American Iron and Steel Institute

News Release

FOR IMMEDIATE RELEASE
November 9, 2016

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NEHRP AND ATC RELEASE NEW SEISMIC DESIGN TECHNICAL BRIEF BASED ON AISI STANDARD

Document is co-authored by AISI standards committee members

WASHINGTON, D.C. – A new technical brief released by the National Earthquake Hazards Reduction Program (NEHRP) and the Applied Technology Council (ATC) provides a comprehensive overview of the seismic design of cold-formed steel (CFS) framed buildings. The document is based on topics covered in the recently released American Iron and Steel Institute (AISI) standard, AISI S400-15, *North American Standard for Seismic Design of Cold-Formed Steel Structural Systems, 2015 Edition*, which is available for free download at www.aisistandards.org.

NEHRP Seismic Design Technical Brief No. 12, "Seismic Design of Cold-Formed Steel Lateral Load-Resisting Systems: A Guide for Practicing Engineers" is available for free download at http://dx.doi.org/10.6028/NIST.GCR.16-917-38. The Applied Technology Council managed the development of the document and contracted with cold-formed steel experts in industry and academia to create and review the technical content. Two of the three authors—Robert L. Madsen of Devco Engineering, Inc. and Benjamin Schafer, Ph.D., of The Johns Hopkins University—are members of AISI's Committee on Specifications (COS) and Committee on Framing Standards (COFS). Madsen is also chair of the AISI COFS Lateral Design Subcommittee, which developed AISI S400-15.

NEHRP Technical Briefs are published by the National Institute of Standards and Technology (NIST) as aids in the efficient transfer of research into practice to reduce losses resulting from earthquakes. This particular document provides the following:

- An introduction to cold-formed steel systems and current seismic design philosophies for those systems.

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- An overview of the codes and standards developed and used by the industry.
- A summary of cold-formed steel systems, including shear walls with wood structural panel sheathing or steel sheet sheathing attached to CFS framing, strap-braced walls, and special bolted moment frames using CFS sections.
- A discussion on typical floor and roof diaphragms used in buildings with CFS seismic force-resisting systems.
- An exploration of the newest AISI standards relating to cold-formed steel framing that will be referenced in upcoming building codes and standards.

"NEHRP Seismic Design Technical Brief No. 12 is an important resource for practicing structural engineers because many of them do not receive instruction on the design of cold-formed steel framing systems during their formal education and professional practice," said Bonnie Manley, P.E., Regional Director – Construction Codes and Standards, AISI. "Many also assume that cold-formed steel framing is limited to nonstructural or gravity framing applications in commercial buildings. However, ongoing research has provided significant advancements in the understanding of the performance of CFS framing seismic force-resisting systems. As a result, cold-formed steel framing is increasingly being chosen for not only the gravity system, but also for the wind and seismic force-resisting systems in low-rise and mid-rise buildings. This technical brief covers both introductory and advanced topics that will be immensely helpful in increasing knowledge about CFS framing benefits and practices in the design community." Manley stated that the document would also be of interest to building officials, students and researchers.

The Applied Technology Council will develop and host webinars in 2017 that support the content provided in NEHRP Seismic Design Technical Brief No. 12. Professional development hours will be offered. For more information, visit https://www.atcouncil.org/.

AISI is an American National Standards developer recognized by the American National Standards Institute (ANSI). AISI develops standards related to steel structural members cold-formed to shape

from carbon and low-alloy steels and is committed to fairness, transparency and performance in its efforts to ensure steel's competitiveness in the marketplace.

AISI's codes and standards work is conducted under the Construction Market Council of the Steel Market Development Institute (SMDI), a business unit of AISI, which oversees the industry's investment in advancing the competitive use of steel by meeting the demands of the marketplace. For more information on SMDI's Construction Market program, visit www.buildusingsteel.org. Follow SMDI Construction on Twitter @BuildUsingSteel.

AISI serves as the voice of the North American steel industry in the public policy arena and advances the case for steel in the marketplace as the preferred material of choice. AISI also plays a lead role in the development and application of new steels and steelmaking technology. AISI is comprised of 19 member companies, including integrated and electric furnace steelmakers, and approximately 125 associate members who are suppliers to or customers of the steel industry. For more news about steel and its applications, view AISI's website at www.steel.org. Follow AISI on Facebook or Twitter (@AISISteel).

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