

Fall Protection

1.0 POLICY

All workers working at a height of 3 meters or more, and who are not protected from falling by the presence of handrail or guardrails, are required to utilize a continuous tie-off fall protection system provided by Contractor. The fall protection system meets or exceeds the requirements of the WorkerSafe British Columbia / OH&S design criteria for vertical and horizontal life-line systems (B.C. Regulations Number 7/96). That regulation requires that:

1. Vertical lifelines must have a breaking strength of 6,000 lbs.;
2. Vertical lifelines must have an ultimate strength of 5,000 lbs. in any direction;
3. Horizontal lifelines must have a breaking strength of 20,000 lbs. And be a minimum of ½” diameter wire rope, unless designed and certified by a professional engineer;
4. End anchors must have an ultimate load capacity of 16,000 lbs.;
5. Horizontal lifelines spans must be minimum of 20’0” and a maximum of 60’0”;
6. All connecting hardware such as shackles, turnbuckles and the like must have an ultimate load capacity of 16,000 lbs.; and
7. A personal fall arrest system with shock absorbing which may allow a **free fall of up to 4 feet.**

While climbing and moving on steel structures and whenever practical, all workers will be continuously tied-off to a vertical lifeline, a horizontal lifeline or directly to a structural framing member.

2.0 PURPOSE

To ensure all workers working at a height of 3 meters or more unable to benefit from the presence of handrails or guardrails, are protected from falling by using fall arrest equipment provided by Contractor

Island Cactus Construction Ltd.

3.0 RESPONSIBILITY

- **President / Safety Persons** Of **Island Cactus Construction Ltd.** shall ensure the implementation of this procedure;
- **Project Manager** shall ensure that all management personnel assigned to the project consistently apply the provisions of this procedure;
- **Construction Manager** shall implement and enforce all elements of this procedure;
- **Trades Supervision** shall ensure that all workers at risk utilize the fall arrest equipment provided;
- **Safety Supervision** shall monitor all risk situations and ensure that workers are fully familiar with the installation use and maintenance of fall arrest equipment and
- **Each Worker** is obligated to comply with the fall protection policy and utilize the fall arrest equipment provided and to advise his or her immediate supervisor in the event that fall hazards become apparent during the performance of his or her work in order that the hazards can be assessed and corrective action taken, if required.

4.0 PROCEDURE

- 4.1 The intent of this fall protection program is to protect all workers working over 3 meters from grade where adequate handrails or guardrails are not present.

Certain situations may arise where it is impractical to install fall protection. Such situations require extreme caution and vigilance and may include the following circumstances:

- The first worker involved in the installation of the fall protection system or the last worker involved in the removal of the fall protection system upon completion of the work;

- Workers involved in the initial placement of skeletal members such as tower cranes, scaffolding or in extreme extenuating circumstances during initial erection and connection of structural steel members where the use of fall protection is impossible;
- Transition between adjacent fall protection systems where the worker utilizes the three-point stance (both feet placed firmly in the work surface, one hand supporting the worker and the other hand transferring the lifeline from one fall protection system to the other);
- Emergency situations such as fire fighting or the correction of unsafe condition.

4.2 The following fall protection equipment will be installed:

- Vertical lifelines will be anchored to the top of columns using ½ inch shank “D” bolts (5,000 lb. capacity any direction). If the columns come equipped with fall protection tabs then shackles can be used in lieu of D bolts;
- Vertical lifelines will be 5/8” diameter lifeline, polyester / propylene blended rope complete with locking snap hook one end. There will be one vertical lifeline on all columns, which require to be climbed. Wherever possible, installation of vertical lifelines will be completed prior to column erection;
- Each ironworker will be supplied with a full body harness, complete with a back “D” ring, a fall arrestor rope grab for 5/8 rope, complete with integral 3 foot lanyard with shock absorber, plus a second 3 foot lanyard, complete with shock absorber. The fall arrestor rope grab complete with integral lanyard and shock absorber is utilized when climbing. After moving onto the structural members the rope grab and lanyard assembly either is disconnected and carried with the worker or is disconnected and parked on the vertical lifeline.
- Horizontal lifelines will be minimum ½ inch wire rope;
- Engineered anchor posts will be installed to the top flange of roof trusses and / or roof beams;
- Horizontal lifelines, complete with engineered anchor posts, will be installed on each roof truss. Whenever possible, the installation of lifeline and anchor posts will be completed at grade prior to the truss being erected;
- Each ironworker will be supplied with an additional ¼ inch by 6 ft wire rope sling and caribiner to permit supplementary tie-off to beams and columns.

- At the interior floor level, after initial connection has been completed, the bolt up crew will access the work location using ladders, and will tie off to existing steel using lanyards. Workers moving along beams will be required to travel in a crouched position with the lanyard attached to the steel member or wire rope sling looped around steel member and trailing behind;

4.3 The following methods will be used when transferring position or moving about the structure:

- **To transfer a lanyard from one tie-off point to another two lanyards must be used;**
- To transfer a lanyard from a vertical lifeline to a horizontal the workers are to remain tied to the vertical line until the lanyard is secured to the horizontal lifeline, and vice versa;
- For safe access to roof level access will be via manbasket or a temporary staircase will be erected and secured to the structure. The temporary staircase will be positioned close to the immediate work areas and moves as the work proceeds. Whenever possible, workers are to avoid climbing the steel to reach roof level;
- When moving across steel where no lifeline is in place, workers will be required to tie-off to the structural-framing member upon which they are working. Workers will move across steel with a short lanyard and will traverse the steel in a crouched position straddling the beam, walking on the bottom flange and holding the top flange. A choker will be wrapped around the beam, and the lanyard secured to the choker, and
- To climb columns vertically, workers will secure themselves to the installed vertical lifelines using the cable grabs and lanyard assembly attached to the “D” ring on the back of their body harness. Workers will secure their second lanyards to the horizontal lifeline or framing member prior to parking their cable grab and lanyard on the vertical lifeline.

The following is a summary of our site specific fall protection policy;

- **Any worker working ten feet or more above grade must be protected from falling utilizing either a Fall Restraint System or a Fall Arrest System or a Safe Work Zone, six and a half feet from any open edge, that you are not permitted to enter.**