FALL PROTECTION PROCEDURE

1. PURPOSE

1.1 This procedure provides guidance to University employees that work at heights. Conformance to this Procedure aids the University in preventing falls by avoiding work at heights where possible; using fall protection equipment or other controls; and minimizing the consequences if a fall should occur. Although work at heights may be covered by other regulations or procedures such as ladders, scaffolds or other elevated work platforms, this procedure applies to all work performed above four feet.

2. SCOPE

2.1 This procedure applies to all faculty, staff, student workers, and contractors who may perform elevated work at the University of Notre Dame.

2.1.1 Specific guidance on the use of mobile elevated working platforms can be found in the University's Aerial Platform and Scissor Lift Procedure.

2.1.2 Specific guidance on the use of ladders and scaffolding can be found in the University's Ladder and Scaffolding Procedure.

3. DEFINITIONS

3.1 **Authorized Person** - A person authorized by the organization to perform work at height. May be a faculty, staff, student worker, contractor, or sub-contractor.

3.2 **Body belt (safety belt)** - A strap with means both for securing it about the waist and for attaching it to a lanyard, lifeline, or deceleration device.

3.3 **Competent Person** - A person who is capable of identifying existing and predictable hazards in the surroundings or working conditions associated with the work at height which are hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to solve work at height problems. (for example – supervisor or team leader of authorized person)

3.4 **Construction Related Activities** - Activities that involve building, erecting new structures or processes, relocation of equipment or processes, installation of new processes, etc. This does not include typical maintenance activities such as painting, changing of light bulbs or related fixtures, electrical work, preventive maintenance activities, etc.

3.5 **Deceleration Device** - Any mechanism such as a rope grab, rip-stitch lanyard, tearing lanyard, deforming lanyard, or automatic self-retracting lifeline/lanyard that serves to dissipate a substantial amount of energy during a fall arrest.

3.6 **Double Lanyard** - Two independent lanyards, each with its own individual shock absorbing device.

3.7 **Fall Prevention** - Fall prevention is any means used to reasonably prevent employee exposure to fall hazards, either by eliminating work at elevation, using aerial lifts, scaffolds, work platforms with guardrails, or similar protection.

3.8 **Fall Protection** - Fall protection involves using personal fall arrest equipment to prevent the completion of a fall and to reduce the possibility of resulting injuries.

3.9 **Full Body Harness** - An engineered design of straps which are secured about the employee in a manner that will distribute the fall arrest forces over the thighs, pelvis, waist, chest and shoulders with means of attaching it to other components of a personal fall arrest system.

3.10 **Leading Edge** - The edge of a floor or roof.

3.11 **Mobile Elevated Work Platforms** - Vehicle mounted aerial devices, elevating rolling work platform, boom- type elevating work platform, or self-propelled elevating work platform.

3.12 **Personal Fall Arrest System** - An approved system used to arrest an employee in a fall from a working level. It consists of an anchor point, anchorage devices, connectors, full body harness, and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.

3.13 **Personal Fall Restraint System** - System that prevents a worker from reaching an unprotected leading edge on a horizontal surface, such as a roof. May include guard rails, cable systems, and fixed anchor points.

3.14 **Positioning Device System (Horizontal)** - A restraining device positioned in such a way that a person is able to work at the edge walking / working surface but cannot physically fall over the edge. Positioning Device Systems cannot be used for fall arrest.

3.15 **Positioning Device System (Vertical)** - A body harness system rigged to allow a person to work on a horizontal surface while wearing a harness secured to a lanyard no longer than twenty-four inches, on a vertical surface such as a wall or fixed ladder. The positioning device system allows a person to work with both hands free while leaning. Positioning Device Systems cannot be used for fall arrest.

3.16 **Qualified Person** - A person who, by extensive knowledge, training and experience, has successfully demonstrated to the organization or the organization's designee the ability to resolve problems relating to work at height or the project. (for example - an engineer or fall protection consultant).

3.17 **Rope Grab** - An approved deceleration device that travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee.

3.18 **Shock Absorbing Lanyard** - A flexible line of rope, wire rope, or strap which generally has a connector at each end for connecting the body harness to a lifeline or anchor point and has deceleration capabilities as part of the entire unit (i.e., rip-stitching, tearing or deforming lanyards).

3.19 **Self-Retracting Lifeline/Lanyard** - A deceleration device containing a drum-wound line that can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

3.20 **Snaphook** - All snaphooks used are to be of the locking type with a self-closing, self- locking keeper that remains closed and locked until unlocked and pressed open for connection or disconnection.

3.21 **Unprotected Sides and Edges** - Any side or edge (except at entrances to points of access) of an elevated walking/working surface, e.g., floor, roof, ramp or runway where there is no wall or guardrail system at least 42 inches (105 cm) high.

3.22 **Warning Line System** - A visual or physical warning on a roof 15 feet or 5 meters from the edge to warn employees that they are approaching an unprotected opening (including skylights), roof side or edge, and which designates an area in where roofing work may take place without the use of guardrails, fall arrest, or safety net systems to protect employees in the area.

3.23 **Work At Heights** - Work performed at a height equal to or greater than 4 feet (1.2 meters).

3.24 **"Y" Lanyard** - Two lanyards sharing a common shock-absorbing device.

4. RESPONSIBILITIES

4.1 Department Manager/Supervisor – Responsible for ensuring employees under their direct control adhere to this procedure and contractors brought in under their authority are aware and are contractually required to adhere to this procedure. Identifies the tasks that require fall protection.

4.2 Competent Person – Conducts the risk assessment for fall hazards. Shall be knowledgeable on applicable fall protection regulations and requirements. Selects appropriate fall protection equipment for specific tasks.

4.3 Authorized Person – Responsible for adhering to all requirements in the fall protection program. Responsible to cease work and take appropriate action to include communicating to the appropriate management level when new or previously unknown hazards are identified.

4.4 The Risk Management & Safety Department shall:
- 4.4.1 Develop and maintain the fall protection program and provide guidance to departments and individuals.
- 4.4.2 Coordinate necessary training, which primarily consist of elevated platform safety, scaffolding safety, ladder safety and personal fall arrest system safety for authorized persons.
- 4.4.3 Serve the role of technical support and consultation to interpret requirements and establish safe practices.

4.5 Departments with personnel exposed to fall hazards
- 4.5.1 Identify competent and authorized persons within their department.
- 4.5.2 Contact Risk Management & Safety for technical support when questions arise regarding compliance and safe procedures.
- 4.5.3 Provide proper safety equipment to their affected employees and ensure personnel using have been properly trained prior to use.

5. GENERAL REQUIREMENTS OF FALL PROTECTION

5.1 All work above 4 feet (1.2 meters) shall follow this procedure or provide adequate fixed guarding systems (i.e. guardrails). All individuals within 15 feet of an edge shall be protected from falling by a guardrail or fall arrest system.

5.2 Warning systems shall be in place on a roof 15 feet or 5 meters from the edge to warn authorized persons that they are approaching an unprotected opening (including skylights), roof side or edge, and which designates an area where roofing work may take place without the use of guardrails, fall arrest, or safety net systems to protect employees in the area.

5.3 If authorized persons must work at heights, a competent person shall determine the type of fall protection required.

5.4 Fall protection equipment shall be used in accordance with the manufacturer's instructions. This includes weight and size limitations, and shall not be altered in any way without the manufacturer's written authorization.

5.5 Anchor points shall be capable of supporting at least 5000 pounds per employee attached. Guardrails are not considered an acceptable fixed anchor.

5.6 Risk Mitigation
- 5.6.1 Where the risk of a fall from work at height is identified, departments shall use the following hierarchy of controls to either eliminate the hazard or reduce the risk of a fall.

5.6.1.1 Elimination

Eliminate the risk of a fall, e.g. relocate the work to a safe working height, to the ground or existing solid construction with guardrail/walls, etc.

5.6.1.2 Passive Fall Protection

If it is not reasonably practical to eliminate the risk of a fall, reduce the risk by the use of passive fall protection equipment e.g. guard-railing, scissor lifts, elevated work platforms, scaffolds, etc. Work from any mobile, elevated work structure shall require the additional use of a Personal Fall Arrest System.

5.6.1.3 Work Positioning System

If it is not reasonably practical to eliminate the risk or use passive fall protection, use work positioning systems to physically prevent a fall from occurring.

5.6.1.4 Personal Fall Arrest System

If it is not reasonably practical to use the above options, the use of Personal Fall Arrest Systems to arrest a fall after it occurs shall be used. Body belts are not permitted for use as part of a Personal Fall Arrest System.

- When personnel are required to use personal fall arrest systems, a rescue strategy shall be developed by the Fall Protection Competent Person. The hierarchy of fall protection rescue includes self-rescue by the worker who has fallen, assisted rescue by co-workers, and, if all else fails, calling in professional rescuers.
- The following considerations shall be part of a rescue procedure:
    - Instruct personnel working at heights that if a fall occurs, immediately contact 631-5555 from a cell phone or 911 from a campus phone to summon Notre Dame Fire Department (NDFD).

5.6.1.5 Administrative Controls

If none of the above measures are reasonably practical, or the risk of a fall still remains, the risk shall be reduced by the use of documented administrative controls that specify the procedures to be used to mitigate the risk,

such as Warning Line System, Fall Protection Plan, Job Safety Analysis, etc.

NOTE: The selection and use of a Work Positioning System, Personal Fall Arrest System, or Administrative Controls shall be approved by the supervisor in consultation with a Competent Person. Contact Risk Management and Safety as needed.

6. ROOF ACCESS REQUIREMENTS

6.1 Purpose

6.1.1 A variety of University and contract personnel are frequently required to access roofs to conduct inspections, perform maintenance, install equipment, make repairs, etc. The purpose of the roof access requirements is to prevent falls and roof access related injuries. Special precautions shall be taken when working on building roofs.

6.2 Roof Access Signs & Restricted Access

6.2.1 All fixed roof access ways (e.g. fixed stairways, ladders, elevators) shall be posted with a signage stating the following information or equivalent:

"NOTICE"

ENTRANCE TO THE ROOF IS RESTRICTED TO
AUTHORIZED PERSONNEL ONLY

PRIOR TO ACCESSING THIS ROOF, YOU MUST
REVIEW THEN SIGN & DATE THE POSTED HAZARD ASSESSMENT,
If there is NOT a Hazard Assessment posted – DO NOT ACCESS the ROOF!

Contact FD&O Maintenance (631-7701) or Risk Management & Safety (631-5037)
If you have Questions

6.3 Prior to accessing any roof, the following shall be completed:

6.3.1 Personnel shall complete authorized training.

6.3.2 A competent person shall complete the Fall Protection Hazard Assessment and post it on all roof access points. See Appendix C for the Fall Hazard Assessment

6.3.3 Personnel accessing the roof shall review the roof's specific access requirements. At a minimum, this shall include the Fall Protection Hazard Assessment but may include other documents such as standard operating procedures. Personnel shall acknowledge understanding by signing the acknowledgement sheet.

7. EQUIPMENT

7.1 In order to ensure compatibility of systems and equipment, all University fall protection equipment shall be purchased from a singular, approved vendor (See Appendix B).

8. MAINTENANCE AND INSPECTION

8.1 Personal Fall Arrest Systems

8.1.1 Personal Fall Arrest Systems and associated devices/equipment shall be visually inspected prior to each use, and periodically per the manufacturer's specifications for excessive wear, damage and other signs of deterioration. Periodic inspections of fall arrest systems shall be documented using Appendix A.

8.1.2 Defective or out of date equipment shall be immediately removed from service, tagged and promptly destroyed.

8.1.2.1 Personal Fall Arrest Systems that are involved in a fall arrest incident shall be taken out of service immediately and permanently. Retractable lifelines shall be sent back to the manufacturer for repair and re- certification or destroyed. Notify Risk Management and safety of a fall utilizing fall protection equipment.

8.1.2.2 Harnesses, lanyards, and retractable devices shall have a legible tag or data plate attached to the device or it shall be taken out of service.

8.1.2.3 Fall protection equipment shall be replaced as required per the manufacturer's instructions.

9. QUALIFICATIONS & TRAINING

9.1 Authorized Persons performing work at height shall be trained in site-specific fall protection procedures and any task specific procedures that are established prior to performing any work at height.

9.2 Authorized Persons shall demonstrate an understanding of the

training and use of the equipment including elevated work platforms. This shall be accomplished through a documented exam and/or documented practical demonstration.

9.3 Refresher training shall be provided when:

9.3.1 Changes in the workplace render previous training obsolete

9.3.2 Changes in the types of fall protection equipment or aerial lifts to be used render previous training obsolete

9.3.3 Workplace observations indicate that employees have not retained an understanding of the skills acquired through their initial training

9.3.4 Changes are made to the fall protection program, or

9.3.5 Competent personnel identify the need for additional training

9.4 At a minimum, refresher training shall be completed every 3 years.

9.5 Personnel who maintain and inspect personal fall arrest systems shall receive formal training on how to properly maintain and inspect these systems. The training shall be conducted by a qualified person or competent person.

10. RECORDS

10.1 Records shall be retained for either three years or the applicable national regulatory requirements, whichever is greater. This includes the following:

10.1.1 All training documentation

10.1.2 All Audit and Program Review Documentation

10.1.3 Pre-Shift Aerial and Scissor Lift Inspection Form

10.1.4 Fall Hazard Assessments

10.1.5 Work Practice Procedures

11. AUDIT AND PROGRAM REVIEW

11.1 A documented annual evaluation shall be conducted of the Fall Protection Procedure by Risk Management and Safety.

11.2 The annual evaluation shall include a thorough review of the following:

11.2.1 The University's Fall Protection Procedure to determine if it is complete and up to date.

11.2.2 Equipment inspection checklists to evaluate thoroughness and completeness of the inspections.

11.2.3 Training records to determine if all required training was appropriately conducted and attended.

11.2.4 The availability of all the records required to be maintained by this procedure.

11.3 The results of the evaluation shall be communicated to all appropriate levels of management. All actions that are necessary to improve the process shall be documented and completed.

REVISION TABLE

History	Effective Date
Newly created procedure	October 2017

Appendix A
Inspection and Maintenance Checklists
For Fall Arrest Components

Warnings: Always read and follow the instructions and warnings contained on the product and packaging before using any fall protection equipment and do not exceed time in use limitations.

Inspection: All fall protection equipment shall be inspected prior to each use.

Training: All workers shall be trained by a Competent Person in the proper use of fall protection/arrest equipment.

System: Only components that are fully compatible with one another shall be used.

What to do after a fall? After a fall occurs, all components of the fall arrest system shall be tagged & removed from service. Contact Risk Management and Safety at 631-5037.

Harness Inspection

1. **Webbing—**Grasp the webbing with your hands 6 inches to 8 inches (18 cm) apart. Bend the webbing in an inverted "U". The surface tension resulting makes damaged fibers or cuts easier to detect. Follow this procedure for the entire length of the webbing, inspecting both sides of each strap. Look for frayed edges, broken fibers, pulled stitches, cuts, burns, and chemical damage.

2. **D-Rings—**Check D-rings for distortion, cracks, breaks, and rough or sharp edges. The D- ring should pivot freely.

3. **Attachment of Buckles—**Inspect for any unusual wear, frayed or cut fibers, or broken stitching of the buckle or D-ring attachments.

4. **Tongue/Grommets —** The tongue receives heavy wear from repeated buckling and unbuckling. Inspect for loose, distorted or broken grommets. Webbing should not have additional holes punched.

5. **Tongue Buckles—**Buckle tongues should be free of distortion in shape and motion. They should overlap the buckle frame and move freely back and forth in their socket. Roller should turn freely on the frame. Check for distortion or sharp edges.

6. **Friction and Mating Buckles —** Inspect the buckle for distortion. The outer bars and center bars shall be straight. Pay special attention to corners and attachment point at the center bar.

Lanyard Inspection

When inspecting lanyards, begin at one end and work to the opposite end, slowly rotating the lanyard so that the entire circumference is checked.

1. **Hardware:**

a) *Snaps:* Inspect closely for hook and eye distortions, cracks, corrosion, or pitted surfaces. The keeper (latch) should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper locks shall prevent the keeper from opening when the keeper closes.

b) *Thimbles:* The thimble shall be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the thimble shall be free of sharp edges, distortion, or cracks.

Steel Lanyard—While rotating the steel lanyard, watch for cuts, frayed areas, or unusual wearing patterns on the wire. Broken strands will separate from the body of the lanyard.

Web Lanyard—While bending webbing over a pipe, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Swelling, discoloration, cracks and charring are obvious signs of chemical or heat damage. Observe closely for any breaks in stitching.

Rope Lanyard—Rotation of the rope lanyard while inspecting from end-to-end for any fuzzy, worn, broken or cut fibers. Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout, following a short break-in period.

Shock Absorber Pack—The outer portion of the pack should be examined for burn holes and tears. Stitching on areas where the pack is sewn to D-rings. Belts or lanyards should be examined for loose strands, rips, and deterioration.

Shock-Absorbing Lanyard—Shock-absorbing lanyards should be

examined as a web lanyard (described in Item 3 above). However, also look for the warning flag or signs of deployment. If the flag has been activated, remove this shock-absorbing lanyard from service.

NOTE: All items that are found to be defective shall be tagged as "DEFECTIVE" and removed from service. A life may depend on it.

Some items may be able to be sent to the manufacturer repaired, refurbished and re-certified for use and returned to service.

Cleaning

Basic care of all safety equipment will prolong the durable life of the unit and will contribute toward the performance of its vital safety function. Proper storage and maintenance after use are as important as cleaning the equipment of dirt, corrosives, or contaminants. Storage areas should be clean, dry and free of exposure to fumes or corrosive elements.

Nylon or Polyester—Remove all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent. Work up lather with a vigorous back and forth motion; then wipe with a clean cloth. Hang freely to dry, but away from excessive heat.

Drying—Equipment should dry thoroughly without close exposure to heat, steam, or long periods of sunlight.

FULL BODY HARNESS

Inspection Checklist / Log

Harness Model			**Manufacture Date**	
Serial Number			**Lot Number**	
Purchase Date				

GENERAL FACTORS	INSPECT FOR	STATUS		SUPPORTING DETAILS
Hardware: includes D-rings, buckles, keepers, & back pads	Damage, distortion, sharp edges, burrs, cracks, corrosion, proper operation of working parts		**Accepted**	
			Rejected	
Webbing:	Cuts, burns, tears, abrasion, frays, excessive soiling, discoloration		**Accepted**	
			Rejected	
Stitching:	Pulled or cut stitches		**Accepted**	
			Rejected	
Labels:	All labels securely held in place and fully legible		**Accepted**	
			Rejected	

Overall Disposition	**ACCEPTED**		**INSPECTED BY**	
	REJECTED		**DATE INSPECTED**	

LANYARDS

Inspection Checklist / Log

Lanyard Model			**Manufacture Date**	
Serial Number			**Lot Number**	
Purchase Date				

GENERAL FACTORS	INSPECT FOR	STATUS		SUPPORTING DETAILS
Hardware: includes snap hooks, carabiners, adjusters, keepers, thimbles, & D-rings,	Damage, distortion, sharp edges, burrs, cracks, corrosion & proper operation		**Accepted**	
			Rejected	
Webbing:	Cuts, burns, tears, abrasion, frays, excessive soiling, discoloration		**Accepted**	
			Rejected	
Stitching:	Pulled or cut stitches		**Accepted**	
			Rejected	
Synthetic Rope:	Pulled or cut yarns, burns, abrasions, knots, excessive soiling, discoloration		**Accepted**	
			Rejected	
Wire Rope:	Broken wires, corrosion, kinks, separation of strands		**Accepted**	
			Rejected	
Energy Absorbing Component:	Elongation, tears, excessive soiling		**Accepted**	
			Rejected	
Labels:	All labels securely held in place and fully legible		**Accepted**	
			Rejected	

Overall Disposition		**ACCEPTED**		**INSPECTED BY**	
		REJECTED		**DATE INSPECTED**	

HOOKS / CARABINERS

Inspection Checklist / Log

Hook / Carabiner Model			**Manufacture Date**	
Serial Number			**Lot Number**	
Purchase Date				

GENERAL FACTORS	INSPECT FOR	STATUS		SUPPORTING DETAILS
Physical Damage:	Cracks, sharp edges, burrs, deformities & locking operation		**Accepted**	
			Rejected	
Excessive Corrosion:	Corrosion which effects the operation and/or strength		**Accepted**	
			Rejected	
Markings:	Mark sure all markings are legible		**Accepted**	
			Rejected	
			Accepted	
			Rejected	

Overall Disposition		**ACCEPTED**		**INSPECTED BY**	
		REJECTED		**DATE INSPECTED**	

TIE-OFF ADAPTOR / ROPE GRAB

Inspection Checklist / Log

Adaptor / Grab Model			**Manufacture Date**	
Serial Number			**Lot Number**	
Purchase Date				

GENERAL FACTORS	INSPECT FOR	STATUS		SUPPORTING DETAILS
Hardware: includes D-rings	Damage, distortion, sharp edges, burrs, cracks & corrosion		**Accepted**	
			Rejected	
Webbing:	Cuts, burns, tears, abrasion, frays, excessive soiling, discoloration		**Accepted**	
			Rejected	
Stitching:	Pulled or cut stitches		**Accepted**	
			Rejected	
Labels:	All labels securely held in place and fully legible		**Accepted**	
			Rejected	

Overall Disposition		**ACCEPTED**		**INSPECTED BY**	
		REJECTED		**DATE INSPECTED**	

SELF-RETRACTING LIFELINES

Inspection Checklist / Log

SRL Model			**Manufacture Date**	
Serial Number			**Lot Number**	
Owner Dept.			**Purchase Date**	

GENERAL FACTORS	INSPECT FOR	STATUS		SUPPORTING DETAILS
Impact Indicator:	Activation (rupture of stitching, elongated indicator, etc)		**Accepted**	
			Rejected	
Screws / Fasteners:	Damage & make certain all screws & fasteners are tight		**Accepted**	
			Rejected	
Housing:	Distortion, cracks & other damage. Inspect anchoring loop for distortion & damage.		**Accepted**	
			Rejected	
Lifeline:	Cuts, burns, tears, abrasion, frays, excessive soiling & discoloration, broken wires		**Accepted**	
			Rejected	
Locking Action:	Proper lock-up of brake mechanism		**Accepted**	
			Rejected	
Retraction/ Extension:	Inspect spring tension by pulling lifeline out fully & allowing it to retract fully (no slack)		**Accepted**	
			Rejected	
Hooks / Carabiners:	Physical damage, corrosion, proper operation & markings		**Accepted**	
			Rejected	
Reserve Lifeline:	Inspect reserve lifeline retention systems for deployment		**Accepted**	
			Rejected	
Labels:	All labels securely held in place and fully legible		**Accepted**	
			Rejected	

Overall Disposition		**ACCEPTED**		**INSPECTED BY**	
		REJECTED		**DATE INSPECTED**	

Appendix B
Approved Fall Protection Equipment

In order to ensure system compatibility throughout campus, the University will standardize the types of fall protection equipment used. A list pre-selected, general purpose fall protection items is located **here**. This list encompasses the most frequently needed items. If you have questions about the listed equipment or need items not listed, please contact your department competent person or our Airgas representative directly.

Large Orders & Unique Applications: A site visit is recommended before placing large orders or in developing solutions for custom applications. To schedule a site visit, please contact our local Airgas representative, Matt Smith at:

- Phone: (574) 520-8372
- Email: matthew.t.smith@airgas.com

Routine Orders & General Applications: To order general purpose equipment from the pre-selected list, please use the following process:

- Consult the list of pre-selected fall protection equipment to identify items by part number
- Go to the buyND website and select items/insert part number from the catalog
- Submit your order through Airgas (order will be processed according to your department's procedure)

****** Notes:***

1. Once equipment is received, your department competent person must add it to the department inventory using the Fall Protection Equipment Form.

2. Departments may continue to use fall protection equipment and systems they currently have providing that these items have not reached a wear-out date and pass a competent person inspection.

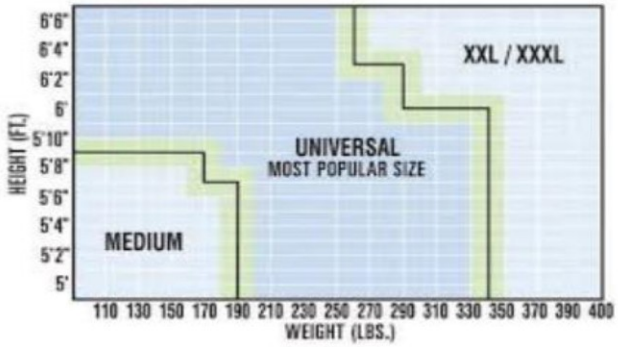
Anchorage

Airgas Part Number	Product Description	Product Price	Product Visual
HON8816-14/	Adjustable Beam Anchor	$184.55	
HON8183/3FTGN	3' Cross Arm Strap with D-Rings	$33.51	

Body Wear

Airgas Part Number	Product Description	Product Price	Product Visual
HONTF4000/UAK	Full Body Harness with Polyester Stretch Webbing with back D-Ring	$59.42	
HONAC-QC/UGN	Full Body Universal Safety Harness with quick connect buckles	$202.32	
HONACF-QCUG	Full Body Harness size Large/X-Large with quick connect and front D-Rings	$218.95	

Harness Sizing Chart



Connecting Devices

Airgas Part Number	Product Description	Product Price	Product Visual
HON216TWLSZ76FTGN	6' Lanyard with 2 locking snap hooks	$63.19	
HONMFL-1-Z7/6FT	Turbolite 6' Fall Limiter with steel carabiner and steel locking snap hook	$134.68	
HONMFLEC-3/6FT	Leading Edge Self-Retracting 6' Lifeline with steel snap hook for use in sharp edge applications	$232.80	
HONMFL-3-Z7/6FT	Twin Turbo 6' Fall Limiter with G2 connector and steel locking snap hook	$281.15	

Additional Equipment

Airgas Part Number	Product Description	Product Price	Product Visual
HON9099X/12	Step Relief Safety Device	$17.92	
HON8173/U	Compact, stainless steel trailing rope grab for use with 5/8" rope	$65.39	
HON300L-Z7/50FTBL	50ft 5/8" diameter copolymer blend rope with locking snap hook and loop	$60.63	
HON8175SLSZ73FTYL	Trailing Rope Grab 8175 with SofStop shock absorber and locking snap hook	$183.51	

Appendix C

Fall Hazard Assessment

FALL HAZARD ASSESSMENT

PART I: GENERAL INFORMATION

Building Name:	Specific Location/Equipment: (e.g. air handler #1; 2nd floor north hatch)	* Person Performing Assessment: * *Assessment to be performed by competent person*	Date:

Reason for accessing area?	**Reason** (check box)		**Equipment & Distance to Edge** (circle one)	
	Inspection		Air Handling Unit	Rooftop
	Maintenance		Chiller Tower	Vents
	Repair		Drains	Other
	Testing		Heater	

PART II: HAZARD IDENTIFICATION

1. What is the method of access?	Stairs Fixed Ladder Portable Ladder Ship's Ladder Other
	All "Yes" answers must be addressed in Part III

	YES	NO
2. Is access point within 15' of an unprotected edge?		
3. Could the employee approach within 15' of an unprotected edge?		
4. Does the task expose workers to a fall of 4 or more feet?		

5. Exacerbating Factors			
	Low Light	Trip Hazards	Exposure to High Winds
	Slippery Surfaces	Protruding Objects	Floor Openings
	Sloping Surfaces	Unstable Surfaces/Footing	Skylights
	Other		

PART III: HEIRARCHY OF CONTROLS (from most to least preferred)

	YES	NO	COMMENT / DESCRIPTION
ELIMINATION: Can the work be relocated to a non-fall hazard area?			
PASSIVE MEASURES: Can engineering controls be put in place? *(guardrails/parapet – must be 42" +/- 3", scaffolding with guardrails)*			
FALL RESTRAINT SYSTEMS: Can positioning systems be used to restrict range of movement to prevent fall? * *Training required*			

FALL ARREST SYSTEMS: Can personal fall arrest systems be used to stop a fall after it occurs? ** Training AND rescue plan required*			Fall Height:	Fall Arrest Stopping Distance: *Stopping Distance must be less than Fall Height
			ID Tie-off Points/Equipment (must be at least 5000 lbs)	
*If you answer "**No**" to the first four methods of control, contact RMS for assistance in mitigating the hazard(s).*				

PART IV: WORK AREA DIAGRAM

Draw a rough sketch of the work area to include:

- *Access point/route*
- *Fall hazards (unprotected edges, holes, etc)*
- *Equipment working on*
- *Anchor points*

Part V: RESCUE PLAN (only if using PFA)

* *A copy of this plan must be provided to NDFD for review prior to the activity. If necessary, NDFD will contact the competent person to discuss and validate the plan.*