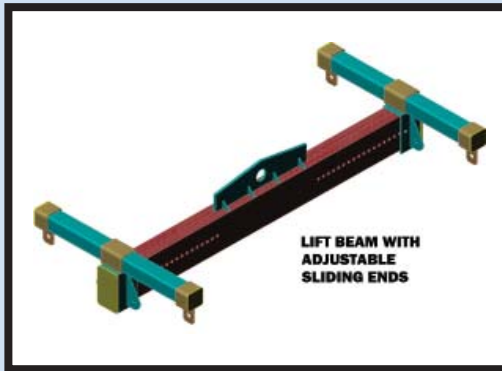




Delta Engineers & Architects, P.C.'s Structural Department

Delta provides specialty structural design services



Images of Lift Beams

We are a seamless extension of our clients' organizations

Delta provides lift beam designs for precast concrete manufacturers and steel erectors/fabricators

Over the years there have been several books and articles written that discuss the rigging of equipment for the handling of material. OSHA's federal regulations (ASME B30.20) play a big part in this. In the construction arena, the design and layout of rigging equipment pertains more specifically to the handling and erection of construction material. This "material" ranges from the simple; drainage inlets and floor beams, to the complicated; asymmetrical precast wall panels and 3-sided precast concrete skewed bridge elements.

When designing building components, the designer often leaves the review of the handling of the component to the specialty design engineer. Many pieces designed as a wall or a column will perform quite well oriented in the upright and intended position, but may become impractical to transport if handling isn't reviewed. Laying them on their side or imposing a handling load (impact) may cause the piece to bend, crack, or all together fail.

With all the information on rigging there is little written on the actual design of the lifting/spreader beam, a basic and often needed component of the lifting system. Further, there are even fewer articles that discuss a design fully utilizing ultimate strength design, which is well used today for the design of steel and concrete structures from start to finish. Delta Engineers has developed a proven method of lift beam strength design.

Delta's experience in designing spreader and lift beams, as well as the analysis of precast products for stress during lifting, has proven that with the application of sound engineering design principles any unique lift beam configuration can be accomplished.

If you would like to learn more about this, and other services that Delta's Structural Department can provide, please contact Jeffrey Stafford at 607-231-6617 (Facilities) or Joe Mieczkowski at 607-231-6670 (Precast)

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