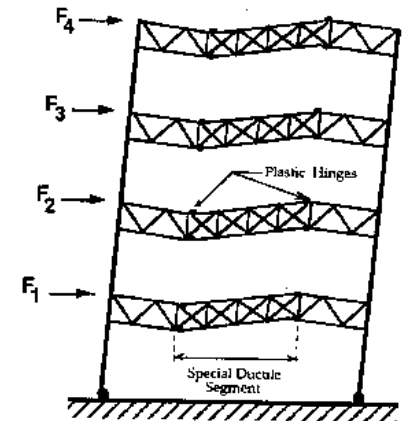
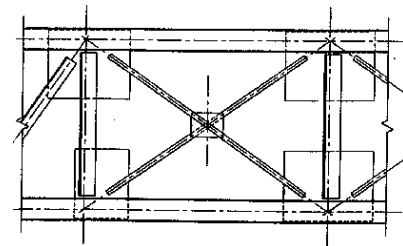


Special Moment Resisting Steel Truss

This moment resisting steel truss frame design reduces earthquake damage to steel structures. The basis for the innovation is "A Draft Guide for Designing Special Moment Resisting Steel Frames" that resulted from a University of Michigan study. The design has been implemented by the Earl Construction Co. in the Tru-Frame™ truss system, which contains several diagonal elements that are designed to absorb seismic energy and yield at prescribed stress levels. After a quake, the diagonals are easily accessible for repair or replacement.

The standard moment frame design using rolled steel sections requires ultrasonic testing. This is eliminated when using this special system, because its connection requires only a single pass fillet weld at the bottom chord that does not need preheating nor a full penetration moment weld. This advantage is achieved by moving the inelastic deformation of the frame to a special link element at the midspan of the truss. Since all connections are single pass fillet welds and tension control bolts, they can be visually inspected any time after completion without the need for additional testing.



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