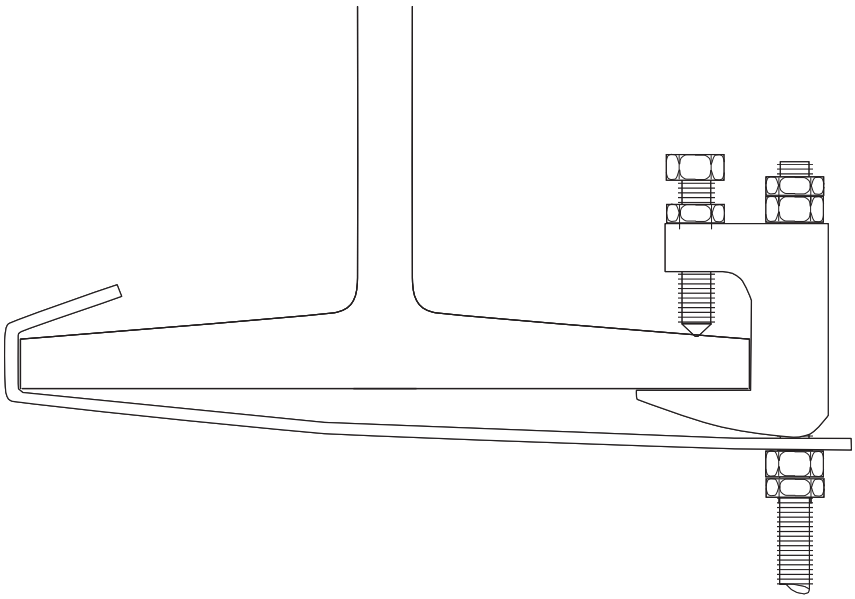

FIGURE C13-1 C-Type Beam Clamp Equipped with a Restraining Strap.

The intent of the 2-in. perimeter closure wall angle is to permit back and forth motion of the ceiling during an earthquake without loss of support, and the width of the closure angle is key to good performance. This has been experimentally verified by large-scale testing conducted by ANCO Engineering in 1983.

Extensive testing using the ICC-ES AC 156 protocol by major manufacturers of suspended ceilings has shown that perimeter clips can provide equivalent performance if they are designed to accommodate the same degree of movement as the closure angle while supporting the tee ends.

C13.5.9 Glass in Glazed Curtain Walls, Glazed Storefronts, and Glazed Partitions

The 2000 National Earthquake Hazards Reduction Program (NEHRP (2000) Provisions contains seismic design provisions for glazing systems. For ASCE 7, it was found that clarity of the provisions could be improved by reformatting the equations.

C13.6 MECHANICAL AND ELECTRICAL COMPONENTS

The revisions to Table 13.6-1 in ASCE-07 are the result of work done in recent years to better understand the performance of mechanical and electrical components and their attachment to the structure. The primary concepts of flexible and rigid equipment and ductile and rugged behavior are drawn from the Structural Engineers Association of California, *Recommended Lateral Force Requirements and Commentary*, 1999 Edition, Commentary Section C107.1.7. Material on HVAC is based on The American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. publication *A Practical Guide to Seismic Restraint*, RP-812, 1999. Other material on industrial piping, boilers, and pressure vessels is based on the American Society of Mechanical Engineers codes and standards publications.

C13.6.5.5 Additional Requirements

Most sheet metal connection points for seismic anchorage do not exhibit the same mechanical properties as bolted connections with structural elements. The use of Belleville washers improves the seismic performance of sheet metal connections by distributing the stress over a larger surface area of the sheet metal connection interface, allowing for bolted connections to be torqued to recommended values for proper preload while reducing the tendency for weak axis bending. The intrinsic spring loading capacity of the Belleville washer assists with long-term preload retention to maintain integrity of the seismic anchorage.

Manufacturers test or design their equipment to handle seismic loads at the equipment “hard points” or anchor locations. The interface between the anchor bolt and the equipment hard point should be in accordance with the specification that was the basis