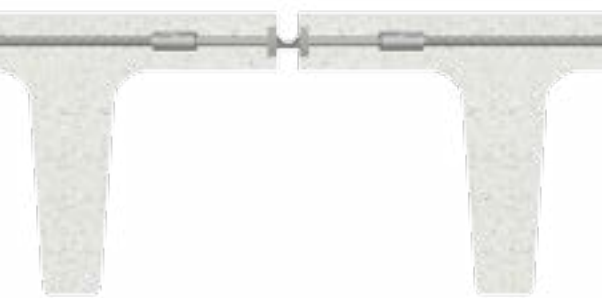
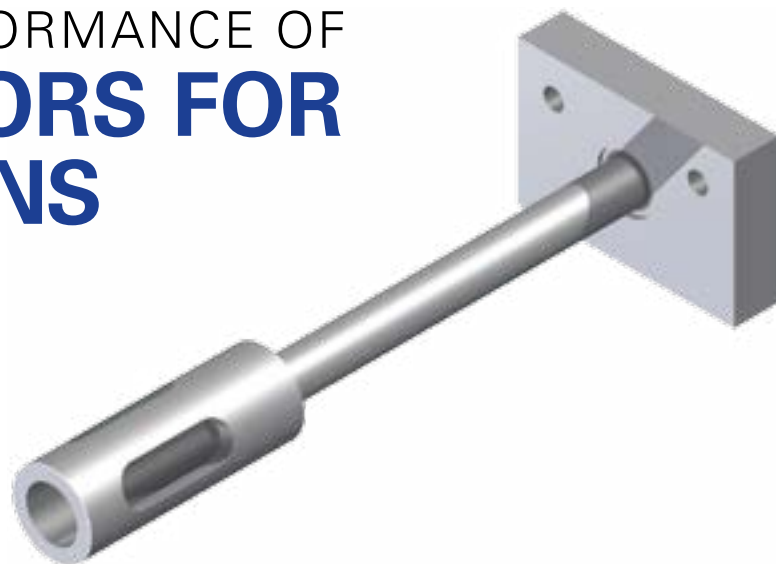


# REVOLUTIONIZING THE PERFORMANCE OF CHORD CONNECTORS FOR SEISMIC CONDITIONS

**MB** MeadowBurke®

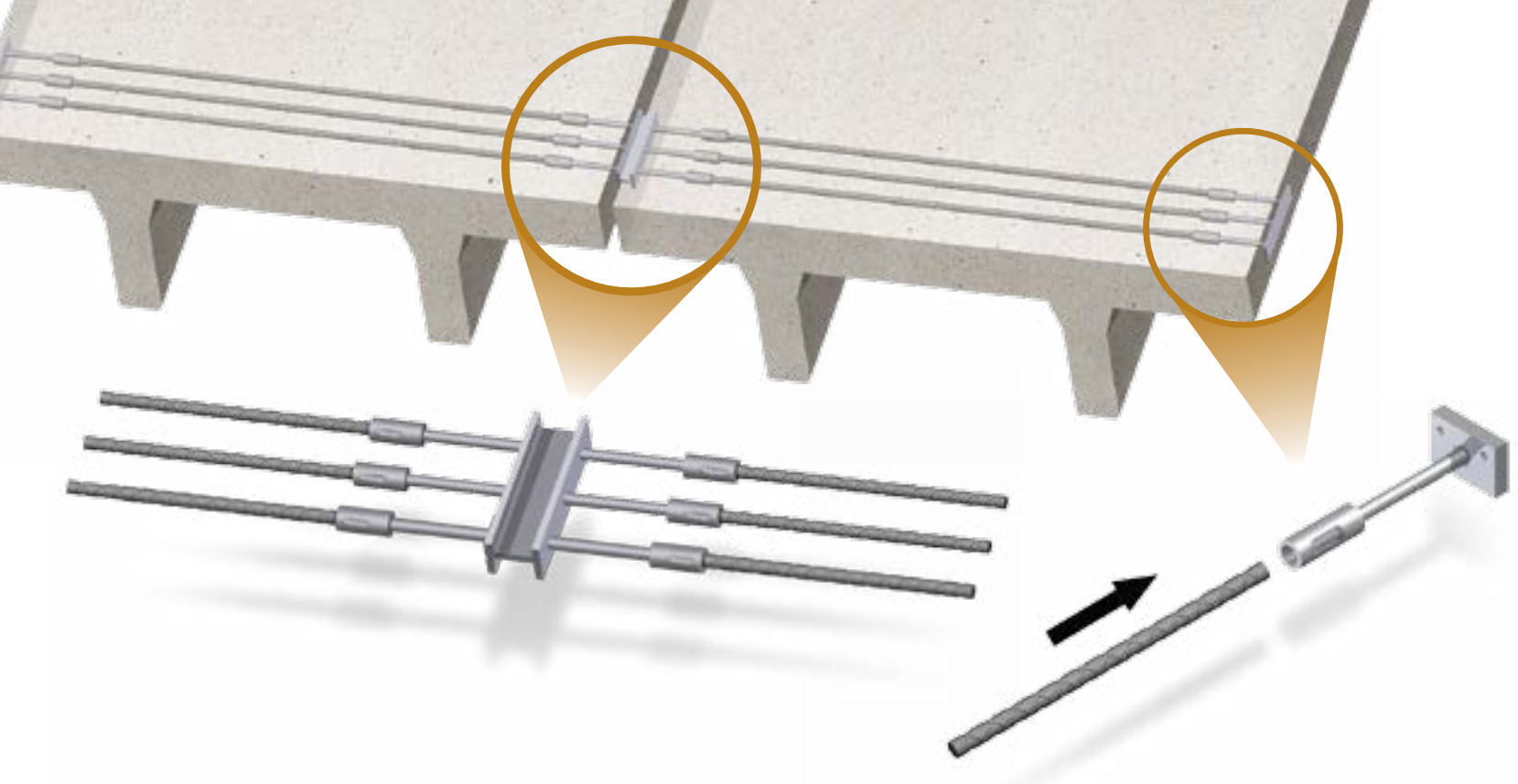


Building safe precast structures in earthquake zones is challenging for engineers and precast/prestressed producers alike. Structural performance depends on the ductility of connectors joining each precast element. This is especially critical at the double-tee connections. Until now, the lack of ductility in precast structures would cause extreme vulnerability to weld breaks during seismic activity resulting in significant compromise and even catastrophic failure of the structure. Recent chord connector advancements by the engineers at Lehigh University and Meadow Burke have yielded a code-compliant, seismic-resistant system chord connection. The system provides reliable force transfer and ductility to the diaphragm while under considerable seismic demands and is known as the Seismic Chord Connector.

The Seismic Chord Connector by Meadow Burke is a seismic chord connection that provides reliable force transfer and ductility to the floor system under large demands. Designed to be used in pretopped precast concrete diaphragm systems, the Seismic Chord Connector works exceptionally well in double-tee flooring structures where the ductility dramatically improves the reliability of the connection under earthquake and high wind demands.

Requiring just two plug welds for the rebar attachment, the Seismic Chord Connector can be placed in the form using existing rebar chairs where the face of the connector is centered in the flange depth, or if using shims, centered in the flange depth using the plastic form connection plates. The pretopped double tees are then placed in position, and the diaphragm connections are welded.

The simple design of the Seismic Chord Connector allows easy replacement of current cumbersome methods. The connection provides over 0.6" of reliable deformation



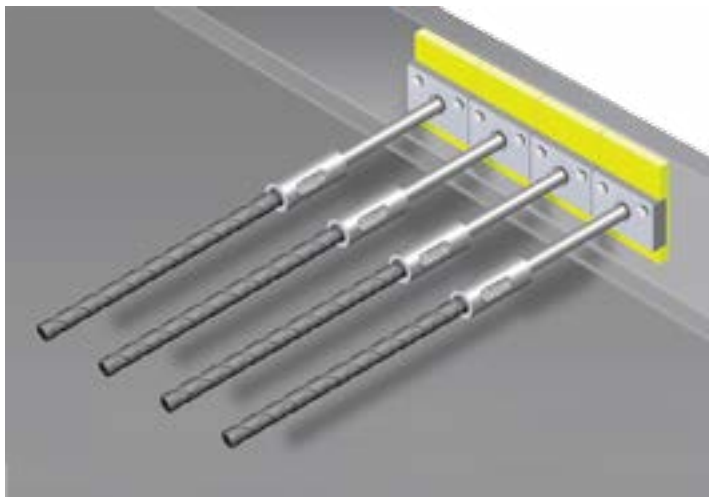
capacity and eliminates the need for field cast concrete pour strips, thereby improving the quality and service life of the building. It also provides a useful detail for any precast system where reliable welded tension connections are needed.

Designed with finite element software and validated through experimental testing, the Seismic Chord Connector is a code-compliant system that meets the ASCE 7-16 requirements for High Deformation Elements. The ASCE 7-16 is a building code for the design, live loads and environmental loads of buildings

such as those which arise from the effects of wind, snow, and earthquakes. The loading criterion is designed to assure safety, serviceability, and integrity.

The ASCE, American Society of Civil Engineering, anticipates the publication of the ASCE 7-16 standard in early 2017. The official release for the Seismic Chord Connector by Meadow Burke is expected to be announced shortly after.

**For more information visit [www.meadowburke.com](http://www.meadowburke.com).**



### **ADVANTAGES OF THE SEISMIC CHORD CONNECTOR**

- Code-compliant, fully tested
- HDE Connection in accordance with ASCE 7-16
- High deformation capacity of 0.78" at 23.6 kips
- Connection elongation helps to eliminate brittle failure
- Easy installation
- Inventory item, eliminating prefabrication
- Provides a reliable dry chord connection for total precast design