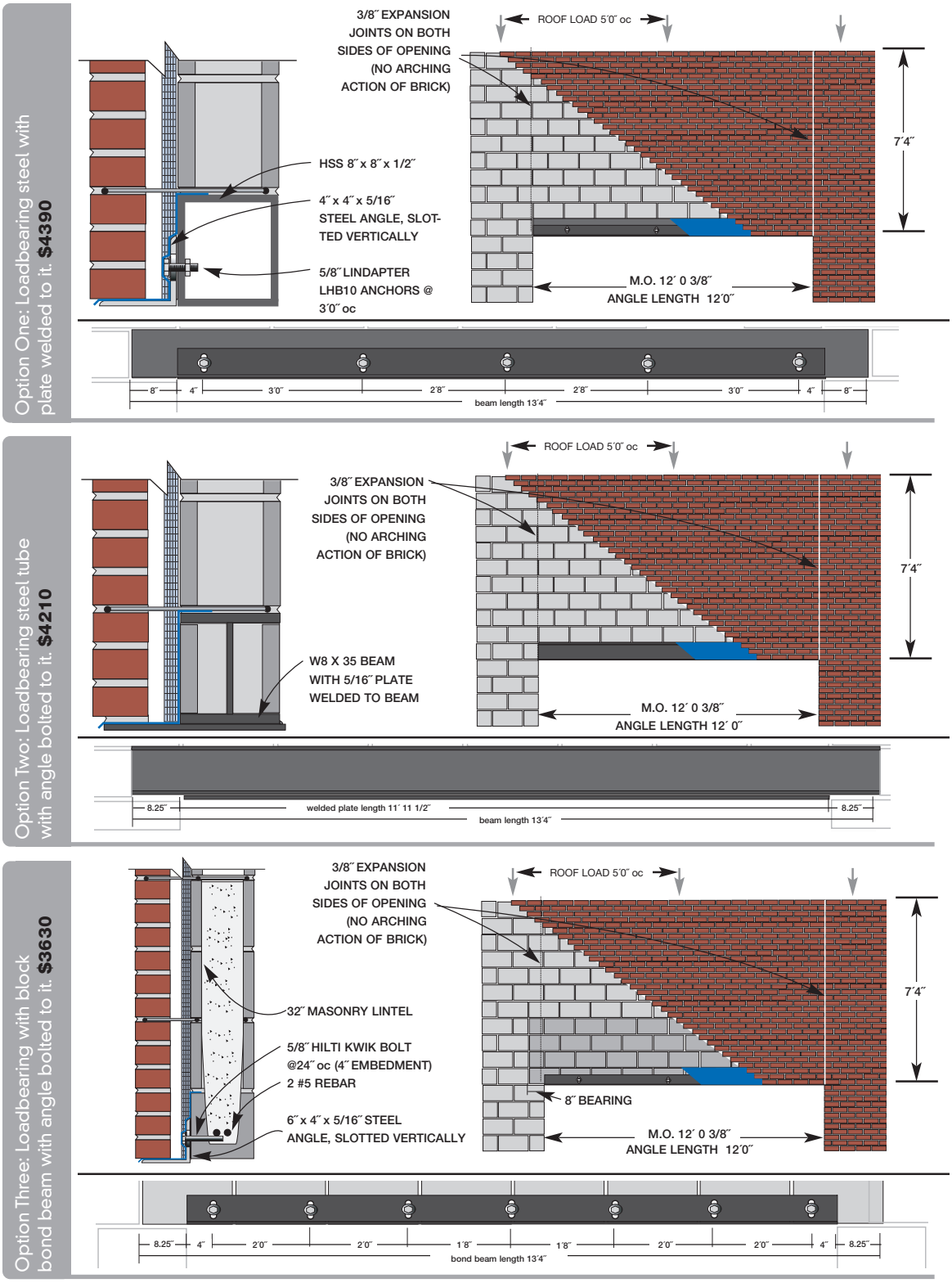
**Design data:**

- roof dead load = 20 psf
- roof live load = 25 psf
- wall height above door = 7′4″
- wind pressure = 20 psf
- wall comprised of 8″ cmu (45-55psf) & 4″ brick (40psf)
- lintels to comply with l/600 deflection criteria

## OVERHEAD DOOR OPENING DESIGN EXAMPLE (loadbearing cavity wall)

Cost data courtesy of Jeff Vidlak, senior estimator, J&E Duff. Beam structural design by George Podrebarac of Graef, Anhalt, Schloeman & Associates




# Reinforced Masonry Lintel Openings

BY JEFF VIDLAK

At recent Masonry Design Seminars sponsored by the Masonry Advisory Council in conjunction with the International Masonry Institute (IMI), a sub-program of the National Concrete Masonry Association's (NCMA) Structural Masonry Design System version 4.0 was demonstrated by Clemson University professor Russell Brown, PE, PhD.

Structural engineers in attendance were shocked by the ease of designing multiple depth lintels of 16″, 24″, 32″, etc. using the new module. With a simple mouse click,

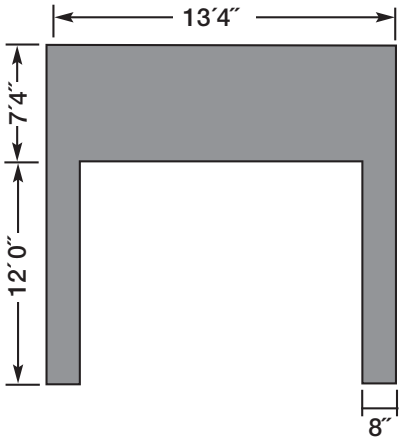


**Figure 1**

lintels are easily and cost effectively designed. As an example, a typical truck dock design is provided to demonstrate the capabilities of the new software (Figure 1).

To save time and money, consider reinforced masonry lintels which could provide a cost savings of $600 per truck dock opening. The system has myriad benefits: CMU for lintels readily available, no shop drawings required, enhanced scheduling, labor is saved by not cutting soaps to fit around steel lintels, no painting is necessary and by placing the expansion joints at the openings saves on the total number of expansion joints, providing less cost and maintenance for owners.

Design of this system is made even more efficient and cost effective with the application of NCMA's design software offered at secure.ncma.org. Structural Masonry Design System Version 4.0 is available for instant download from NCMA at the modest price of $259. The concrete masonry and clay masonry software for allowable stress design and strength design according to '05, '02, '99 or '95, ACI 530/ASCE 5/TMS 402 or the 2000 or 2003 IBC, includes reinforced and un-reinforced walls, shear walls, columns, lintels, custom face shell thicknesses, 14″ and 16″ deep units, interaction diagrams and more.

*Jeff Vidlak is estimator for West Chicago mason contractor, J & E Duff, Inc. He has been involved in aspects of the masonry industry since 1972, working in the past as a superintendent, mason contractor, foreman and journeyman bricklayer. Vidlak holds a BA in Business Management and MA in Leadership Studies from Lewis University, Chicago.*
*630-562-3800, jeffv@jeduff.com*