HOISTING AND RIGGING

Date Revised:	August 2024	Overall Task Risk Rating:	Before Controls	В	After Controls	С
Description:	Activities that require the use of equipment, tools, and machinery, for the purposes of hoisting and rigging various items.					
Location(s):	Shop, Asphalt Plant & Construction Projects					
Associated Documents: Working at Heights WTS, Overhead Hazards WTS, Hazardous Energy Control WTS						

RED FLAGS (HOLD WORK UNTIL CORRECTED):

Note:

If you are not familiar with the safe use of the equipment, ask your foreman / superintendent for assistance prior to starting

PERSONAL PROTECTIVE EQUIPMENT (CSA APPROVED)





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Protection



Protection



Protection













Fall Protection

Note:

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When onsite one must adhere to the minimum site requirements (i.e. Safety Boots, Hard Hat& High Visibility Protection. Safety Glasses when necessary)

SAFE WORK PRACTICES (SWP)

General Hoisting and Rigging Practices:

- If you are not familiar with the safe use of any machinery or equipment, ask your foreman / superintendent for assistance prior to starting
- Do not exceed the rated load capacity or lifting limitations of equipment
- All loads must be secure during hoisting
- All hoisting and rigging hooks will be equipped with safety latches
- Ensure that all outriggers of the hoisting equipment are on a solid surface and that the hoisting equipment is level
- Keep clear of pinch points
- Maintain control of loads/equipment being raised/ lowered, use tag lines if necessary
- Do not attempt to make adjustments or clear jammed machinery without first shutting off power
- All equipment must be maintained and operated in a condition that does not endanger a worker

Cranes and Operations:

- All cranes must be erected and dismantled in accordance to the manufacturer's instructions
- Crane must be adequately anchored in accordance to the manufacturer's instructions
- Crane must be grounded and all electrical connections secured

Suspended Loads:

- Suspended loads are not to be passed over workers it is the responsibility of both the operator and the workers
- Operators shall not leave any raised loads unattended

Signs and Barriers:

- Appropriate warning signage must be posted to indicate that overhead work is being performed in the area
- Hoisting areas must be secured with a barrier to prevent public access
- Ground spotters shall be used when loads are being raised

Keep machines and equipment clean and report any leaks or other noticeable defects





Signal Person:

- Two-way communication must be established between the ground signaler and the crane operator
- Make sure all signals are understood and communicated clearly and concisely
- Full visibility must be obtained by the operator of the hoisting equipment at all times
- If communication is lost between the operator and the signal person, the operator must stop until communication is restored
- Signal persons must only perform signalling duties during hoisting

Powerline and Overhead Safety:

- Always check for overhead power lines and observe minimum distances from overhead power lines
- When unsure, always assume that electrical power lines are live
- Refer to Overhead Hazards WTS for more information

Environmental Considerations:

- Take weather conditions into account before attempting any hosting and rigging operations
- All electrical connections must be sealed against rain

Inspection:

- Daily pre-operational inspection will be performed where required for specific pieces of equipment (i.e. on cranes and rigging gear)
- All hoisting and rigging equipment will be visually inspected for wear, cracks, severe corrosion, kinks, bird-caging, broken strands, burn
 marks, chemical damage, deformation or other signs of obvious damage
- Do not use defective equipment or machinery, inform your foreman / superintendent they will arrange for the equipment to be serviced
- All exposed moving or rotating parts must be adequately guarded no one is to make any protective guarding ineffective
- Ensure that all material and equipment is in good condition and will meet the requirements of the lift
- Ensure that any item of the rigging hardware that requires an engineered diagram has one
- The area of the lift will be assessed for possible hazards and all hazards will be removed or controlled before the lift occurs Training:
- Employee Orientations (including roles, responsibilities, applicable workplace task standards, WHMIS, etc.)
- Only trained, authorized personnel are allowed to operate machinery or equipment (i.e. cranes & hoisting devices)
- Only trained, authorized personnel are allowed to perform maintenance / repairs

Personal Protective Equipment:

- Workers on construction projects must wear, at a minimum, head, foot and high visibility protection. Eye protection when necessary
- Eye protection is required when completing tasks that may cause debris / objects to dislodge or become airborne

JOB HAZARD AND RISK ANALYSIS			RISK RATING SYSTEM A High risk of injury or equipment / p C Medium risk of injury or equipment / p Low risk of injury or equipment / p	t / property damage.
	TASK HAZARDS	RATING BEFORE CONTROLS	TASK CONTROLS	RATING AFTER CONTROLS
•	Equipment Overload	В	 Equipment must not be loaded in excess of their load ratings Inspect chains, hooks and clamps for damage daily 	С
•	Electrical Overhead Hazards	В	 Overhead electrical hazards must be identified and avoided Implement Overhead Hazards WTS 	С
•	Lack of Maintenance	В	 Equipment shall be operated and maintained as per the manufacturer's instructions 	С
•	Falling Objects	В	 Have complete control of the load (use a tag line as needed) The load must be evenly balance when lifted Do not pass raised loads over workers Hoisting areas must be secured with a barrier to prevent public access. 	С



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•	Improper Setup	В	 Determine the weight of the load and ensure that it does not exceed the Safe Work Load of any of the components Take weather conditions into account 	С
•	Equipment Failure, Improper Crane use	С	 Equipment must be used in accordance with manufacturer's instructions & related legislature 	С
•	Lack of Planning	C	 Do not operate within legislated safe approach distances of energized overhead electrical hazards (wires) Remain aware of other workers in close proximity Make sure all signals are clear, concise and understood 	С
•	Lack of Inspection	C	 The operator shall perform & record a daily inspection of their hoist equipment prior to use Equipment must not be used if any defects are identified - inform your superintendent / foreman 	С
•	Lack of Training	С	 Only trained, authorized personnel are allowed to operate machinery or equipment (i.e. cranes & hoisting devices) Only trained, authorized personnel are allowed to perform maintenance / repairs 	С

SAFE JOB PROCEDURES (SJP)

Pre-Task Commencement:

- 1. Gather and wear the required PPE for the task on construction sites, all must wear head, foot and high visibility protection. Eye protection when necessary
- 2. Ensure the site-specific workplace violence assessment is complete
- 3. Complete the Daily GAZZ Card and review with all workers the shift's tasks with any associated hazards and control strategies
- 4. Ensure all workers understand the GAZZ Card contents, and sign off in acknowledgement
- 5. Ensure controls are in place prior to commencing work so risks are mitigated / eliminated
- 6. Determine what equipment / machinery / tools and material, are required for the completion of the task
- 7. Inspect all equipment / machinery / tools prior to use and document the inspections on appropriate forms when required
- 8. Ensure preventative maintenance activities have been completed where required, prior to using equipment / machinery / tools
- 9. If equipment / machinery / tools are observed to be damaged, remove it from use and notify the Foreman / Superintendent
- 10. Post signage where needed
- 11. Select hoisting/rigging equipment based on manufacturer's specifications, rated load carrying capacity and site-specific conditions
- 12. Determine if hoisting and rigging equipment will require structural engineering drawings and the approval of a structural engineer
- 13. Ensure hoisting/rigging operator has appropriate training for relevant equipment in use
- 14. Develop a communication plan with a spotter
- 15. Implement Overhead Hazards WTS controls if applicable

During Task:

- 1. Setup hoisting and rigging equipment (must be a competent worker with appropriate training)
- The operator shall perform and record a daily inspection of his or her hoisting and rigging equipment prior to use
- Ensure hoisting and rigging components are capable of lifting the weight of the intended load
- 4. Rig material, and inspect connections/components prior to hoisting
- Hoist and rig material
- 6. Hoisting operators who cannot maintain full visibility of the load and the intended path must have appropriate spotters
- 7. Contain work area, using appropriate barricading and danger (warning) signage. Loads being hoisted must not pass over anyone
- 8. Operate equipment machinery and/or tools as per manufacturer's instructions

Task Completion:

- Ensure all equipment / machinery / tools are maintained and stored appropriately in the designated locations
- 2. Implement any housekeeping or maintenance as required

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