REV. 04/2026

CRANE SAFETY

OWNERS AND SITE MANAGERS HIGHER-RISK SITUATIONS

It is essential that project supervisors be familiar with the general characteristics and capabilities of cranes to be used in construction activities. This policy is intended to cover employee owners and site managers who may be involved in the selection and operation of cranes. Cranes are used in a variety of ways and expected to be substantially certain protections of the policy may also apply, in addition to 29 CFR 1926, Construction Industry Regulations Subpart CC - Cranes and Derricks in Construction. The intent of this policy is compliance with Identified Throughout Crane Safety.

OVERHEAD TRANSFERRING OBJECTS OR ELEVATING PERSONNEL OR MATERIALS

Is essential when a capacity of transferring objects or elevating personnel or materials. Project supervisors should be familiar with the authorization to take prompt corrective measures to eliminate hazards and to stop operations if necessary. Project supervisors are responsible for ensuring employees are provided with the appropriate personnel the ability to assess hazards problems relating to a crane operation and the authority to take prompt corrective measures to eliminate hazards. The crane employee owner or a subcontractor, depending on the ownership, is responsible for ensuring the equipment is in a safe condition.

CRITICAL LIFT

Under ANSI B30.5-2007 and

A lift or operation that if not executed safely could result in:

- Serious injury or fatality to personnel, significant damage or replacement of long lead time items or assets to cause a major disruption to the operation, or significant adverse publicity.
- Involve significant levels of hazardous materials.
- Involve a high degree of complexity or difficulty.
- Require multiple cranes for a single lift.
- Swing phasing and coordinate is always of a critical nature.
- Involve a high degree of risk.
- Lift weights in the maximum rated capacity zone for the configuration being used.

OPERATOR

Under ASME B30.5-2007 Rev.

An individual assigned to operate a crane on the jobsite.

ROLES AND RESPONSIBILITIES

Project Supervisor

- Project supervisor shall ensure that operations are qualified and evaluated as required in this section.
- Project supervisor shall ensure that operator's crane safety with a crane management.
- Project supervisor should oversee the unloading, loading, assembly, disassembly, rigging, operation and maintenance of all Company cranes on site, along with the responsibility of ensuring that the equipment is in good condition. The manager could also be assigned contractors or a third party.
- Project supervisor should see that the operator is provided with clear signals and directions from the appropriate person.
- Project supervisor should participate in the planning of crane access and placement as well as critical lifts. Ensure that the jobsite has been prepared properly for the crane to travel on and for the crane to work safely. Ensure that the jobsite has sufficient clearance to operate the crane safely. Ensure that the jobsite has been prepared properly for the crane, and if not, then project leadership can attest to ensure that the leaning capacity of the ton and leveling of the crane is sufficient to operate the crane safely. Ensure that the jobsite has been prepared properly and that the ground should be constructed that will support loads of the leaning crane. Ensure that the jobsite has been prepared properly and engineering firms are available to aid in determining any leaning capacity, required additional support, and a crane's ability to operate safely.
- When a crane is owned or leased by a subcontractor, project supervisor should require the operator to receive instruction on safe operations of that particular crane before its lease or manufacturer. That includes all appropriate manuals, hand charts, and the latest crane inspection.

PROCEDURES

- Crane shall not be operated when the wind speed is in excess of what the manufacturer recommends for safe operation. Crane shall not be operated when weather recommendations for safe operation, project supervisor will determine if the operation should be halted due to the weather conditions. Crane shall not be operated in a manner that will cause it to exceed its rated load capacity, or its lift capacity, as recommended by the manufacturer's specifications or as the load chart or a chart or a figure is posted affixed to the boom.
- Operators shall not lift loads over or on the jobsite, including on Service Crane Safety Manual, or Rigging Manual, and rules of ASME, ANSI B30.5. A Critical Lift Plan must be completed and signed by the Project Manager, Project Superintendent, Project Engineer, and Project Safety Representative. Operations involving cranes, forms, precast, etc.) the operator shall not operate the crane in a manner that causes a load to swing in excess the Critical Lift Plan. Critical lifts must be conducted prior to all critical lifts. All Company cranes shall be equipped with a warning, signaling and horn that is audible to all.
- The operator cannot safely raise to diminish crane.
- If a crane should not be moved without having a signal person directing the operator.
- The operator should not operate a crane if it is not in good condition, safe to operate, and properly lubricated.
- No hands should be left suspended while operating a crane, or power lines, and near operation areas.

OVERHEAD POWER LINES

Working with, unloading and dismantling cranes in proximity to overhead power lines can present safety concerns. The Safety Department recommends the following:

- Assume all power lines are energized unless confirmed de-energized by the utility owner.
- Maintain safe distances from power lines and non-conductive ropes.
- If there are power lines that cannot be de-energized, a crane or several cranes should be addressed. The work zone can be made safe by de-energizing the lines. Project supervisor should the equipment up to the equipment's maximum working radius or more positively defined by manufacturer's specifications. Working near power lines, including dismantling, is dependent on the operator.
- Operators should be aware of the ability as to whether any part of the equipment, load line, or load (including rigging and tiling accessories) if operated up to the equipment's maximum working radius or more positively defined by manufacturer's specifications, will be closer than 10 feet to the power line. Operators should be aware of overhead protections, such as power lines, and near operation areas.

OVERHEAD POWER LINES

Working with, unloading and dismantling cranes in proximity to overhead power lines can present safety concerns. The Safety Department recommends the following:

- Assume all power lines are energized unless confirmed de-energized by the utility owner.
- Maintain safe distances from power lines and non-conductive ropes.
- If there are power lines that cannot be de-energized, a crane or several cranes should be addressed. The work zone can be made safe by de-energizing the lines. Project supervisor should the equipment up to the equipment's maximum working radius or more positively defined by manufacturer's specifications. Working near power lines, including dismantling, is dependent on the operator.
- Operators should be aware of the ability as to whether any part of the equipment, load line, or load (including rigging and tiling accessories) if operated up to the equipment's maximum working radius or more positively defined by manufacturer's specifications, will be closer than 10 feet to the power line. Operators should be aware of overhead protections, such as power lines, and near operation areas.

OPERATOR

- Operator shall be qualified in the type of crane they are operating. The methods of qualification are outlined in the section of Training.
- The operator will be trained on the type of equipment being operated.
- The method of certification must meet the requirements outlined in ASME B30.5-2007 and 29 CFR 1926.1427 Crane Operator (CCO) for accepted.
- The crane operator qualifying procedure must be conducted in accordance with the following requirements:
  - Psychomotor, training, and experience must be evaluate operations.
  - Knowledge must be tested.
  - Maintenance and inspection are the OSHA Standard
  - Has completed the OSHA criteria for a certified crane operator.
- Each operator must be experienced in the operation and maintenance of the equipment.
- Each operator must be safety conscious, responsible, and reliable.
- The operator shall make a thorough visual inspection of the machine at the start of each shift.
- If the operator identifies a problem with a crane, he/she must report the problem to the supervisor and provide suggestions for solutions to the problem if requested.
- Each operator must be aware of overhead protections, such as power lines, and near operation areas.

OVERHEAD POWER LINES

Working with, unloading and dismantling cranes in proximity to overhead power lines can present safety concerns. The Safety Department recommends the following:

- Assume all power lines are energized unless confirmed de-energized by the utility owner.
- Maintain safe distances from power lines and non-conductive ropes.
- If there are power lines that cannot be de-energized, a crane or several cranes should be addressed. The work zone can be made safe by de-energizing the lines. Project supervisor should the equipment up to the equipment's maximum working radius or more positively defined by manufacturer's specifications. Working near power lines, including dismantling, is dependent on the operator.
- Operators should be aware of the ability as to whether any part of the equipment, load line, or load (including rigging and tiling accessories) if operated up to the equipment's maximum working radius or more positively defined by manufacturer's specifications, will be closer than 10 feet to the power line. Operators should be aware of overhead protections, such as power lines, and near operation areas.

OPERATOR

- Operator shall be qualified in the type of crane they are operating. The methods of qualification are outlined in the section of Training.
  - The operator will be trained on the type of equipment being operated.
  - The method of certification must meet the requirements outlined in ASME B30.5-2007 and 29 CFR 1926.1427 Crane Operator (CCO) for accepted.
  - The crane operator qualifying procedure must be conducted in accordance with the following requirements:
    - Psychomotor, training, and experience must be evaluate operations.
    - Knowledge must be tested.
    - Maintenance and inspection are the OSHA Standard
    - Has completed the OSHA criteria for a certified crane operator.
  - Each operator must be experienced in the operation and maintenance of the equipment.
  - Each operator must be safety conscious, responsible, and reliable.
  - The operator shall make a thorough visual inspection of the machine at the start of each shift.
  - If the operator identifies a problem with a crane, he/she must report the problem to the supervisor and provide suggestions for solutions to the problem if requested.
  - Each operator must be aware of overhead protections, such as power lines, and near operation areas.

OVERHEAD POWER LINES

Working with, unloading and dismantling cranes in proximity to overhead power lines can present safety concerns. The Safety Department recommends the following:

- Assume all power lines are energized unless confirmed de-energized by the utility owner.
- Maintain safe distances from power lines and non-conductive ropes.
- If there are power lines that cannot be de-energized, a crane or several cranes should be addressed. The work zone can be made safe by de-energizing the lines. Project supervisor should the equipment up to the equipment's maximum working radius or more positively defined by manufacturer's specifications. Working near power lines, including dismantling, is dependent on the operator.
- Operators should be aware of the ability as to whether any part of the equipment, load line, or load (including rigging and tiling accessories) if operated up to the equipment's maximum working radius or more positively defined by manufacturer's specifications, will be closer than 10 feet to the power line. Operators should be aware of overhead protections, such as power lines, and near operation areas.

CRANE ASSEMBLY & DISASSEMBLY

Crane assembly and disassembly is defined as the process of putting together or taking apart the pieces of a crane that must be assembled or disassembled. Crane assembly and disassembly includes boom and jib sections, counterweights, cranes. Crane of crane assembly and disassembly operations, whether performed by a Company or subcontractor is the responsibility of the operator and supervised and the entity supervising the crane is responsible for ensuring the following requirements are met:

- Assembly/disassembly must be supervised by a competent director. Documentation of the A/D director's qualifications must be provided to the Safety Department. Documentation of training shall be kept with the crane operator's qualification documents.
- Operators and all crane assembly and dis-ir in accordance with the manufacturer's written instructions and are trained in their duties during the operation.
- No one is allowed under the crane engaged in the assembly or disassembly of the crane, in the area below swing of the crane, or in the area of the crane where it is being assembled/disassembly. This step also includes any areas where any portion of a crane may fall into, or enter, in the event of a mechanical failure.
- Post assembly inspection shall be completed as required by the manufacturer, including a load test.
- Crane parts, such as booms, jibs, and counterweight, employee owners must not be under the boom, jib, and counterweight that are not properly blocked.
- Crane assembly/disassembly including shall be tailed with all appropriate personnel, equipment, and tools. Tailing operations shall be conducted from a safe distance. Tailing operations shall be performed in the section. The tailing operations shall be assigned/contracted to a third party.
- Operators shall not engage in any precise which diverts their attention from the operation of the crane.
  - Cell phone usage is prohibited while in the cab of the crane.
  - Reference signs/weathered/worn/damaged/illegible signs are prohibited.
- Operators shall not operate cranes when operation is not fully attentive.
- Operators shall be responsible for all operations under their control. Crane shall not be operated in a manner that causes a load to swing in excess the operator shall comply with the crane operations the lift before lifting the load.
- At no time will the operator operate the crane while intoxicated or under the influence of drugs.
- Operators shall not lift, or lower a load, or move a jib in a place that could cause a hazard, reduce the lift, and capacity of the crane and the load.
- Operators shall be thoroughly familiar with the operation of the crane and its proper use. If adjustments or repairs are required, the crane shall be reported to the supervisor. If the crane has not been operated until the conditions have been corrected.
- Operators shall not start crane movement if the load or slung/rigged rigger present is not within his/her range of vision or hearing.
- The operator will not lift loads that are improperly slung/rigged.
- Operators shall understand and respond to signals from the person directing lift or from the slung/rigged rigger present.
- Operators shall stop a slung rigged at all times, no matter who is directing.
- Operators shall not operate a crane if the load swing rate is correct for the crane is equipped (boom length, load line swing, counterweight, etc.).
- Operators shall verify that the crane is properly set up including the load swing radius and that the load is within the of the crane lift models.
- Operators shall verify that:
  - Crane operator qualification certifications are up to date.
  - All attachments are properly assembled and attached to the crane according to the rigging drawings called for on the crane lift plan.
  - The counterweight, if required, is installed exactly as called for in the crane lift plan and engineer's report. The maximum required counterweight will not exceed.
- Operators shall perform the following operations before beginning operation of the crane:
  - ☑ Test crane functions and controls to ensure they are in good condition and in the operation of the equipment.
  - ☑ Apply hoist and auxiliary hoist brakes.
  - ☑ Level any attachment level.
  - ☑ Lower boom crane boom or ground level or only a crane; most if possible, or securely lower boom from movement by and or other crane/ferry.
  - ☑ Move all controls to off.
  - ☑ Apply all crane brakes and.
  - ☑ Disengage master clutch, if necessary.
  - ☑ Stop the engine.
- Operators shall perform the following operations if power or control function fails during operation:
  - ☑ Level all suspended loads, if possible, use hoists or power control.
  - ☑ Apply all hoists and turning moves.
  - ☑ Move all controls to off.
- If a crane will be operated at night, the operator shall make sure that the area is well lighted and safe for work. The load and loading area should be illuminated.
- Operators shall not operate a crane during periods of bad weather if their ability to see the load or equipment is impaired by darkness, fog, rain, etc. When a load weather conditions, the operator shall not operate the equipment or crane.
- Wind can cause cranes to tip or loosen and other attachments to fall off. Operators shall be aware of wind speed and shall compensate for the effect of wind on the load and its rotating rotings, reducing operating speeds, or ceasing operations if the wind speed is too high for safe operation. It is the operator's manual, day operations the crane operator is responsible for.
  - If wind causes the load to swing, operator shall stop the crane's operating velocity or release pitch when boom lings pin, and wind speed is too high.
  - If wind exceeds 25 mph, crane shall be secured, apply hook blocks, lower boom into blocking or ground and, if necessary, secure boom and apply boom stops, if available and in use.
- Booms, jibs, or masts are being assembled or disassembled, operators shall be aware of the potential for boom rigging shall be secured during assembly/disassembly of the boom, jib, or mast sections. Workers shall not go under boom, jib, or mast sections when removing connecting pins and bolts.

RIGGING & SIGNALING

General

Power and Section 8.1, Rigging a Load for more information.

- The rigger is responsible for setting the correct weight of the load and selecting the proper rigging for the load and attaching the slung/rigging the load.
- The signal person is responsible for relaying and directing the movement of the crane and load, as well as being the safety lookout.
- Depending on the size, complexity, and associated risk of the lifting operation, one person can perform both roles, in addition, there may be multiple individuals in either one or both roles for a single lift.
- Hands and/or whistles will be blown by the operator, signal person anytime a load has the potential to be in motion or swing.
- Subcontractors that are hired to perform rigging or Company project will provide qualified riggers and signal persons and provide the Safety Department with documentation provided before their work starts.
- To be a Company qualified rigger/signal person for rigging or signaling, one must successfully pass the training program established to train contractors as to how employees will be trained and evaluated for competency.
- If a subcontractor will be signaling cranes for a crane, they shall provide their own means of communication and provide a signal person who is qualified to communicate with the operator's manual, day operations the crane operator is responsible for.
- Signal person shall be in a safe location to view the crane and load.
- Signal person shall be qualified and trained to operate the equipment or equally available at the site and on the crane.

SIGNALING

- The rigger's responsible for setting the correct weight of the load and selecting the proper rigging for the load and attaching the slung/rigging the load.
- The signal person is responsible for relaying and directing the movement of the crane and load, as well as being the safety lookout.
- Depending on the size, complexity, and associated risk of the lifting operation, one person can perform both roles, in addition, there may be multiple individuals in either one or both roles for a single lift.
- Hands and/or whistles will be blown by the operator, signal person anytime a load has the potential to be in motion or swing.
- Subcontractors that are hired to perform rigging or Company project will provide qualified riggers and signal persons and provide the Safety Department with documentation provided before their work starts.
- To be a Company qualified rigger/signal person for rigging or signaling, one must successfully pass the training program established to train contractors as to how employees will be trained and evaluated for competency.
- If a subcontractor will be signaling cranes for a crane, they shall provide their own means of communication and provide a signal person who is qualified to communicate with the operator's manual, day operations the crane operator is responsible for.
- Signal person shall be in a safe location to view the crane and load.
- Signal person shall be qualified and trained to operate the equipment or equally available at the site and on the crane.

SIGNALING

- The signal person shall be qualified to the type of crane they are operating. The methods of qualification are outlined in the section of Training.
  - The following systems: hand signals, verbal signals, radio voice operation, and limitations, boom deflection, and the dynamics of the load and rigging, and the operator's manual.
  - Communication of the crane and load, as well as being the safety lookout.
  - Depending on the size, complexity, and associated risk of the lifting operation, one person can perform both roles, in addition, there may be multiple individuals in either one or both roles for a single lift.
  - Hands and/or whistles will be blown by the operator, signal person anytime a load has the potential to be in motion or swing.
  - Subcontractors that are hired to perform rigging or Company project will provide qualified riggers and signal persons and provide the Safety Department with documentation provided before their work starts.
  - To be a Company qualified rigger/signal person for rigging or signaling, one must successfully pass the training program established to train contractors as to how employees will be trained and evaluated for competency.
  - If a subcontractor will be signaling cranes for a crane, they shall provide their own means of communication and provide a signal person who is qualified to communicate with the operator's manual, day operations the crane operator is responsible for.
  - Signal person shall be in a safe location to view the crane and load.
  - Signal person shall be qualified and trained to operate the equipment or equally available at the site and on the crane.
- Signals are to be standard and clear.
- Signals are to be in accordance with the manufacturer's recommendations.
- Signals are to be posted at the crane