STANDARD OPERATING PROCEDURE – LOADING, UNLOADING & MATERIAL HANDLING

DEPARTMENT:	APPROVED BY:	EFFECTIVE DATE:	REVIEW DATE:	REVISION:
Operations	Mario Plante	November 13, 2024	November 20, 2024	2

1 OBJECTIVE/PURPOSE

The loading and unloading of trailers on our work can become a very dangerous task if the proper safeguards are not in place. This Standard Operating Procedure establishes minimum company requirements for the loading and unloading of trailers with loaders, forklifts, excavators, cranes, and any other material handling equipment.

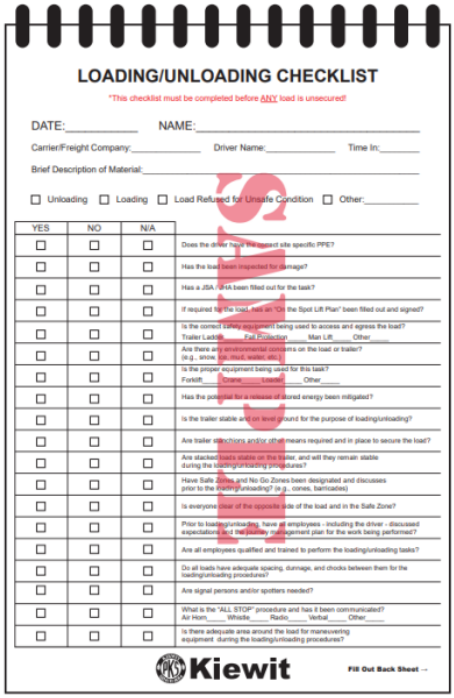
This SOP cannot be modified in any way, but it can be added to if a project chooses to do so. Any deviation from the minimum requirements requires approval in writing from the first level of offsite project management, typically the project sponsor or area manager.

2 MINIMUM REQUIREMENTS

1. The Front-Line Supervisor (FLS) over the operation is responsible to ensure the operation is performed safely and the following minimum requirements are executed.
2. An Operations Start Card JHA specific to the loading and unloading of the trailer must be completed with all personnel involved in the task prior to loading or unloading. This includes ensuring that the LSA Safeguards for Lifting & Rigging – Material Handling are completed, in place, and verified by the FLS prior to work beginning.
3. All operators involved in the loading and unloading must be trained and designated for the type of equipment being utilized to load or unload.
4. All trailers not currently connected to a truck/equipment, must have suitably sized chocks on the trailer wheels.
5. At least one trained and competent spotter must be utilized to help the equipment operator during the loading or unloading process. All spotters must be trained and designated per project policy.
6. The load must be inspected by a competent person prior to any unloading.
7. Any load unstrapping and strapping must be completed by the driver of the truck. Truck drivers must be in the cab of their vehicle or in a designated safe area if not strapping or unstrapping a load.
8. A Controlled Access Zone (CAZ) must be in place on the backside of the trailer prior to moving any loads.
    a. See example image below for ideal trailer loading/unloading setup.
    b. All work must stop anytime anyone enters the prohibited area on the backside of trailers.
9. If the trailer must be accessed, then the trailer's built-in steps or a **trailer ladder** is required for all access. Employees shall not be permitted to climb on and off trailers.

3 BEST PRACTICES

TRAILER LOADING & UNLOADING CHECKLIST:



LOADING/UNLOADING CHECKLIST

*This checklist must be completed before ANY load is unsecured!

DATE:_____ NAME:_____

Carrier/Freight Company:_____ Driver Name:_____ Time In:_____

Brief Description of Material:_____

☐ Unloading ☐ Loading ☐ Load Refused for Unsafe Condition ☐ Other:_____

YES	NO	N/A	
☐	☐	☐	Does the driver have the correct site specific PPE?
☐	☐	☐	Has the load been inspected for damage?
☐	☐	☐	Has a JSA / HA been filled out for the task?
☐	☐	☐	If required for the load, has an "On the Spot Lift Plan" been filled out and signed?
☐	☐	☐	Is the correct safety equipment being used to access and egress the load? Trailer Ladder ____ Fall Protection ____ Man Lift ____ Other ____
☐	☐	☐	Are there any environmental concerns on the load or trailer? (e.g., snow, ice, mud, water, etc.)
☐	☐	☐	Is the proper equipment being used for this task? Forklift ____ Crane ____ Loader ____ Other ____
☐	☐	☐	Has the potential for a release of stored energy been mitigated?
☐	☐	☐	Is the trailer stable and on level ground for the purpose of loading/unloading?
☐	☐	☐	Are trailer stanchions and/or other means required and in place to secure the load?
☐	☐	☐	Are stacked loads stable on the trailer, and will they remain stable during the loading/unloading processes?
☐	☐	☐	Have Safe Zones and No Go Zones been designated and discussed prior to the loading/unloading? (e.g., cones, barricades)
☐	☐	☐	Is everyone clear of the opposite side of the load and in the Safe Zone?
☐	☐	☐	Prior to loading/unloading, have all employees - including the driver - discussed expectations and the safety management plan for the work being performed?
☐	☐	☐	Are all employees qualified and trained to perform the loading/unloading tasks?
☐	☐	☐	Do all loads have adequate spacing, dunnage, and chocks between them for the loading/unloading procedures?
☐	☐	☐	Are signal persons and/or spotters needed?
☐	☐	☐	What is the "ALL STOP" procedure and has it been communicated? Air Horn ____ Whistle ____ Radio ____ Verbal ____ Other:____
☐	☐	☐	Is there adequate area around the load for maneuvering equipment during the loading/unloading procedures?

Kiewit Fill Out Back Sheet →

PAGE 2 FRONT

Hazards: | Mitigation:

Comments and/or Notes:

Driver Signoff: | Operator Signoff:

Spotter/Rigger Signoff: | Ground Crew Signoff:

If at any time during the loading/unloading process, things are unclear or conditions change, work MUST STOP!
Contact the supervisor to reassess the situation.

If you do not feel comfortable completing the task, use your *Stop Work Responsibility!*

Kiewit

PAGE 2 BACK

- Best Practices for Loading and Unloading Trailers
- Loading Unloading Checklist Examples
- Loading and Unloading Supplies

4 MATERIAL HANDLING

- Ensure the material has been determined to be for Site and the truck will be staged to prevent unnecessary handling (i.e., Cable reels and pipe are unloaded in the appropriate areas to reduce travel on forks).
- Perform a 360-degree walk around; both the equipment operator and the spotter(s) access the load for any hazards.
- Do not stand on any deck or material that is 6' or greater above the ground.
- If a spotter is required, they will remain visible to the operator and will direct and guide the forks under the load from a predetermined position as to remove themselves out of the line of fire.

- Securing material while unloading from trailer:
  - If unloading from a trailer, the operator will carefully test-lift the load to check the stability of center-of-gravity. If stable, lower to the ground and secure if transporting.
  - If the test-lift proves the load to be unstable or the material has the potential to tip or fall off the forks the load will be strapped to the mast with **minimum 2" ratchet straps** from the deck prior to offloading to the ground.
- Securing material during travel and transport:
  - **ALL** material being transported using forks must either be palletized with material secured to the pallet or have designed fork pockets.

NOTE: If travelling on slopes, palletized material, or designed fork pocket materials must be strapped to the mast/carriage.

  - **ALL** other material must be ratchet strapped to the mast regardless of the distance being transported.
  - If a grapple attachment is used, a ratchet strap is not required if the grapple secures the load.

- The load will be transported to the location and strapped, set down and unstrapped - it may be unstrapped prior to setting down depending upon the location of the straps (strapped under the load).
- When transporting loads of any size or configuration, loads must be transported as low to the ground as possible.
- All workers must be clear of the danger zone relative to the size of the load should it fall off the forks.
- When handling long objects, such as beams or sheet piles, spotters should stand in front of the beams or sheet piles a minimum of 3m away in view of the operator. Never stand near the ends due to being in the line of fire should the beam or sheet pile slide sideways off the forks.
- Loads may be safely lifted to clear obstacles and then lowered back down as close as possible to the ground.
- All loads leaving site will be inspected by the Loading Operator or Spotter to ensure that all 3rd party vendor truck drivers are following best practices for securing the load.
- All tip pins will be secured with a safety chain from the chassis to the top of the tip bin, in addition the chassis will be secured to the mast during the dumping process. Speed will be reduced to 5km over rough terrain to minimize movement of the bin on the forks.

Grapple attachment handling sheet piles.

Grapple attachment loading sheet piles.

GOOD: Always use a spotter in designated areas, but also when unsure of the item being transported or lifted into place. Spotter and operator are to meet to discuss and sigh FLHAs.

GOOD: Proper sling use with hook, removal of forks when using pick point, and lift plan filled out for each lift.

GOOD: When hauling pipe, the strap should rap the pipe and secured to the back of the forks.

GOOD: Proper way of stopping and exiting telehandler; Forks are on ground with outrigger down. Prior to exiting equipment check the ground conditions.

GOOD: When hauling loose material in any type of containment; contents should be strapped correctly as well.

GOOD: Check load and contents. Check for loose items that need to be secured or that could cause a hazard. Always know the weight of the load.

GOOD: When hauling cable reels, approved spindle must be placed through the center of the reel and straps used on either side of the spindle.

BAD: Improper sling use.

BAD: Poor housekeeping within cab, floor should be clear of debris and cab organized.

BAD: All loads should be strapped correctly, with the right size strap (2”), and with multiple straps when required.

BAD: Spotters are mandatory if the load cannot be positioned out of the operator's line of sight.

BAD: When hauling metal items (steel to steel) a softener is to be used between the items being transported and the fork mast.

BAD: When hauling spreader bars, the rigging is to be removed.

BAD: Improper way of exiting telehandler; Forks are in the air and no outrigger down. Look for the green light on Extreme models.

BAD: Make sure load is balanced correctly and item is picked and traveled with at the center of gravity.

5 AWKWARD & DANGEROUS LOADS

- Every load must be assessed prior to proceeding. Some considerations to consider:
  - Contents or Type of Load
  - Size
  - Shape
  - Stability
  - Placement of Load
- Ensure the load is always stable. Always leave one strap on the bottom stack or trailer pins in place while offloading on the top tier.

6 CONTROLLED ACCESS ZONE (CAZ)

A Controlled Access Zone (CAZ) must be established in the area where there is potential for the trailer's load to fall off the trailer. Listed below are guidelines for a CAZ:

a. Red barricade-controlled access zone that fully encloses the danger area or "no-go zone."
b. CAZs must be set up to fully encompass where hazards are present. No gaps will be left in the CAZ where individuals could inadvertently access.
c. Use only ***red rope, red plastic chain or hard barricades*** to delineate the CAZ.
d. Signage must be placed on red ropes, chains, or barricades on all accessible sides of the CAZ. Contact info of the person controlling the area will be on the signs.
e. Red barricade CAZ must extend out at least 10 feet away from the trailer or twice the height of the load.
f. Unauthorized access into the CAZ is grounds for disciplinary action up to and including termination.

7 REFUSING UNSAFE LOADS

- Kiewit has the right to refuse any load which could compromise the health and safety of our workers. Kiewit educates everyone bringing material to Kiewit Sites on our high safety standards/expectations. Workers on the frontline will flag any questionable loads and together with their Front-Line Supervisor will determine whether a load can be unloaded safely or should be refused.

NEVER proceed to unload if there are any doubts about being able to perform the task safely.

- Look for evidence that a load might have shifted during transport.

EXAMPLES OF REFUSED LOADS

This load is secured with chains, however only 50% of the load is on the pallet.

Materials are not supported on pallets for easy off-load.

Materials are not supported on pallets for easy off-load.

8 STEP-BY-STEP INSTALLATION & USE OF ALUMINUM TRAILER LADDERS

This process ensures the safe and effective use of the aluminum trailer ladder, protecting bot the user and compliance with safety standards.

1. **INSPECTION BEFORE USE**

- Check the ladder: Inspect for any visible damage such as cracks, bends, or worn-out parts.
- Ensure cleanliness: Remove any dirt, grease, or debris from the ladder steps and base to prevent slipping.
- Verify OSHA compliance: Confirm the ladder meets OSHA standards and is suitable for the specific application.

2. **POSITIONING THE LADDER**

- Select a stable ground: Place the ladder on a flat, solid surface to ensure stability. Avoid uneven or slippery ground.

- Align with trailer deck: Position the ladder with its hooks on top end securely over the trailers edge.
- Engage safety features: Ensure the hooks or stabilizing bars are fully engaged with the trailer to prevent movement during use.

3. SECURING THE LADDER

- Use locking mechanisms: Engage any built-in locking or attachment mechanisms to secure the ladder in place. This step prevents dislodgement while climbing.
- Stabilize the base: If applicable, extend any stabilizing feet or bars for added support.
- Double check stability: Test the ladder by applying gentle pressure to ensure it's firmly in place before climbing.

4. CLIMBING THE LADDER

- Face the ladder: Always face the ladder while climbing or descending.
- Use three-point contact: Always maintain three points of contact (two hands and one foot or two feet and one hand).
- Avoid overloading: Check the ladders weight capacity and do not exceed it, including tools or materials you carry.

5. SAFE USE DURING OPERATION

- Avoid sudden movement: Climb and descend carefully to minimize rocking or shaking.
- Do not overreach: Keep your center of gravity between the ladders rails to maintain balance.
- Wear proper footwear: Use slip-resistant boots or shoes to improve grip.

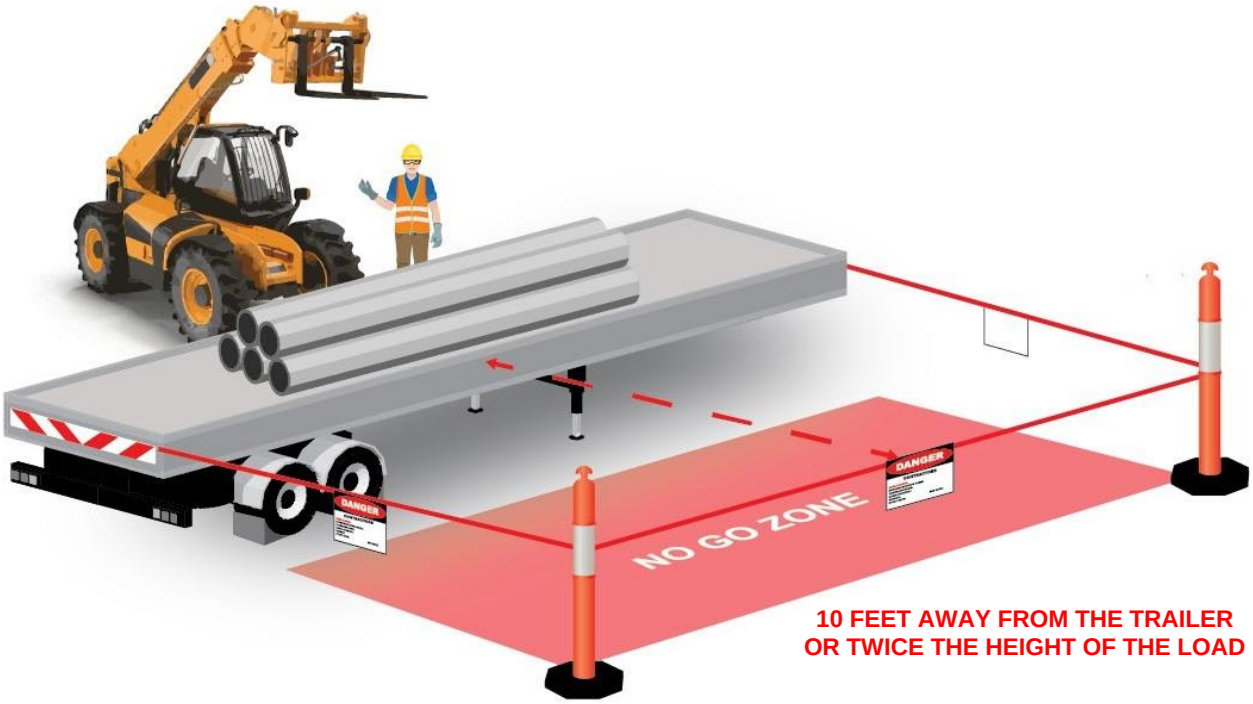
6. POST-USE STEPS:

- Disengage carefully: Remove the ladder from the trailer deck by disengaging any hooks or locking mechanisms.
- Clean and store: Wipe down the ladder to remove any dirt or moisture, then store it in a dry, safe location.
- Perform a final check: Inspect for any new damage incurred during use.

ADDITIONAL SAFETY TIPS

- Follow manufacturer instructions. Always refer to the specific instructions provided with your ladder model.
- Train workers – ensure all users are trained in proper ladder use and OSHA regulations.
- Report defects. If any damage is found, take the ladder out of service immediately and report or repair it as needed.

9 ILLUSTRATIONS/ VISUALS



10 FEET AWAY FROM THE TRAILER
OR TWICE THE HEIGHT OF THE LOAD

VISUAL EXAMPLE: WOODEN STORAGE BOX