



## FORMING SECTION

# SSFI TECHNICAL BULLETIN

## Bracing / Aligners

Wall Forms require bracing to ensure that the forms do not fall over and the completed wall is in proper location. In other words, wall forms must be *braced* and *aligned*.

Alignment of wall forms is necessary so that the completed wall is vertical, or at the angle the designer requires. For vertical walls, an alignment device usually does not support much load. Therefore it can be of light construction but must obviously have a method to adjust the length of the brace. This is usually accomplished using a purpose built tubular steel brace that has a threaded adjustment screw or a turnbuckle with attachment devices for standard lumber shapes. The spacing of these aligners is dependent on the type of wall form, the height of the form, and other factors unique to each forming system.

Bracing of wall forms is necessary to ensure the form does not fall over due to wind or other calamitous causes. This bracing is usually designed for a specific application since local conditions determine the forces that must be resisted. The brace is commonly used to align the wall form also.

There are three major components of the brace, the brace, the anchor, and the connection. The brace can be any material that will safely transfer loads from the form to the supporting surface. Usually the brace is steel, aluminum or wood. The anchor is the device at the bottom end of the brace that will resist the forces from the brace and keep the brace in a fixed position. The anchor is typically the supporting floor, a pier in the ground, or a concrete weight of known dimensions and weight. The connections, one at the form end of the brace, and the other at the anchor end of the brace, are either pins, bolts, inserts, plates, or combination thereof that allow proper positioning and strength to ensure the loads are transferred safely.

Most wall form manufacturers produce wall aligners and braces for use with their forms. Aligners and braces can also be job specific, that is designed for a particular situation and circumstance. Contact your manufacturer/supplier for recommendations for the forms you are using.

For further information on wall form aligners and braces consult the American Concrete Institute's "Formwork for Concrete" handbook (SP-4).

See the following for additional information about forming and the use of aligners and braces:

- ❖ SSFI Codes of Safe Practices
- ❖ ANSI A10.9, *Concrete and Masonry Work Safety Requirements*
- ❖ FEDERAL OSHA 29 CFR1926, Subpart Q (Concrete and Masonry Construction)
- ❖ American Concrete Institute, ACI-347

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This Technical Bulletin was prepared by members of the SSFI Forming Section.

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