



NYCTM Buildings

CONSTRUCTION ADVISORY

IMPROPERLY INSTALLED & OVERLOADED COLD-FORMED STEEL

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**IMPROPER LOADING
OF COLD-FORMED STEEL
CONSTRUCTION CAN
BE DANGEROUS**

LOADS CANNOT BE PLACED ON COLD-FORMED STEEL UNTIL THE FLOOR AND SUPPORTING FRAMING SYSTEM IS COMPLETELY INSTALLED, ALL SHORING AND BRACING IS IN PLACE, AND ALL CODE-MANDATED INSPECTIONS HAVE BEEN COMPLETED

WHAT IS COLD-FORMED STEEL?

Cold-formed steel is a type of light-weight steel product made by bending or rolling steel sheets at ambient temperature into various shapes. Cold-formed steel products are available for both structural and non-structural applications.

WHAT HAPPENED HERE?



CMU blocks were stacked on a deck supported by cold-formed joists without adequate shoring, overloading the deck.



A knuckleboom deposited CMU block on a deck before the framing system was complete, overloading the deck.

WHAT SHOULD YOU DO?

WORKERS

- **DO NOT** go onto any section of a deck that is being formed unless you are experienced with laying decking and have discussed the operation with your supervisor before beginning the work.
- Avoid edges and openings unless guardrails are in place and holes are covered, or you are wearing appropriate fall protection.
- **DO NOT** cut or drill through cold-formed steel, run all utilities through provided openings.
- **DO NOT** remove shoring or bracing unless directed by your supervisor.
- Place materials and equipment only in designated areas as directed by your supervisor. These areas must be clearly marked on the deck by spray paint.



CRANE OPERATORS

- **DO NOT** deposit material on cold-formed steel construction unless directed by an authorized signal person at the job site.

CONSTRUCTION SUPERINTENDENTS

- **DO NOT** allow persons, material, or equipment on cold-formed steel until all members, fasteners, shoring and bracing have been installed, and Code-mandated special inspections and competent person inspections have been completed and documented.
- Ensure loads do not exceed design limits and are placed only in areas designated on drawings and marked in the field.
- Ensure compliance with installation requirements, including requirements for the sequence of operation, alignment of joists, rafters, trusses, and structural wall studs, and installation of screws, bolts, anchors, and other fasteners.
- Ensure bracing and shoring is installed as indicated on the drawings.
- Ensure no bracing or shoring is removed until the special inspector has determined it is no longer required. Ensure modifications to bracing or shoring are verified by the special inspector.
- Ensure masonry walls are properly braced during construction.

PERMIT HOLDER

- The permit holder is ultimately responsible for ensuring a safe job site and compliance with the New York City Building Code.
- Engage a registered design professional (RDP) to develop site specific bracing, shoring, and loading drawings for your site.
- Provide complete details of anticipated loading to the RDP and immediately notify the registered design professional of changes to anticipated loading.
- Ensure deliveries of materials and equipment to the site are made only when qualified personnel are present at the site to receive the delivery.
- Keep the special inspector aware of the progress of work. Notify the special inspector at least 72 hours in advance of work requiring a special inspection.
- Ensure all work requiring special inspection remains accessible and exposed until the special inspector approves the relevant work.
- Ensure required inspection checklists and reports are maintained at the site and available for review by the Department.

Section 3305.8 of the 2022 NYC Building Code for further information.