AERIAL LIFTS POLICY AND TRAINING

SUMMARY

The document outlines the use, safety protocols, and training requirements for aerial lifts and related equipment utilized by the Company. It emphasizes the importance of proper handling, inspection, and operation to ensure safety and efficiency in the workplace.

- Types of Aerial Lifts: The Company uses various types of aerial lifts including extensible boom platforms, aerial ladders, articulating boom platforms, vertical towers, and combinations of these devices.
- Securing Aerial Ladders: Aerial ladders must be secured in the lower traveling position using the locking device on the truck cab and the manually operated device at the base of the ladder before moving the truck.
- Inspection and Testing: All lift controls and equipment are tested and inspected before each use to ensure they are in safe working condition.
- Operator Authorization: Only authorized individuals are allowed to operate aerial lift equipment.
- Fall Protection: Employees must wear a body belt and attach a lanyard to the boom or basket when working from an aerial lift.
- Electrical Safety: A minimum clearance of 10 feet must be maintained between electrical lines and any part of the equipment or load for lines rated 50 kV or below.

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- Warning Line Systems: Warning line systems must be erected around all sides of the roof work area and comply with specific distance requirements from the roof edge.
- Controlled Access Zones: Controlled access zones must be defined by control lines and comply with specific distance and strength requirements.
- Training Requirements: Only trained employees are allowed to operate aerial lifts, and the Company provides a comprehensive training program to recognize fall hazards and minimize risks.
- Certification and Retraining: The Company maintains written certification records of training and retrains employees when necessary due to changes in the workplace or inadequacies in knowledge or skill.

POLICY

Lifts that may be used by the Company include the following types of vehicle-mounted aerial devices used to elevate personnel to job-sites above ground:

- Extensible boom platforms;
- Aerial ladders;
- Articulating boom platforms;
- Vertical towers; and
- A combination of any such devices. Aerial equipment may be made of metal, wood, fiberglass reinforced plastic (FRP), or other material; may be powered or manually operated; and are deemed to be aerial lifts whether or not they are capable of rotating about a substantially vertical axis.

Aerial lifts may be "field modified" for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer or by any equivalent entity.

Ladder Trucks and Tower Trucks

Aerial ladders will be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel.

Extensible and Articulating Boom Platforms

All lift controls and equipment are tested/inspected before each use. This determines that such controls are in safe working condition.

Only individuals authorized by the Company are allowed to operate the equipment (Aerial Lifts).

Belting off to an adjacent pole, structure, or equipment while working from an aerial lift will not be permitted.

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Employees are to stand firmly on the floor of the basket, and are not to sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.

A body belt will be worn and a lanyard attached to the boom or basket when working from an aerial lift.

Boom and basket load limits will not be exceeded.

The brakes will be set and when outriggers are used, they will be positioned on pads or a solid surface. Wheel chocks will be installed before using an aerial lift on an incline, provided they can be safely installed.

An aerial lift truck will not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation.

Articulating boom and extensible boom platforms, primarily designed as personnel carriers, will have both platform (upper) and lower controls. Upper controls will be in or beside the platform within easy reach of the operator. Lower controls will provide for overriding the upper controls. Controls will be plainly marked as to their function. Lower level controls will not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

Climbers will not be worn while performing work from an aerial lift.

The insulated portion of an aerial lift will not be altered in any manner that might reduce its insulating value.

Before moving an aerial lift for travel, the boom(s) will be inspected to see that it is properly cradled and outriggers are in stowed

For lines rated 50 kV or below, the minimum clearance between electrical lines and any part of the equipment or load is at least 10 feet. This type of work is performed by a qualified individual.

Company employees are to stand firmly on the floor of the basket, and are not to sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.

An approved fall restraint system is to be worn while working from an aerial lift.

An approved fall restraint system will be attached to the boom or basket while working from an aerial lift and is not permitted to be attached to adjacent poles or structures.

Electrical Contact Concerns

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Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines will be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance will be increased 4 in. (10 cm) for every 10kV over that voltage. However, under any of the following conditions, the clearance may be reduced:

- If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. (122 cm). If the voltage is higher than 50kV, the clearance will be increased 4 in. (10 cm) for every 10 kV over that voltage.
- If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not a part of or an attachment to the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.
- If the equipment is an aerial lift insulated for the voltage involved, and if the work is performed by a qualified person, the clearance (between the uninsulated portion of the aerial lift and the (power line) may be reduced.

Employees standing on the ground may not contact the vehicle or mechanical equipment or any of its attachments, unless:

- The employee is using protective equipment rated for the voltage; or
- The equipment is located so that no uninsulated part of its structure (that portion of the structure that provides a conductive path to employees on the ground)
- If any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines is intentionally grounded, employees working on the ground near the point of grounding may not stand at the grounding location whenever there is a possibility of overhead line contact. Additional precautions, such as the use of barricades or insulation, will be taken to protect employees from hazardous ground potentials, depending on earth resistivity and fault currents, which can develop within the first few feet or more outward from the grounding point.

WARNING LINE SYSTEMS

Warning line systems and their use will comply with the following provisions:

- The warning line will be erected around all sides of the roof work area.
- When mechanical equipment is not being used, the warning line will be erected not less than 6 feet (1.8 m) from the roof edge.
- When mechanical equipment is being used, the warning line will be erected not less than 6 feet (1.8 m) from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet (3.1 m) from the roof edge which is perpendicular to the direction of mechanical equipment operation.
- Points of access, materials handling areas, storage areas, and hoisting areas will be connected to the work area by an access path formed by two warning lines.
- When the path to a point of access is not in use, a rope, wire, chain, or other barricade, equivalent in strength and height to the warning line, will be placed across the path at the point where the path intersects the warning line erected around the work area, or the path will be offset such that a person cannot walk directly into the work area.

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- Warning lines will consist of ropes, wires, or chains, and supporting stanchions erected as follows:
- The rope, wire, or chain will be flagged at not more than 6-foot (1.8 m) intervals with high-visibility material;
- The rope, wire, or chain will be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches (.9 m) from the walking/working surface and its highest point is no more than 39 inches (1.0 m) from the walking/working surface;
- After being erected, with the rope, wire, or chain attached, stanchions will be capable of resisting, without tipping over, a force of at least 16 pounds (71 N) applied horizontally against the stanchion, 30 inches (.8 m) above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof, or platform edge;
- The rope, wire, or chain will have a minimum tensile strength of 500 pounds (2.22 kN), and after being attached to the stanchions, will be capable of supporting, without breaking, the loads applied to the stanchions The line will be attached at each stanchion in such a way that pulling on one policy of the line between stanchions will not result in slack being taken up in adjacent policy before the stanchion tips over.

No employee will be allowed in the area between a roof edge and a warning line unless the employee is performing roofing work in that area.

Mechanical equipment on roofs will be used or stored only in areas where employees are protected by a warning line system, guardrail system, or personal fall arrest system.

CONTROLLED ACCESS ZONES

Controlled access zones and their use will conform to the following provisions:

- When used to control access to areas where leading edge and other operations are taking place the controlled access zone will be defined by a control line or by any other means that restricts access.
- When control lines are used, they will be erected not less than 6 feet (1.8 m) nor more than 25 feet (7.7 m) from the unprotected or leading edge, except when erecting precast concrete members.
- When erecting precast concrete members, the control line will be erected not less than 6 feet (1.8 m) nor more than 60 feet (18 m) or half the length of the member being erected, whichever is less, from the leading edge.
- The control line will extend along the entire length of the unprotected or leading edge and will be approximately parallel to the unprotected or leading edge.
- The control line will be connected on each side to a guardrail system or wall.

Control lines will consist of ropes, wires, tapes, or equivalent materials, and supporting stanchions as follows:

- Each line will be flagged or otherwise clearly marked at not more than 6-foot (1.8 m) intervals with high-visibility material.

- Each line will be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m) [50 inches (1.3 m) when overhand bricklaying operations are being performed] from the walking/working surface.
- Each line will have a minimum breaking strength of 200 pounds (.88 kN).

On floors and roofs where guardrail systems are not in place prior to the beginning of overhand bricklaying operations, controlled access zones will be enlarged, as necessary, to enclose all points of access, material handling areas, and storage areas.

On floors and roofs where guardrail systems are in place, but need to be removed to allow overhand bricklaying work or leading edge work to take place, only that portion of the guardrail necessary to accomplish that day's work will be removed.

SAFETY MONITORING SYSTEMS

Safety monitoring systems and their use will comply with the following provisions:

- The policy designates a competent person to monitor the safety of other employees and the policy ensures that the safety monitor complies with the following requirements:
- The safety monitor will be competent to recognize fall hazards;
- The safety monitor will warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner;
- The safety monitor will be on the same walking/working surface and within visual sighting distance of the employee being monitored;
- The safety monitor will be close enough to communicate orally with the employee; and
- The safety monitor will not have other responsibilities which could take the monitor's attention from the monitoring function.

Mechanical equipment will not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations on low-slope roofs.

No employee, other than an employee engaged in roofing work [on low-sloped roofs] or an employee covered by a fall protection plan, will be allowed in an area where an employee is being protected by a safety monitoring system.

Each employee working in a controlled access zone will be directed to comply promptly with fall hazard warnings from safety monitors.

COVERS

Covers for holes in floors, roofs, and other walking/working surfaces will meet the following requirements:

- Covers located in roadways and vehicular aisles will be capable of supporting, without failure, at least twice the maximum axle load of the largest vehicle expected to cross over the cover.

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- All other covers will be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.
- All covers will be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees.
- All covers will be color coded or they will be marked with the word "HOLE" or "COVER" to provide warning of the hazard.
- Reference: This provision does not apply to cast iron manhole covers or steel grates used on streets or roadways.

PROTECTION FROM FALLING OBJECTS

Falling object protection will comply with the following provisions:

- Toeboards, when used as falling object protection, will be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below.
- Toeboards will be capable of withstanding, without failure, a force of at least 50 pounds (222 N) applied in any downward or outward direction at any point along the toeboard.
- Toeboards will be a minimum of 3 1/2 inches (9 cm) in vertical height from their top edge to the level of the walking/working surface. They will have not more than 1/4 inch (0.6 cm) clearance above the walking/working surface. They will be solid or have openings not over 1 inch (2.5 cm) in greatest dimension.
- Where tools, equipment, or materials are piled higher than the top edge of a toeboard, paneling or screening will be erected from the walking/working surface or toeboard to the top of a guardrail system's top rail or midrail, for a distance sufficient to protect employees below.
- Guardrail systems, when used as falling object protection, will have all openings small enough to prevent passage of potential falling objects.

During the performance of overhand bricklaying and related work:

- No materials or equipment except masonry and mortar will be stored within 4 feet (1.2 m) of the Excess mortar, broken or scattered masonry units, and all other materials and debris will be kept clear from the work area by removal at regular intervals.

During the performance of roofing work:

- Materials and equipment will not be stored within 6 feet (1.8 m) of a roof edge unless guardrails are erected at the edge.
- Materials which are piled, grouped, or stacked near a roof edge will be stable and self-supporting.
- Canopies, when used as falling object protection, will be strong enough to prevent collapse and to prevent penetration by any objects which may fall onto the canopy.
- Working edge.

FALL PROTECTION

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This option is available only to employees engaged in leading edge work, precast concrete erection work, or residential construction work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment.

The fall protection plan will conform to the following provision:

- The fall protection plan will be prepared by a qualified person and developed specifically for the site where the leading edge work, precast concrete work, or residential construction work is being performed and the plan will be maintained up to date.
- Any changes to the fall protection plan will be approved by a qualified person.
- A copy of the fall protection plan with all approved changes will be maintained at the job site.
- The implementation of the fall protection plan will be under the supervision of a competent person.
- The fall protection plan will document the reasons why the use of conventional fall protection systems (guardrail systems, personal fall arrest systems, or safety nets systems) are infeasible or why their use would create a greater hazard.
- The fall protection plan will include a written discussion of other measures that will be taken to reduce or eliminate the fall hazard for employees who cannot be provided with protection from the conventional fall protection systems. For example, the Company will discuss the extent to which scaffolds, ladders, or vehicle mounted work platforms can be used to provide a safer working surface and thereby reduce the hazard of falling.
- The fall protection plan will identify each location where conventional fall protection methods cannot be used. These locations will then be classified as controlled access zones.
- Where no other alternative measure has been implemented, the Company will implement a safety monitoring system in conformance with
- The fall protection plan will include a statement which provides the name or other method of identification for each employee who is designated to work in controlled access zones. No other employees may enter controlled access zones.
- In the event an employee falls, or some other related, serious incident occurs, (e.g., a near miss) the Company will investigate the circumstances of the fall or other incident to determine if the fall protection plan needs to be changed (e.g. new practices, procedures, or training) and will implement those changes to prevent similar types of falls or incidents.

General aerial lift requirements:

- Visual inspections will be made of the equipment to determine that it is in good condition each day the equipment is to be used.
- Tests will be made at the beginning of each shift during which the equipment is to be used to determine that the brakes and operating systems are in proper working condition.
- No employee will use any motor vehicle equipment having an obstructed view to the rear unless:

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- The equipment has a reverse signal alarm audible above the surrounding noise level or:
- The equipment will have a working back-up alarm or use a spotter when backing.

Aerial Lifts Utilized Near Energized Lines or Equipment:

- When working near energized lines or equipment, aerial lift trucks will be grounded or barricaded and considered as energized equipment, or the aerial lift truck will be insulated for the work being performed.
- Equipment or material will not be passed between a pole or structure and an aerial lift while an employee working from the basket is within reaching distance of energized conductors or equipment that are not covered with insulating protective equipment.

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TRAINING

Only trained employees will operate an aerial lift.

The Company provides a training program for each employee who might be exposed to fall hazards. The program will enable each employee to recognize the hazards of falling and will train each employee in the procedures to be followed in order to minimize these hazards.
The policy assures that each employee has been trained, as necessary, by a competent person qualified in the following areas:

- The nature of fall hazards in the work area;
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
- The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used;
- The role of each employee in the safety monitoring system when this system is used;
- The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs;
- The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection; and
- The role of employees in fall protection plans;

CERTIFICATION OF TRAINING

The Company will verify compliance with the Training Program preparing a written certification record. The written certification record will contain the name or other identity of the employee trained, the date(s) of the training, and the signature of the person who conducted the training. Relying on training conducted by another policy or completed prior to the effective date of this policy, the certification record will indicate the date that determines the prior training was adequate rather than the date of actual training. The latest training certification will be maintained.

RETRAINING

When the Company has reason to believe that any affected employee who has already been trained does not have the understanding and skill required, the Company will retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:

- Changes in the workplace render previous training obsolete; or changes in the types of fall protection systems or equipment to be used render previous training obsolete; or Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.

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Company Disclaimer:

- The following has been developed to reduce hazards likely to cause injuries to our employees.
- Some of the following policies may not be applicable to our operations. This manual serves as a guideline and is subject to change or modification as particular circumstances warrant.
- Employees should contact their immediate supervisor or senior management with questions.
- **If there are conflicts with local, state or federal regulations or the Company's Employee Handbook or other Company documents, the local, state or federal regulations, the Company Employee Handbook or other Company documents will prevail.**

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- **This document is based on OSHA's Training Requirements in OSHA Standards document.**
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