

HORIZONTAL SHORING BEAM SAFETY RULES
As Recommended by
SCAFFOLDING, SHORING AND FORMING INSTITUTE, INC.

It shall be the responsibility of all employers and users to read and comply with the following common sense guidelines which are designed to promote safety in the erection, dismantling and use of horizontal shoring beams. These guidelines are not all inclusive nor do they supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines conflict in any way with any state, provincial, local or federal statute or governmental regulation, said statute or regulation shall supersede these guidelines and it shall be the responsibility of each employee and user to comply therewith and also to be knowledgeable and understand all state, local or federal statutes or governmental regulations pertaining to horizontal shoring beams.

A. GENERAL GUIDELINES

1. POST THESE SHORING SAFETY GUIDELINES in a conspicuous place and be sure that all persons who erect, dismantle or use shoring are aware of them.
2. FOLLOW ALL STATE, PROVINCIAL, LOCAL AND FEDERAL CODES, ORDINANCES AND REGULATIONS pertaining to shoring.
3. SURVEY THE JOB SITE. A survey by a qualified person shall be made of the job site for hazards, such as untamped earth fills, ditches, debris, high tension wires, unguarded openings and other hazardous conditions. These conditions should be corrected or avoided as noted in the following sections.
4. PLAN SHORING ERECTION SEQUENCE in advance and obtain necessary access equipment to accomplish the work safely.
5. INSPECT ALL EQUIPMENT BEFORE USING. Never use any equipment that is structurally defective in any way. Mark it or tag it as defective, then remove it from the jobsite.
6. A SHORING DRAWING prepared by a person qualified to analyze the loading intended and consistent with the manufacturer's recommended safe working loads, shall be used on the job at all times.
7. ERECT, DISMANTLE OR ALTER SHORING only under the supervision of a qualified person.
8. DO NOT ABUSE OR MISUSE THE SHORING EQUIPMENT.
9. INSPECT ERECTED SHORING: (a) immediately prior to concrete placement; (b) during concrete placement and while vibrating concrete, and (c) after concrete placement until concrete is set.
10. NEVER TAKE CHANCES! IF IN DOUBT REGARDING THE SAFETY OR USE OF THE SHORING, CONSULT YOUR SHORING SUPPLIER.
11. USE SHORING EQUIPMENT only for the purposes or in ways for which it was intended. Use proper tools when installing equipment.
12. ERECTING AND DISMANTLING OF SHORING requires good physical condition. Do not work on shoring if you feel dizzy, unsteady in any way or are impaired in any way by drugs or any other substances.
13. DO NOT USE SHORING SYSTEMS for fall protection.

B. USE MANUFACTURER'S RECOMMENDED SAFE WORKING LOADS AND PROCEDURES FOR:

1. Span, spacing, and types of shoring beams.
2. Types, sizes, heights, and spacing of vertical shoring supports.

C. USE LUMBER EQUIVALENT TO THE STRESS, species, grade and size used on the layout. Use only lumber that is in good condition. Do not splice between supports.

D. DO NOT MAKE UNAUTHORIZED CHANGES OR SUBSTITUTION OF EQUIPMENT; always consult your supplier prior to making changes necessitated by jobsite conditions.

E. PROVIDE AND MAINTAIN ADEQUATE SUPPORT TO properly distribute shoring loads. When supporting horizontal shoring beams on:

1. Masonry walls, insure that masonry units have adequate strength. Brace walls as necessary.
2. Ledgers supported by walls using bolts, or other means, they should be properly designed and installed per recommendation of supplier or job architect/engineer.
3. Formwork, such formwork should be designed for additional loads imposed by the shoring beams.

4. Structural Steel Framework, the ability of the steel to support this construction loading should be checked and approved by the responsible project architect/engineer.
 5. When supporting horizontal beams on steel hangers, be sure that the bearing ends fully engage on the hangers. The hangers shall be designed to conform to the bearing end and shall have a rated strength to safely support the shoring loads imposed. (Follow hanger manufacturers' recommendations.)
 6. Do not bear adjustable horizontal beams on other adjustable horizontal beams.
- F. **SPECIAL CONSIDERATION MUST BE GIVEN TO THE INSTALLATION OF HORIZONTAL SHORING:**
1. When sloped or supported by sloping ledgers (stringers).
 2. When ledger (stringer), including blocking, height/width ratio exceeds 2 ½ to 1. Under no circumstances shall horizontal shoring beams bear on a single "two by" ledger (stringer).
 3. When eccentric loading conditions exist.
 4. When ledger (stringer) consists of multiple members. (i.e., double 2x6, 2x8, etc.)
- G. **ASSURE THAT BEARING ENDS OF SHORING BEAMS ARE PROPERLY SUPPORTED** and that locking devices are properly engaged before placing any load on beams.
- H. **IF MOTORIZED CONCRETE PLACEMENT EQUIPMENT IS TO BE USED**, be sure that lateral and other forces have been considered and adequate precautions taken to assure stability.
- I. **HORIZONTAL SHORING BEAMS SHOULD NOT** be supported other than at the bearing prongs unless recommended by supplier.
- J. **DO NOT NAIL BEAM BEARING PRONGS TO LEDGER.**
- K. **PLAN CONCRETE POURING METHODS AND SEQUENCES TO** insure against unbalanced loading of the shoring equipment. Take all necessary precautions to avoid uplift of shoring components and formwork.
- L. **AVOID SHOCK OR IMPACT LOADS FOR** which the shoring was not designed.
- M. **DO NOT PLACE ADDITIONAL, TEMPORARY LOADS** (such as rebar bundles) on erected formwork or poured slabs, without checking the capacity of the shoring and/or structure to safely support such additional loads.
- N. **DO NOT RELEASE ANY PART OF THE FORMWORK OR SHORING** until proper authority has been obtained. Particular consideration must be given to reshoring procedures.
- O. **WINDLOAD:** Erector must analyze the forming/shoring system for additional loads imposed from wind loading and provide adequate anchorage to resist these forces, including uplifting wind forces.
- P. **RESHORING** is one of the most critical operation in formwork; consequently, reshoring procedure must be designed by a qualified person and approved by the architect/engineer of record.

SH301
4/00
Rev – 6/03