be adequately braced or tied to the building. If it is wrapped in a tarp for protection from the elements, it could blow over if it isn't secured. According to the Construction Safety Association of Manitoba, “Bracing must be properly secured in place, otherwise scaffold movement may dislodge an end, reducing

the stability of the scaffold. There are several different brace retention or locking systems found on scaffolds. These devices must operate freely for ease of assembly and dismantling, and also lock securely to prevent a brace from dislodging. Nails and other miscellaneous odds and ends should not be used in place of proper retention parts supplied by the manufacturer.”

6 Use guardrails. The design of the scaffold must incorporate guardrails on at least the three sides facing away from the building if the scaffold is more than 10 feet above ground. There should be a top rail, a mid rail and a bottom rail (toe board). If you must remove any guardrails while hoisting materials, replace them promptly. Wear fall protection at all times.

7 Inspect and maintain. Scaffolding must be routinely inspected by the supervisor and by a competent person — ideally a professional engineer or a person designated in writing by a professional engineer. In the case of a suspended platform, inspect and test all components including welds, stirrups, connecting pins, connecting plates, trusses, beams and working surface. Check that the lumber is of good quality. If any pieces get broken or damaged, replace them right away. Inspect frames, braces and other components for damage, bends and excessive rust or wear. Also check motors, platforms or wire ropes for damage from chemicals or corrosive material.

8 Good housekeeping. There isn't much room on a scaffold, so it's important to store tools and materials in an orderly fashion. Keep the platform free of obstructions. Place debris and waste material in a container or remove it from the platform immediately.

9 Keep your balance. A scaffold and its platform must be perfectly level (CSA standard says it mustn't deviate from the vertical by more than 12 millimeters per three meters of height) to minimize the risk of workers losing balance and falling off. Particularly on swing stages, there must be an adequately weighted counterweight. Pay attention when working on a scaffold. Any sudden movements, or reaching too far from the platform, can cause a loss of balance.

10 Use appropriate PPE. This includes head protection, non-slip protective footwear and fall protection as required, in the form of a safety harness tied off to a solid structure, such as the building. Ontario's construction safety regulations indicate that the harness can be tied off to the suspended platform or scaffold only “if all or part of the platform or scaffold has more than one independent means of support and the platform or scaffold is so designed, constructed and maintained that the failure of one means of support will not cause the collapse of all or part of the platform or scaffold.”

With all of these safety practices in place, working on a scaffold can be a high without the dangerous lows. **cos**

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