

BULLETIN 08-001
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STABILITY DURING HANDLING AND ERECTION

It has recently been observed that the equation shown with Figure 5.6.2, page 5-24 of the 6th edition of *PCI Design Handbook* (MNL 120-04) and Figure 2.2.10(a), page 27 of *PCI Erector's Manual* (MNL 127-99) is incorrect and may not provide stability for all conditions when rotating a precast concrete component in the air. It is necessary that the center of gravity (c.g.) of the precast concrete component be between the two main crane lines for all angles during the rotation. This is illustrated in [Figures A and B](#). If the center of gravity is not between the two main crane lines, the precast concrete component can roll uncontrollably, which may result in a safety concern. PCI is currently working on revisions to this information and they will be published in the 7th edition of *PCI Design Handbook*. PCI will also update MNL-127-99.

Until these revisions are published, PCI recommends that you have rigging locations reviewed by a competent engineer who understands the dynamics of precast concrete product handling when you are dealing with a condition like this.

To ensure stability during rotation, a rigging arrangement as shown in Figure A will satisfy the condition. In the figure, both points a and b should be located on the opposite side of the center of gravity from point c. Such an arrangement ensures that Line 1 and Line 2 remain on opposite sides of the center of gravity from each other. If point b is required to be located on the same side of the center of gravity as point c to minimize tensile stresses in the component, further study will be required to avoid an uncontrollable rolling condition during rotation.

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