CONTROLLED DOCUMENT
HSE / QUALITY DEPARTMENT

METHOD STATEMENT

Crane Lifting Operations

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1 SECTION 1 — DOCUMENT INFORMATION & DISTRIBUTION

Table 1 — Document Attributes

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Table 2 — Authorship and Review Record

Role	Name	Date	Signature
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2	Site Manager	Controlled
3	HSE Manager / HSE Officer	Controlled
4	Appointed Person (Lift Planner)	Controlled
5	Crane Operator / Plant Department	Controlled
6	Client / Principal Contractor Representative	Controlled
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Table 4 — Revision History

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2 SECTION 2 — SCOPE OF WORKS

Purpose and Objective

This Method Statement establishes the safe system of work for the planning, rigging, and execution of crane lifting operations, including critical lifts, to ensure that all lifting activities are conducted in a controlled, competent, and compliant manner that eliminates or reduces to as low as reasonably practicable the risk of injury to personnel, damage to plant, or disruption to third parties.

2.2 Description of the Work Activity

The scope covers the end-to-end lifting process, including lift planning, crane and rigging equipment selection, ground bearing verification, crane set-up and inspection, load rigging, trial lifting, execution of the main lift (including any critical or tandem lifts), load placement, and subsequent de-rigging and crane demobilisation.

2.3 Work Location, Site Boundaries and Interfaces

Lifting operations shall be carried out within the designated lift zone(s) identified on the site layout drawing and lift plan, inclusive of the crane standing area, exclusion zone, load travel path, and landing area. Interfaces with adjacent live works, public roadways, overhead services, and neighbouring structures shall be identified and controlled through the site-specific lift plan prior to mobilisation.

2.4 Equipment, Plant and Materials Involved

Mobile or crawler crane(s) of adequate capacity, certified rigging and lifting accessories (slings, shackles, spreader beams, below-the-hook lifting devices), outrigger mats/cribbing, radio communication equipment, exclusion barriers and signage, and the load(s) to be lifted as identified in the lift plan.

2.5 Exclusions

This Method Statement does not cover tower crane erection/climbing operations, helicopter lifting, or lifts falling outside the certified capacity of the equipment described in the associated lift plan; such activities shall be subject to separate, dedicated method statements and risk assessments.

2.6 Related Documents

This document shall be read in conjunction with the project-specific Lift Plan, Task-Specific Risk Assessment, Crane Certification and Load Charts, Rigging Equipment Certification, Site Traffic Management Plan, and the Project Health, Safety & Environmental Management Plan.

3 SECTION 3 — APPLICABLE STANDARDS & LEGISLATION

International Standards

ISO 45001:2018 — Occupational Health and Safety Management Systems. Provides the overarching framework for hazard identification, risk assessment, and control that underpins this Method Statement, including the requirement for competence assurance and worker consultation on lifting activities.

ISO 9001:2015 — Quality Management Systems. Governs the document control, review, and approval process for this Method Statement and ensures that lifting operations are delivered to a consistent, auditable quality standard.

ASME B30.5 — Mobile and Locomotive Cranes. Sets the design, inspection, testing, and operational safety requirements referenced throughout the crane set-up, inspection, and lifting sequence described in Section 7.

ASME B30.9 / B30.20 — Slings and Below-the-Hook Lifting Devices. Governs the selection, inspection, and safe working load determination of the rigging equipment used in this operation.

3.2 National / Regional Legislation (United States)

OSHA 29 CFR 1926 Subpart CC — Cranes and Derricks in Construction. The primary federal regulation governing crane assembly/disassembly, ground conditions, operator certification, signal person qualification, and lift planning requirements applicable to this activity.

OSHA 29 CFR 1926 Subpart M — Fall Protection. Applicable where personnel are exposed to fall hazards during rigging, crane climbing, or working at height in proximity to the lift zone.

OSHA 29 CFR 1910.184 — Slings (General Industry). Referenced for rigging equipment inspection and safe use criteria where general industry provisions apply to the site.

State and Local Authority Having Jurisdiction (AHJ) Requirements — Local crane permit, road closure, and public protection requirements shall be identified and obtained prior to mobilisation in accordance with the jurisdiction in which the works are executed.

3.3 Industry-Specific Codes of Practice

NCCCO (National Commission for the Certification of Crane Operators) — Certification scheme referenced for verification of crane operator, rigger, and signal person competency in accordance with OSHA 1926.1427.

ANSI/ASSP A10.32 — Fall Protection and Fall Restraint Systems. Referenced where applicable to personnel working at height during crane assembly or load attachment.

Crane Institute of America / Industry Lift Planning Guidance — Referenced for the development of the site-specific lift plan, including determination of the critical lift threshold and selection of ground bearing pressure calculations.

3.4 Client / Contractual Requirements

This Method Statement shall be read in conjunction with the Client / Principal Contractor's project-specific HSE Management Plan, Permit to Work procedures, and any additional lifting operation requirements stipulated in the project contract documents. Where a conflict arises between this document and Client requirements, the more stringent provision shall apply.

4 SECTION 4 — ROLES & RESPONSIBILITIES MATRIX

Site Manager

Responsibilities:

- Holds overall responsibility for the safe execution of works on site and ensures adequate resources are provided for the lifting operation.
- Confirms the Lift Plan and Method Statement are approved and communicated prior to work commencement.
- Ensures coordination between lifting operations and other concurrent site activities.

Competency & Certification Requirements:

- NEBOSH General Certificate (or equivalent)
- Site-specific management competency
- Minimum 5 years construction management experience

4.2 HSE Officer

Responsibilities:

- Monitors compliance with this Method Statement and all applicable OSHA and site HSE requirements.
- Conducts periodic site inspections and audits of the exclusion zone, rigging equipment, and PPE compliance.
- Investigates and reports any near-miss, incident, or non-conformance arising from lifting operations.
- Facilitates toolbox talks and verifies competency documentation for all personnel involved in the lift.

Competency & Certification Requirements:

- NEBOSH National Diploma or Certificate
- IOSH Managing Safely
- CSCS Card (HSE grade

4.3 Appointed Person (Lift Planner)

Responsibilities:

- Plans the lifting operation, including selection of crane and rigging equipment, ground bearing assessment, and determination of whether the lift is classified as a critical lift.
- Produces and signs off the site-specific Lift Plan and risk assessment.

- Verifies that the load weight, centre of gravity, and rigging configuration are within the safe working load of all equipment.

Competency & Certification Requirements:

- Appointed Person Lift Planning qualification (or NCCCO Rigger Level II with lift planning competency)
- Demonstrable experience in mobile crane lift planning

4.4 Crane Operator

Responsibilities:

- Operates the crane strictly within the manufacturer's load chart and rated capacity for the prevailing configuration and ground conditions.
- Conducts pre-use inspection and function testing of the crane prior to lifting operations.
- Halts operations immediately upon identification of any unsafe condition, signal ambiguity, or environmental limit exceedance.

Competency & Certification Requirements:

- NCCCO Certification (relevant crane type/capacity)
- Valid state-issued license where applicable
- Manufacturer-specific familiarisation training

4.5 Banksman / Signaller

Responsibilities:

- Directs crane movements using standard hand signals or radio communication in accordance with OSHA 1926.1428.
- Maintains a clear, unobstructed line of sight to the crane operator and the load at all times.
- Controls pedestrian and vehicle access into the exclusion zone during load movement.

Competency & Certification Requirements:

- OSHA-compliant Signal Person Qualification (NCCCO or equivalent)
- CSCS Card

4.6 Rigger / Slinger

Responsibilities:

- Selects, inspects, and attaches rigging equipment appropriate to the load weight, geometry, and centre of gravity.
- Confirms sling angles, hitch configuration, and load balance prior to lift commencement.
- Removes rigging equipment safely once the load is landed and secured.

Competency & Certification Requirements:

- NCCCO Rigger Certification (Level I minimum)
- CSCS Card
- Manufacturer training on below-the-hook lifting devices in use

4.7 Foreman

Responsibilities:

- Supervises the trade operatives engaged in load preparation, rigging support, and site housekeeping around the lift zone.
- Ensures the work sequence in Section 7 is followed and reports any deviation to the Site Manager and HSE Officer.
- Verifies PPE compliance and permit validity for the crew under their supervision prior to each shift.

Competency & Certification Requirements:

- CSCS Supervisor Card
- IOSH Managing Safely
- Trade-specific supervisory competency

4.8 Operative

Responsibilities:

- Carries out assigned tasks strictly in accordance with this Method Statement and toolbox talk briefing.
- Remains outside the exclusion zone during active lifting unless specifically tasked and authorised to be within it (e.g. tag-line handler).
- Reports any hazard, defect, or unsafe condition immediately to the Foreman or HSE Officer.

Competency & Certification Requirements:

- CSCS Card (Operative grade)
- Site Induction
- Task-specific toolbox talk attendance

5 SECTION 5 — PPE & EQUIPMENT SCHEDULE

Mandatory PPE (All Personnel)

- Hard Hat — compliant with ANSI/ISEA Z89.1 — Mandatory for all personnel within the site boundary at all times.
- Hi-Vis Vest / Clothing — compliant with ANSI/ISEA 107 Class 2 (Class 3 where working near vehicular traffic) — Mandatory.
- Safety Boots — steel or composite toe-cap, compliant with ASTM F2413 — Mandatory.
- Gloves — cut- and abrasion-resistant, compliant with ANSI/ISEA 105 — Mandatory during rigging and load handling tasks.
- Safety Glasses — impact-rated, compliant with ANSI Z87.1 — Mandatory.

5.2 Task-Specific PPE

- Full Body Harness with Shock-Absorbing Lanyard — compliant with ANSI/ASSP Z359.1 — Mandatory for personnel working at height during crane assembly, climbing, or load attachment above 6 feet.
- Hearing Protection — compliant with ANSI S3.19 — Mandatory in high-noise zones adjacent to running plant.
- Radio / Communication Headset — Advisory, recommended for Banksman/Signaller to reduce ambiguity in verbal commands.
- Face Shield — Advisory, recommended during wire rope or sling inspection where fraying wires present a splinter hazard.

5.3 Specialist Equipment & Inspection Requirements

- Certified Lifting Slings, Shackles, and Below-the-Hook Devices — Mandatory colour-coded inspection tagging in accordance with ASME B30.9/B30.20; visually inspected before each use and formally inspected/certified at intervals not exceeding 12 months.
- Tag Lines — Mandatory for load control on all lifts where load rotation or wind-induced swing is anticipated.
- Two-Way Radios — Mandatory for communication between Crane Operator, Banksman/Signaller, and Appointed Person where direct line of sight cannot be guaranteed throughout the lift.
- Ground Bearing Mats / Outrigger Pads — Mandatory where ground bearing capacity does not inherently meet the crane manufacturer's outrigger loading requirements.
- Wind Speed Anemometer — Mandatory on site for continuous monitoring of wind conditions against the crane's rated operating limits.

6 SECTION 6 — PERMIT TO WORK REQUIREMENTS

A Permit to Work (PTW) system shall be applied to control specific higher-risk activities that may be associated with or occur concurrently with the crane lifting operation described in this Method Statement. No work covered by a required permit shall commence until the relevant permit has been issued, briefed to the workforce, and displayed at the point of work.

6.1 Hot Work Permit

- Issuing Authority: Site Manager or delegated Permit Issuer, countersigned by the HSE Officer.
- Pre-Conditions: Required where hot work (cutting, grinding, welding) is necessary to prepare lifting points, modify rigging attachments, or carry out temporary works within the lift zone; fire watch and extinguishing equipment must be in place.
- Duration: Valid for the single shift only; must be revalidated at the start of each subsequent shift.
- Colour Code: Red permit identifier.
- Cancellation: Closed out by the Permit Issuer following confirmation of a 30-minute post-work fire watch and area inspection.

6.2 Confined Space Entry Permit

- Issuing Authority: HSE Officer, in conjunction with a competent Confined Space Supervisor.
- Pre-Conditions: Required where load landing, rigging attachment, or inspection activities require entry into a pit, shaft, tank, or other confined space; atmospheric testing and rescue arrangements must be verified before issue.
- Duration: Valid for the specific task and shift; entry log must be maintained and permit revalidated if conditions change.
- Colour Code: Yellow/black hazard-striped permit identifier.
- Cancellation: Closed out upon confirmation that all personnel have exited the space and equipment has been withdrawn.

6.3 Electrical Isolation Permit

- Issuing Authority: Site Electrical Engineer or Authorised Person, countersigned by the HSE Officer.
- Pre-Conditions: Required where the lift zone, crane standing position, or load travel path is within the OSHA-defined minimum approach distance of overhead or buried electrical services; positive isolation, lock-out/tag-out, and proving-dead procedures must be completed.
- Duration: Valid for the duration of the lifting operation; isolation status verified at the start of each shift.
- Colour Code: Blue permit identifier.
- Cancellation: Closed out by the Authorised Person following safe reinstatement and confirmation that all personnel are clear of the isolated system.

7 SECTION 7 — SEQUENCE OF WORKS (STEP-BY-STEP METHOD)

The following sequence sets out the complete method for the safe execution of crane lifting operations, organised into five operational phases. Each step identifies the responsible person, equipment required, hazards, hierarchy-of-controls measures, regulatory reference, and verification checkpoint.

PHASE 1 — PRE-MOBILISATION & LIFT PLANNING

This phase establishes the technical and administrative foundation of the lift, confirming ground conditions, crane selection, and formal authorisation before any equipment is mobilised to site.

Step 1: Site Survey & Ground Bearing Assessment

Conduct a site survey of the proposed crane standing area and load travel path to confirm ground bearing capacity, level, and the presence of underground services or voids.

- **Responsible Person: Appointed Person (Lift Planner)**
- **Equipment / Tools Required:**
  - Ground penetrating survey report / geotechnical data
  - Service drawings
  - Measuring equipment
- **Hazards Identified:**
  - Underground services strike — buried cable/pipe damage from ground loading or excavation
  - Ground collapse — insufficient bearing capacity beneath outriggers/tracks

- **Control Measures (Hierarchy of Controls):**
  - Elimination: Reposition crane standing area away from known service routes where possible.
  - Engineering: Specify outrigger mats/cribbing sized to the calculated ground bearing pressure.
  - Administrative: Obtain and review as-built service drawings prior to survey; permit-to-dig if excavation required.
  - PPE: Hard hat, hi-vis vest, safety boots.
- **Regulatory Reference: OSHA 29 CFR 1926.1402 (Ground Conditions)**
- **Verification / Sign-off: Ground bearing assessment record signed by the Appointed Person and retained with the Lift Plan.**

Step 2: Lift Plan Development & Risk Assessment

Develop the site-specific Lift Plan, including load weight verification, centre of gravity, rigging configuration, and classification of the lift as routine or critical, supported by a task-specific risk assessment.

- **Responsible Person: Appointed Person (Lift Planner)**
- **Equipment / Tools Required:**
  - Load chart / crane specification
  - Lift planning software or manual calculation sheets
  - Risk assessment template
- **Hazards Identified:**
  - Crane overload — underestimation of load weight or incorrect radius calculation
  - Load instability — incorrect centre of gravity assumption leading to load shift
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Select a crane with rated capacity exceeding maximum anticipated load with adequate margin.
  - Engineering: Cross-check load chart against configuration, radius, and boom length for the specific lift.
  - Administrative: Independent technical check of the Lift Plan by a second competent person prior to approval.
  - PPE: Not applicable — office/planning task.
- **Regulatory Reference: OSHA 29 CFR 1926.1417 (Assembly/Disassembly — General Requirements); ASME B30.5**
- **Verification / Sign-off: Lift Plan formally approved and signed by the Appointed Person and Site Manager prior to mobilisation.**

Step 3: Crane Selection & Load Chart Verification

Select the crane type and capacity appropriate to the lift requirements and verify its current inspection, load chart, and certification status prior to mobilisation to site.

- **Responsible Person: Site Manager**
- **Equipment / Tools Required:**
  - Crane certification and load chart documentation
  - Third-party inspection certificate
  - Equipment maintenance records
- **Hazards Identified:**
  - Use of uncertified/defective equipment — structural or mechanical failure during lift due to lapsed inspection
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Reject any crane without current, valid inspection and load test certification.
  - Engineering: Verify configuration-specific load chart matches the planned lift radius and boom length.
  - Administrative: Document review and sign-off by Site Manager prior to booking crane for mobilisation.
  - PPE: Not applicable — documentation task.
- **Regulatory Reference: OSHA 29 CFR 1926.1412 (Inspections)**
- **Verification / Sign-off: Crane certification file reviewed and approved; copy retained on site prior to arrival.**

Step 4: Permit to Work & Toolbox Talk

Issue the relevant Permits to Work (Hot Work, Confined Space, or Electrical Isolation as applicable) and conduct a toolbox talk to brief all personnel on the Lift Plan, exclusion zone, and individual responsibilities.

- **Responsible Person: HSE Officer**
- **Equipment / Tools Required:**
  - Permit to Work documentation
  - Lift Plan and Method Statement copies
  - Toolbox talk attendance register
- **Hazards Identified:**
  - Miscommunication of roles/sequence — personnel unaware of exclusion zone limits or signal protocol
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Not applicable.
  - Engineering: Not applicable.
  - Administrative: Mandatory toolbox talk attendance for all personnel prior to lift; permits verified valid and displayed at point of work.
  - PPE: Hard hat, hi-vis vest, safety boots (briefing held within site boundary).
- **Regulatory Reference: OSHA 29 CFR 1926.20 (General Safety and Health Provisions)**
- **Verification / Sign-off: Signed toolbox talk register and valid permits confirmed by HSE Officer before Phase 2 commences.**

PHASE 2 — SITE & CRANE SET-UP

This phase covers the physical establishment of the exclusion zone and the delivery, assembly, and inspection of the crane prior to any lifting activity.

Step 5: Site Establishment & Exclusion Zone

Establish the exclusion zone around the crane standing area and load travel path using barriers, signage, and where required, banksmen at access points, in accordance with the approved Lift Plan.

- **Responsible Person: Foreman**
- **Equipment / Tools Required:**
  - Barriers / fencing
  - Warning signage
  - Barrier tape
- **Hazards Identified:**
  - Unauthorised entry into lift zone — struck-by injury from crane superstructure, load, or outriggers
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Route pedestrian/vehicle traffic away from the lift zone entirely where site layout allows.
  - Engineering: Physical barriers and signage at all access points to the exclusion zone.
  - Administrative: Daily check of barrier integrity by Foreman before lifting commences.
  - PPE: Hard hat, hi-vis vest, safety boots.
- **Regulatory Reference: OSHA 29 CFR 1926.1424 (Work Area Control)**
- **Verification / Sign-off: Exclusion zone inspected and signed off by Foreman prior to crane delivery.**

Step 6: Crane Delivery & Erection / Assembly

Deliver crane components to site and carry out assembly/erection strictly in accordance with the manufacturer's assembly/disassembly (A/D) procedure under the direct supervision of a qualified A/D Director.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**
  - Assembly/disassembly procedure documentation
  - Mobile crane / crawler crane components
  - Rigging equipment for self-erection
- **Hazards Identified:**

  - Structural collapse during assembly — incorrect assembly sequence or use of uncertified components
  - Crush/caught-between injury — personnel positioned within the assembly zone during boom/jib erection
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Use only the OEM-approved A/D procedure; no improvised assembly sequences.
  - Engineering: Assembly zone barricaded separately from the general exclusion zone.
  - Administrative: A/D Director present and directing throughout assembly; assembly checklist completed.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: OSHA 29 CFR 1926.1403–1926.1406 (Assembly/Disassembly)**
- **Verification / Sign-off: Completed assembly checklist signed by the A/D Director.**

Step 7: Outrigger / Crawler Set-Up & Levelling

Deploy outriggers or position crawler tracks on the verified ground bearing area, extend to the configuration specified in the Lift Plan, and level the crane using the on-board level indicator.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**
  - Outrigger mats/cribbing
  - Spirit level / on-board level indicator
  - Ground bearing assessment record
- **Hazards Identified:**
  - Outrigger punch-through — point loading exceeding ground bearing capacity
  - Crane instability — crane operating out of level beyond manufacturer tolerance
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Not applicable.
  - Engineering: Outrigger mats sized per the ground bearing calculation from Step 1.
  - Administrative: Visual confirmation of full outrigger extension and level status recorded before proceeding.
  - PPE: Hard hat, hi-vis vest, safety boots.
- **Regulatory Reference: ASME B30.5; OSHA 29 CFR 1926.1402**
- **Verification / Sign-off: Level and outrigger extension confirmed and logged by Crane Operator, verified by Appointed Person.**

Step 8: Pre-Use Crane Inspection & Function Testing

Carry out a documented pre-use inspection of the crane covering wire ropes, hook and safety latch, hydraulic systems, safety devices (LMI/RCL, anti-two-block), and function-test all motions prior to any lift.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**
  - Pre-use inspection checklist
  - Load Moment Indicator (LMI) / Rated Capacity Limiter (RCL)
- **Hazards Identified:**
  - Mechanical/hydraulic failure during lift — undetected defect in wire rope, hook, or safety device
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Remove crane from service immediately if any defect is identified.
  - Engineering: Confirm LMI/RCL and anti-two-block device are active and correctly configured for the planned lift.
  - Administrative: Daily documented pre-use inspection retained on site for the duration of the operation.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: OSHA 29 CFR 1926.1412 (Inspections)**
- **Verification / Sign-off: Signed pre-use inspection checklist reviewed by HSE Officer before lifting operations begin.**

PHASE 3 — RIGGING & LOAD PREPARATION

This phase covers verification of the load, selection and inspection of rigging equipment, and attachment of the load in preparation for lifting.

Step 9: Load Identification & Weight Verification

Confirm the identity, actual weight, and centre of gravity of the load against the Lift Plan, using weight documentation, load cell readings, or manufacturer data plates as available.

- **Responsible Person: Rigger / Slinger**
- **Equipment / Tools Required:**
  - Load weight documentation / data plate
  - Load cell (where weight uncertain)
- **Hazards Identified:**
  - Crane overload — actual load weight exceeds the weight assumed in the Lift Plan
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Do not proceed with the lift if weight cannot be verified against a reliable source.
  - Engineering: Use load cell verification for loads without certified weight documentation.
  - Administrative: Cross-check verified weight against the Lift Plan before rigging.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: ASME B30.5; OSHA 29 CFR 1926.1417**
- **Verification / Sign-off: Verified load weight recorded on the Lift Plan and initialled by the Appointed Person.**

Step 10: Rigging Equipment Selection & Inspection

Select slings, shackles, and below-the-hook lifting devices rated for the verified load weight and configuration, and visually inspect each item for damage, wear, or expired certification prior to use.

- **Responsible Person: Rigger / Slinger**
- **Equipment / Tools Required:**
  - Certified slings and shackles
  - Below-the-hook lifting devices
  - Inspection tags/log
- **Hazards Identified:**
  - Rigging failure — use of damaged, uncertified, or under-rated rigging equipment
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Reject and remove from service any item with visible damage, deformation, or missing/expired inspection tag.
  - Engineering: Select rigging configuration (sling angle, hitch type) that keeps working load within rated capacity.
  - Administrative: Documented pre-use visual inspection of all rigging items before each lift.
  - PPE: Gloves, hard hat, hi-vis vest, safety boots, safety glasses.
- **Regulatory Reference: ASME B30.9 / B30.20; OSHA 29 CFR 1910.184**
- **Verification / Sign-off: Rigging inspection record completed and checked by Foreman.**

Step 11: Sling & Attachment to Load

Attach the selected rigging to the designated lifting points on the load, confirming correct sling angle, balanced hitch configuration, and secure shackle pin closure.

- **Responsible Person: Rigger / Slinger**
- **Equipment / Tools Required:**
  - Certified slings, shackles
  - Tag lines
- **Hazards Identified:**
  - Load shift or drop during lift — unbalanced rigging or incorrectly seated shackle pin
  - Crush injury — hands/fingers caught between load and rigging during attachment
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Use only designated, engineered lifting points on the load; no improvised attachment points.
  - Engineering: Spreader beam or multi-leg sling configuration to control load balance where required.

  - Administrative: Second-person check of all rigging attachment points before signalling lift-ready.
  - PPE: Gloves, hard hat, hi-vis vest, safety boots.
- **Regulatory Reference: OSHA 29 CFR 1910.184; ASME B30.9**
- **Verification / Sign-off: Rigging attachment visually verified and confirmed lift-ready by Rigger and Foreman.**

Step 12: Pre-Lift Briefing & Final Checks

Conduct a final pre-lift briefing with the Crane Operator, Banksman/Signaller, and Rigger to confirm the lift sequence, communication method, and exclusion zone status immediately before lifting.

- **Responsible Person: Appointed Person (Lift Planner)**
- **Equipment / Tools Required:**
  - Lift Plan
  - Two-way radios
  - Wind speed anemometer reading
- **Hazards Identified:**
  - Miscommunication during lift execution — unclear signals or roles leading to uncoordinated crane movement
  - Adverse weather — wind speed exceeding crane's rated operating limit
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Postpone the lift if wind speed, visibility, or lightning risk exceeds the crane's rated operational limits.
  - Engineering: Confirm radio communication check between all parties before proceeding.
  - Administrative: Final headcount and exclusion zone confirmation immediately prior to Phase 4 commencing.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: OSHA 29 CFR 1926.1417; ASME B30.5**
- **Verification / Sign-off: Pre-lift briefing confirmed complete and logged by the Appointed Person.**

PHASE 4 — LIFTING OPERATIONS (CRITICAL LIFT EXECUTION)

This phase covers the physical execution of the lift, from trial lift through to load positioning, under the direct control of the Crane Operator and Banksman/Signaller.

🔴 **CRITICAL:** Once the load is off the ground, the lift shall not be paused or the load left suspended unless in an uncontrolled emergency; all personnel other than essential lift crew shall remain outside the exclusion zone for the entire duration of Phase 4.

Step 13: Trial Lift (Test Lift)

Raise the load a short distance (typically 150–300mm) off the ground and hold to check rigging security, load balance, and crane stability before proceeding with the main lift.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**
  - Crane
  - Rigging as attached in Phase 3
- **Hazards Identified:**
  - Load instability observed at trial height — unbalanced rigging or incorrect centre of gravity assumption
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Not applicable — trial lift itself is the elimination control for main-lift instability risk.
  - Engineering: Hold the load at trial height for visual inspection before continuing to hoist.
  - Administrative: Rigger to visually confirm load balance and sling tension at trial height; abort and re-rig if unbalanced.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: ASME B30.5**
- **Verification / Sign-off: Trial lift outcome confirmed satisfactory by Rigger and Appointed Person before main lift proceeds.**

Step 14: Main Lift — Hoisting

Following a satisfactory trial lift, hoist the load smoothly to the height required to clear all obstructions along the planned travel path, under the direction of the Banksman/Signaller.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**
  - Crane
  - Two-way radios / standard hand signals
- **Hazards Identified:**
  - Struck-by falling load — rigging failure or crane malfunction during hoisting
  - Contact with overhead obstructions — insufficient clearance during hoist
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Maintain exclusion zone clear of all non-essential personnel throughout hoisting.
  - Engineering: LMI/RCL and anti-two-block devices active throughout the hoist.
  - Administrative: Continuous signal communication between Banksman/Signaller and Crane Operator; smooth, controlled crane movements only.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: OSHA 29 CFR 1926.1425 (Hoisting Personnel — general hoisting provisions apply)**
- **Verification / Sign-off: Continuous visual monitoring by Banksman/Signaller; any anomaly halts the lift immediately.**

Step 15: Load Travel / Slewing

Slew and/or travel the crane to move the suspended load along the planned path to the landing position, using tag lines to control load rotation and swing.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**
  - Tag lines
  - Two-way radios
- **Hazards Identified:**
  - Load swing/rotation — wind gusts or momentum causing uncontrolled load movement
  - Collision with structure or plant — insufficient clearance during slewing
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Suspend travel/slewing operations if wind speed approaches the crane's rated limit.
  - Engineering: Tag lines held by trained operatives positioned outside the direct fall zone.
  - Administrative: Banksman/Signaller maintains continuous line of sight and directs slewing speed and path.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: ASME B30.5; OSHA 29 CFR 1926.1424**
- **Verification / Sign-off: Load travel monitored continuously by Banksman/Signaller with no deviation from the approved path.**

Step 16: Load Positioning & Landing

Lower and position the load precisely onto the prepared landing area or final installation position, guided by tag lines and Banksman/Signaller direction.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**
  - Tag lines
  - Packing/dunnage for load landing
- **Hazards Identified:**
  - Crush injury during landing — hands/feet caught between load and landing surface during final positioning
  - Load tip-over on landing — uneven landing surface or incorrect packing
- **Control Measures (Hierarchy of Controls):**
  - Elimination: No personnel positioned beneath or directly adjacent to the load during final descent.

  - Engineering: Prepared, level landing surface with appropriate packing/dunnage confirmed before lowering.
  - Administrative: Guide ropes/tag lines used to control final positioning; Banksman/Signaller directs final descent rate.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: OSHA 29 CFR 1926.1417**
- **Verification / Sign-off: Load landing confirmed stable and correctly positioned by Rigger before hook is slack.**

PHASE 5 — LOAD RELEASE, DE-RIG & DEMOBILISATION

This phase covers safe release and securing of the landed load, removal of rigging, and controlled dismantling and demobilisation of the crane from site.

Step 17: Load Release & Securing

Confirm the load is stable and adequately secured (e.g. bolted, braced, or otherwise fixed as required) before releasing tension from the crane hook.

- **Responsible Person: Rigger / Slinger**
- **Equipment / Tools Required:**
  - Fixings/bracing as specified in engineering drawings
  - Hand tools
- **Hazards Identified:**
  - Load movement upon release — inadequate securing before hook tension is removed
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Do not release rigging until permanent or temporary securing is confirmed complete.
  - Engineering: Temporary bracing installed per engineering drawing where permanent fixing is not immediate.
  - Administrative: Sign-off by Foreman confirming load is secured before instructing crane to slacken.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: OSHA 29 CFR 1926.1417**
- **Verification / Sign-off: Load securing confirmed and recorded before de-rigging begins.**

Step 18: De-Rigging

Remove slings, shackles, and below-the-hook devices from the landed load once securing is confirmed, and return rigging equipment to designated storage.

- **Responsible Person: Rigger / Slinger**
- **Equipment / Tools Required:**
  - Hand tools
  - Rigging storage containers
- **Hazards Identified:**
  - Struck-by falling rigging — rigging released while still under tension or dropped from height
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Confirm zero load tension on rigging before disconnection.
  - Engineering: Not applicable.
  - Administrative: Rigging inspected for damage during removal and defective items quarantined from further use.
  - PPE: Gloves, hard hat, hi-vis vest, safety boots.
- **Regulatory Reference: ASME B30.9**
- **Verification / Sign-off: Rigging equipment accounted for, inspected, and returned to store; logged by Foreman.**

Step 19: Crane Dismantling / Stand-Down

Retract outriggers, stow the boom/jib, and where required, dismantle the crane in accordance with the manufacturer's A/D procedure under the supervision of the A/D Director.

- **Responsible Person: Crane Operator**
- **Equipment / Tools Required:**

  - Assembly/disassembly procedure documentation
  - Rigging equipment for dismantling
- **Hazards Identified:**
  - Structural collapse during dismantling — incorrect dismantling sequence
  - Crush/caught-between injury — personnel within the dismantling zone
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Follow OEM dismantling sequence exactly; no shortcuts.
  - Engineering: Dismantling zone barricaded separately from general site access.
  - Administrative: A/D Director present and directing throughout; dismantling checklist completed.
  - PPE: Hard hat, hi-vis vest, safety boots, gloves.
- **Regulatory Reference: OSHA 29 CFR 1926.1403–1926.1406**
- **Verification / Sign-off: Completed dismantling checklist signed off by the A/D Director.**

Step 20: Site Clearance & Handover

Remove exclusion zone barriers and signage once the crane and rigging equipment have left site, inspect the work area for residual hazards, and formally hand over the completed lift to the Site Manager.

- **Responsible Person: Site Manager**
- **Equipment / Tools Required:**
  - Site inspection checklist
  - Housekeeping equipment
- **Hazards Identified:**
  - Residual hazards left on site — debris, packing material, or ground disturbance not reinstated
- **Control Measures (Hierarchy of Controls):**
  - Elimination: Not applicable.
  - Engineering: Not applicable.
  - Administrative: Final site walk-down and sign-off before area is returned to general site access.
  - PPE: Hard hat, hi-vis vest, safety boots.
- **Regulatory Reference: ISO 45001:2018 (Operational Planning and Control)**
- **Verification / Sign-off: Handover checklist signed by Site Manager and HSE Officer; lift operation formally closed out.**

8 SECTION 8 — ENVIRONMENTAL CONTROLS

8.1. Waste Management & Disposal — Packing materials, dunnage, and rigging offcuts generated during the operation shall be segregated at source and removed via the site's designated waste management contractor in accordance with local waste regulations.

  - Segregate recyclable timber/packaging from general waste at the point of generation.
  - Maintain a waste transfer record for any hazardous waste generated (e.g. contaminated packing materials).

8.2. Spill Prevention & Containment — Hydraulic fluid or fuel leaks from the crane represent the primary spill risk during this operation and shall be controlled through preventative maintenance and readily available containment resources.

  - Spill kit maintained on site within immediate reach of the crane standing area.
  - Drip trays placed beneath the crane's hydraulic and fuel connection points where a pre-existing leak risk is identified.

8.3. Noise & Vibration Control — Crane operation, particularly engine idling and hydraulic system noise, shall be managed to minimise disturbance to the surrounding environment and exposure to site personnel.

  - Engine switched off (not idling) during extended waiting periods between lifts where practicable.
  - Hearing protection issued in accordance with the PPE Schedule (Section 5) where noise levels approach action values.

8.4. Dust & Airborne Contaminant Control — Where the lift zone or crane standing area is on unpaved ground, dust generation from crane and support vehicle movement shall be controlled to protect air quality and visibility.

- Water damping of unpaved access/standing areas during dry conditions.
- Vehicle speed restricted within the site boundary to minimise dust generation.

8.5. Water & Drainage Protection — Outrigger set-up and ground preparation activities shall avoid impact to existing drainage infrastructure or watercourses in proximity to the lift zone.

- Identify and protect existing drainage inlets within the crane standing area before outrigger deployment.
- Spill kit and drain covers available to prevent hydraulic fluid entering surface water drainage in the event of a leak.

8.6. Flora, Fauna & Ecological Considerations — Where the lift zone or crane travel route is within or adjacent to landscaped, planted, or ecologically sensitive areas, protective measures shall be implemented prior to mobilisation.

- Protective fencing installed around retained trees or planted areas adjacent to the crane standing area, where applicable.
- Ecological constraints confirmed with the project environmental advisor prior to ground disturbance, where applicable.

8.7. Environmental Incident Reporting — Any environmental incident, including spills, unauthorised discharges, or ecological damage, shall be reported immediately in accordance with the project's Environmental Management Plan.

- Report any spill or environmental incident to the HSE Officer immediately and contain at source using the site spill kit.
- Record and investigate all environmental incidents, however minor, in the project incident register.

9 SECTION 9 — EMERGENCY RESPONSE & CONTINGENCY PLAN

Emergency preparedness for crane lifting operations is founded on the principle of anticipating credible failure modes before work begins, ensuring every member of the lift crew understands their role in an emergency, and maintaining clear, rehearsed escalation routes so that a controlled response can be initiated without delay.

Scenario 1 — Load Drop / Rigging Failure

- Immediate Actions: 1) Crane Operator halts all crane movement immediately. 2) Banksman/Signaller directs all personnel clear of the fall zone. 3) HSE Officer and Site Manager notified immediately. 4) Area cordoned off and preserved for investigation.
- Responsible Person / Role: Crane Operator (immediate stop); Banksman/Signaller (area clearance).
- Escalation Route: Foreman → Site Manager → HSE Officer → Project Director; emergency services called if injury or significant property damage has occurred.
- Assembly Point: Designated site muster point, as identified on the site emergency plan.

Scenario 2 — Crane Overturn / Instability

- Immediate Actions: 1) Crane Operator lowers load to ground if safely possible, otherwise remains at controls and does not abandon cab prematurely. 2) Banksman/Signaller evacuates all personnel from the exclusion zone and surrounding fall radius. 3) HSE Officer initiates site-wide alert. 4) Emergency services contacted immediately.
- Responsible Person / Role: Crane Operator; HSE Officer for site-wide alert.
- Escalation Route: Site Manager → HSE Officer → Emergency Services → Project Director.
- Assembly Point: Designated site muster point, upwind and clear of the crane fall radius.

Scenario 3 — Contact with Overhead Power Lines

- Immediate Actions: 1) Crane Operator remains in the cab and instructs all personnel not to touch the crane or load. 2) Attempt to move the crane clear of the power line only if it can be done safely without breaking contact ambiguity. 3) If evacuation from the cab is unavoidable, jump clear (do not step) to avoid simultaneous ground/crane contact. 4) Utility provider and emergency services contacted immediately.
- Responsible Person / Role: Crane Operator; HSE Officer for utility notification.
- Escalation Route: Site Manager → Utility Provider Emergency Line → Emergency Services → Project Director.

- Assembly Point: Designated site muster point, at a safe distance from the energised crane/load.

Scenario 4 — Personnel Injury Within the Exclusion Zone

- Immediate Actions: 1) Crane Operator halts all crane movement immediately. 2) First aider attends casualty; do not move casualty unless in immediate further danger. 3) HSE Officer notified and first aid/emergency response initiated. 4) Emergency services called if injury is serious.
- Responsible Person / Role: First Aider; HSE Officer.
- Escalation Route: Foreman → HSE Officer → Site Manager → Emergency Services (if required) → Project Director.
- Assembly Point: Designated site muster point, with access route kept clear for emergency vehicles.

Scenario 5 — Adverse Weather During an Active Lift

- Immediate Actions: 1) Crane Operator completes the current load movement to the nearest safe landing point — do not begin a new lift. 2) Load landed and rigging secured as soon as safely achievable. 3) Crane boomed down/stowed if wind continues to exceed rated limits. 4) Lift operations suspended until conditions return within rated limits.
- Responsible Person / Role: Crane Operator; Appointed Person for go/no-go decision on resumption.
- Escalation Route: Crane Operator → Appointed Person → Site Manager.
- Assembly Point: Not applicable unless evacuation required; personnel to seek weather shelter as per site arrangements.

Emergency Contact Summary

Role / Function	Contact Name (Placeholder)	Contact Number (Placeholder)
Site Emergency Coordinator	[Name]	[Number]
HSE Officer	[Name]	[Number]
Client Emergency Contact	[Name]	[Number]
Emergency Services (National)	911 (or local equivalent)	911
Nearest Hospital / Medical Facility	[Facility Name]	[Number]
Muster / Assembly Point	[Designated site muster point — see site emergency plan / layout drawing]	

10 SECTION 10 — AUTHORISATION & SIGN-OFF

By signing below, each signatory confirms that they have read, understood, and authorise the implementation of this Method Statement, and that the controls described herein are suitable and sufficient for the safe execution of the crane lifting operations covered by this document.

Field	Details	Signature	Date
BLOCK 1 — PREPARED BY			
Role	HSE Advisor / Method Statement Author — Name: _____		
BLOCK 2 — REVIEWED BY (HSE)			
Role	HSE Manager / NEBOSH Certified — Name: _____		
BLOCK 3 — REVIEWED BY (TECHNICAL)			
Role	Site Manager / Competent Person — Name: _____		
BLOCK 4 — APPROVED BY			
Role	Project Director / Contracts Manager — Name: _____		
BLOCK 5 — CLIENT / PRINCIPAL CONTRACTOR REPRESENTATIVE			

Field	Details	Signature	Date
Organisation / Role	[Client / Principal Contractor Name] — Client HSE Representative — Name: _____		

This document is valid only when all signatures above have been obtained prior to commencement of works.