



Let's Talk About ES&H



Bechtel Communications Inc

01/22/2008

Critical Lift Requirements

In addition to the requirements of Section 5.6.1 of the Subcontractor ES&H Program, the Subcontractor is also responsible for complying with the following lifts that meet the classification of "Critical Lifts."

Prior to submittal of a critical lift plan to the Bechtel Communications Project Rigging Engineer or Bechtel Certified Rigging Engineer, the MLFC shall ensure that the following are provided: Completed lift data sheet; crane load chart for the model identified on the Lift Data Sheet (Attachment C-1); a detailed plan view sketch showing the position of the hoisting equipment, crane, tailing crane, location of the item to be lifted (pick location) and the final location of the lifted item (set location); a measurement from the cranes center pin to the pick location and a measurement from the crane center pin to the set location; and a detailed elevation view sketch providing the height of the building roof or top of the parapet wall (See details below).

For markets where a MLFC does not exist, a Field Coordinator may perform the above activities.

Rigging Engineer

The Bechtel Communications Project Rigging Engineer is responsible for review and approval of communications critical lift rigging plans. He/she works under the supervision of the PFE, Market Manager (or Direct Hire Superintendent if applicable), and receives technical direction from a Bechtel Certified Rigging Engineer. For direct hire work, the Bechtel Communications Project Rigging Engineer may prepare necessary rigging plans. Rigging plans developed by a Communications Project Rigging Engineer must be reviewed by another Bechtel Communications Project Rigging Engineer or a Bechtel Certified Rigging Engineer (CRE).

Details

Critical lift categories are defined by the following:

- a. Any lift where the payload weight is 30 tons or greater.
- b. Over occupied areas (i.e., occupied buildings, sidewalks, roadways, etc.). See Section 5.6.3 of the Subcontractor ES&H Program.
- c. All crane suspended personnel basket lifts (i.e., man-baskets). See Section 5.21 of the Subcontractor ES&H Program.
- d. Lifts requiring the crane to be set up over underground building structures or transportation tunnels.
- e. Lifts exceeding 90% of the crane capacity.
- f. Lifts requiring two or more cranes.
- g. Drifting operations, crane lifts where the load is drifted sideways by external means.



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- h. Lifts with helicopters over areas defined by the FAA as "congested areas." Generally, this is defined as areas that people utilize or inhabit (non-wilderness areas).
- i. Lifts where the crane boom or payload swings directly above or directly under energized power lines. Lifts adjacent to power lines are not considered critical if the clearance provisions of Sections 5.6.2 of the Subcontractor ES&H Program are followed.
- j. Project management may classify any lift that involves sensitive, costly, or schedule-critical equipment as critical lifts.

Subcontractor shall develop a written Critical Lift Rigging Plan and submit to Bechtel for written approval. The "Critical Lift" plan shall be available at the site and address the following applicable items using the following attachments of the Subcontractor ES&H Program (Attachments 5-7 & 5-8) for detailed requirements. (* Indicates mandatory required information)

1. Lift Data sheet, (Attachments 5-7 & 5-8) of the Subcontractor ES&H Program or equivalent sheet with equivalent information: *
 - a. Crane configuration and counterweights.
 - b. Boom/Jib length.
 - c. Radius.
 - d. Weight of hook block, crane attachments, wire rope.
 - e. Weight of rigging.
 - f. Payload weight.
 - g. Radius.
 - h. Capacity.
2. Copy of the crane capacity chart *
3. Plan view sketch*, to scale and dimensioned, indicating location of:
 - a. The crane (in relation to the payload pick site/location and set location).
 - b. Any above ground or underground utilities, buildings, other obstacles or interferences, etc.
 - c. Swing or travel path of boom.
 - d. Boom and payload clearances to obstructions, utilities, buildings, interferences, etc.
 - e. Crane mat and outrigger locations.
 - f. Crane assembly/disassembly area or requirements.
4. Elevation view sketch*, to scale, indicating clearances between boom and the payload and the boom and any obstructions, such as buildings.
5. List of rigging gear*, and a sketch of the rigging arrangement.
6. Description of the communications or signaling method* to be used by equipment operators and rigging crews.
7. Description of the payload to be lifted.*
 - a. Description and location of the rigging attachment points.
 - b. Payload weight, including weight of any attachments.
 - c. Payload dimensions.
8. Special considerations:
 - a. Effects of the wind.



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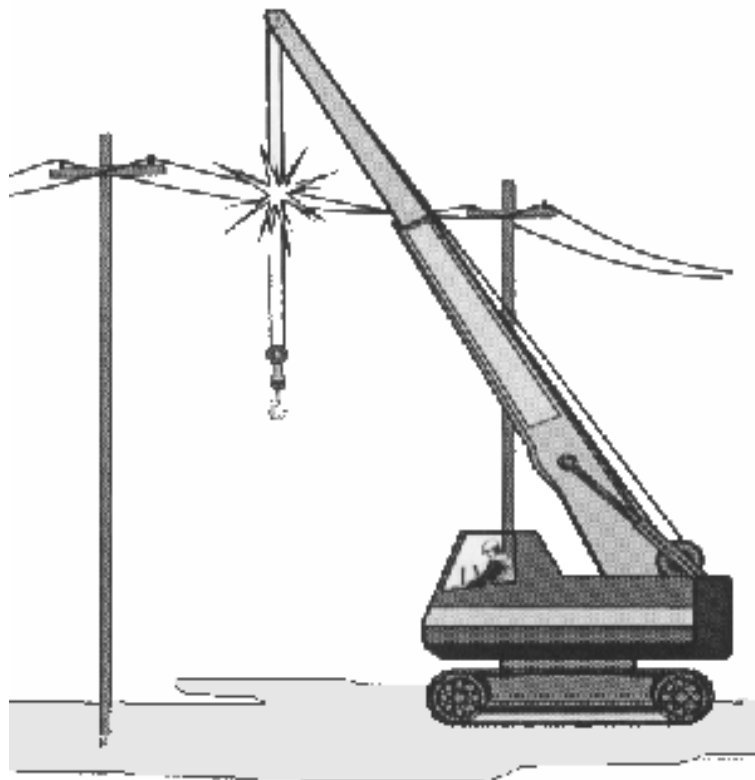
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- b. Soil or ground bearing considerations.
- c. Rigging calculations.
- d. Other special precautions.

Submit the following qualifications or certificates, as applicable:

1. Crane operator qualification documentation.
2. Rigger competency documentation.
3. Crane annual (periodic) inspection certificate.
4. Spreader bar or lift beam test certificate.
5. Certification that man-basket is in compliance with OSHA 1926.550-(15).

Sling or other lifting device load test certificates must be made available upon request.



Sources/For More Information:

[Subcontractor ES&H Program](#)

**Thanks to Kieran Kelly, for submitting this safety bulletin.*

ES&H COMMUNICATION MEETING

Project _____ Market/City/Site _____

Bulletin Topic: _____

Contractor/Subcontractor _____

Conducted by: _____ Date: _____

Other Safety Topics Discussed: _____

Problems or Concerns: _____

Corrective Action Taken: _____

Employees not attending meeting: _____

Please sign in below:

Employee Signature

ID #

Supervisor's signature: _____

Retain Completed Attendance Form in Market Office files