

NORTHERN  STRANDS

# ENGINEERED FALL PROTECTION SYSTEMS



# WHAT TO EXPECT FROM NORTHERN STRANDS ENGINEERED FALL PROTECTION

Fall Protection is a serious business. Designing Engineered Fall Protection systems is a responsibility and privilege that we do not take lightly.

Northern Strands is clearly a market leader in this highly specialized field.

Design experience is paramount. Backed by an experienced team with a thorough understanding of the applicable engineering principles, Northern Strands applies these principles to both flexible and rigid systems. Being an integral part of a global network and pooling resources ensures our success in providing you with a system that your workers will accept and use.

Structural engineering is integral to each project. A system is not complete and cannot be considered certified for use until the receiving structure has been inspected, analyzed and designated as able to withstand the potential fall arrest loads. These critical steps cannot be bypassed. Northern Strands offers the assurance that these steps will be taken.

Utilizing state of the art software, derived from live tests, the system design will include every detail for each component of the assembly as well as any equipment used in conjunction with the system.

The pre-design incorporates the analysis of the worker's tasks and how the systems will allow the worker to continue to perform the tasks safely and efficiently. The system will not dictate to the worker. It is the worker and their tasks that drive the system selection and design.



## What you should expect from your Engineered Fall Protection System Provider:

- Design personnel and installation crews fully trained and recognized by the manufacturer.
- The professional technical skills to analyze the requirements and design a solution that meets all OH&S regulations and CSA standards.
- The right tools and skills to complete the installations and commissioning of the fall protection system.

### Did you know?

In 2015 there was  
1,633 lost time injuries  
in Saskatchewan from  
workplace falls.

- WCB Saskatchewan

# LIFELINES

## Horizontal Lifeline Systems

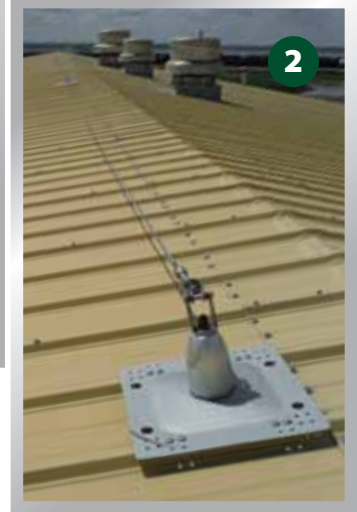
Rooftop or overhead horizontal lifeline systems that allow easy movement and protection in fall hazard areas. Stainless steel components are the foundation for horizontal lifelines. Each component is CSA certified.

### 1. HIGH TENSION LINES

Commonly used at railcar loadouts in grain terminals, mines and in truck bays.

### 2. LOW TENSION LINES

Low tension lines found on rooftops with varying degrees of slope and used for fall arrest or travel restraint.



## Did you know?

An employer or contractor shall ensure that workers use a fall protection system at a temporary or permanent work area where: (a) a worker may fall three metres or more; or (b) there is a possibility of injury if a worker falls less than three metres.”

- OH&S Saskatchewan

# ANCHORS

## Rooftop Anchors

Anchors are secured to the structure and can be used for tie-off of suspended access, bosun chairs, and vertical and horizontal lifeline systems.

### 3. WALL ANCHORS

Tie-back or lifeline wall anchors are often attached to a penthouse. Can be bolt-through or adhesive and are safety-rated to 5000lbs.

### 4. SINGLE POINT FORCE MANAGEMENT ANCHORS

These anchors exert less force on rooftops. They are cost effective and require minimal structural upgrades.

### 5. RIGID POST ROOFTOP ANCHOR

Can be intergrated into a rooftop lifeline system. Window washing is a typical usage for this type of anchor.

### 6. DUAL POST ANCHOR

These anchors consist of two posts attached to the same plate. This anchor allows “protected” travel along the lifeline attached to the tall anchor while simultaneously allowing rappelling from the short anchor, via swing stage or individual. (Typical application is arch-rib/glulam buildings)



# RAILINGS, WALKWAYS, LADDERS & STAIRS

## 7. GUARDRAIL

Non-penetrating guardrail that sits on rooftops or clamps to standing seam roof structures provides a barrier to the leading edge. A variety of railing types and custom configurations are available. Guardrails prevent falls before they even happen; they are one of the most pro-active forms of fall protection.

## 8. FIXED LADDERS

Fixed ladders provide safe access to work areas and ensure workers comply with OH&S regulations. Ladders can be custom-built and field-fitted for your unique location requirements. A vertical lifeline system installed on a fixed ladder is more efficient than using a double-leg lanyard for fall protection while climbing a ladder. Rather than using the time consuming method of attaching and detaching your lanyard hooks, you can simply attach to the vertical life line and climb the ladder at a normal pace.

## 9. WALKWAYS & STAIRS

Walkways provide safe access to and from work areas located at heights. This lightweight bolt together component system is a very flexible solution for your stairway needs. The components can be configured to adapt to the contour of your roof top to provide safe and compliant access to varying rooftop locations. Comprised of rugged aluminum and powder coated pipe, this product is very versatile.



# FALL PROTECTION PRODUCTS

## 10. CONTROL ZONE MARKERS

Keep employees and workers aware of the leading edge with clearly visible control zone markers.

## 11. FALL PROTECTION DAVIT SYSTEMS

Every organization must have a fall protection rescue plan and fall protection davit systems can be an integral part of the rescue operation. Davit systems allow a person to mount a fall protection device without being exposed to a fall hazard. When used properly, a fall protection davit can reduce a falling person's chance of swinging into the nearest wall or structure.

## 12. PORTABLE TRAVEL RESTRAINTS

When flexibility in use and movement are required, the portable systems can be installed and moved where needed.



## ✓ Did you know?

Every 3 days a worker dies as a result of a fall from height. Survivors of these accidents often sustain the most serious injuries resulting in significant claims, personal suffering and business losses.

- Alberta Government

# FALL PROTECTION PRODUCTS (CONT.)

## 13. OVERHEAD RAIL/I-BEAM TROLLEY

The overhead rail system and the I-Beam Trolley system often provide solutions where existing structure is already in place. This option is the answer when ground clearance is a concern, as there is less deflection to account for.



## 14. ROOFTOP RAIL SYSTEM

A direct-to-roof attached system that can change direction and roof slopes up to 15 degrees. This lightweight and versatile product sits low to the roof so as not to obstruct foot traffic.



## 15. RIGID RAIL SYSTEM

This system is ideal for applications such as rail loading, rail unloading, truck or rail hatch opening/closing, truck tarping and general vehicle and equipment maintenance.

## 16. FALL PROTECTION SUB-SYSTEMS

- Harnesses
- Self-retracting lanyards
- Rescue self-retracting lanyards
- Rescue poles
- Lanyards



## Did you know?

The employer or contractor shall ensure that a worker is trained in the fall protection plan and the safe use of the fall protection system before allowing the worker to work in an area where a fall protection system must be used.

# CAPABILITIES AND SERVICES

## INSTALLATIONS & INSPECTIONS

### INSTALLATIONS

We install the products that we sell. Northern Strands' installers are trained and certified by the manufacturer.

### RECERTIFICATIONS

We can look at your existing system – even if we did not install it – and can inspect and recertify it or recommend a solution that better meets your evolving needs.

### ORIENTATION

Your end-users will be oriented on using the system so they use it the way it was intended. Safety is the first priority.

### INSPECTIONS

Northern Strands sends reminders to customers when annual inspections are due. Inspections are conducted by competent personnel under the direction of our engineering department. All inspections are done in compliance with OH&S regulations and CSA standards.

### RENTALS

Northern Strands can provide you with the rental of some fall protection systems so that you can see what works best for you. Temporary jobs also require fall protection and we can meet those needs on a rental basis.

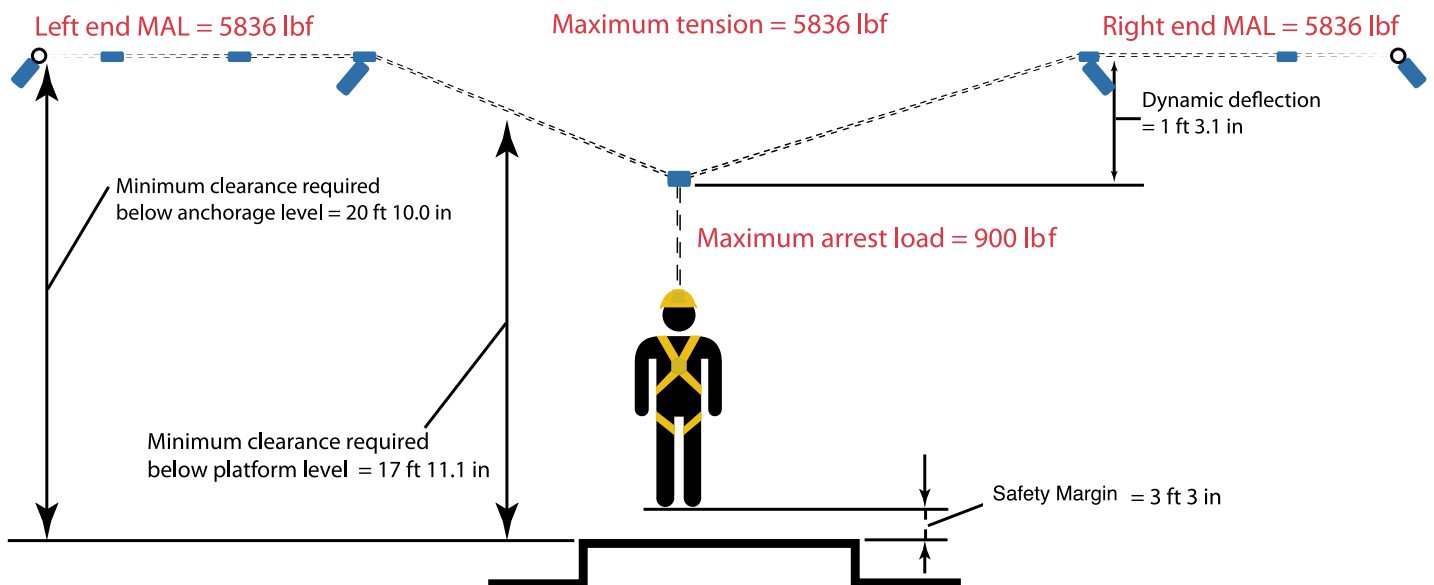
## CONSULTING

### SITE ASSESSMENTS

Northern Strands will conduct an assessment of your site. We will identify fall hazards and recommend suitable, cost effective solutions.

### CUSTOM-DESIGNED SOLUTIONS

We can provide you with a custom-designed solution that meets your unique safety needs. It is more than just getting a system installed that complies with the regulations – it is about providing solutions for each customer.



# CAPABILITIES AND SERVICES

## ENGINEERING CAPABILITIES

Northern Strands is a leader in the design of engineered fall protection systems. Our team works closely with our clients to design, build and certify fall protection systems that comply with regulations and standards.

### DESIGN OF CUSTOM SOLUTIONS

Northern Strands will design what is required to build a fall protection system that meets safety regulations and that works in your unique environment. All situations and locations that present a fall hazard must be addressed. Northern Strands has had the privilege of addressing a wide variety of customer fall protection needs throughout North America.

### DUAL-STAMPED DRAWINGS

With a greater understanding and importance being placed on safety in the workplace, the standards and guidelines are ever-changing and are becoming more stringent every year. Northern Strands recognizes that these more stringent criteria drastically increase the liability of owners and decision-makers. Therefore, Northern Strands is committed to limiting that liability by providing drawings that have stamps in every province in Canada certifying BOTH the fall protection system AND the structure that the system is attached to. This process sets Northern Strands apart from its competitors and provides peace-of-mind and protection in the unfortunate event of a workplace incident.

### ANALYZE POTENTIAL FALLS

Part of the certification process includes analyzing the force of falls and ensuring that the solution provided will keep your employees safe.



## ENGINEERED FALL PROTECTION DIVISION

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