

AGENDA – SPRING 2019 MEETING

Joint ASCE/ACI Committee 445 – SHEAR AND TORSION

QUEBEC CITY, QUEBEC, CANADA; March 23-27, 2019

1. **Call to order – welcome** (Belarbi)
2. **Attendees self-introduction: name and affiliation** (Group)
3. **Approval of the agenda** (Belarbi)
4. **Approval of meeting minutes of Fall 2018, Las Vegas, NV** (Belarbi)
5. **Summary of ACI318-19 code changes related to ACI 445/318E efforts**
 - ✓ **Strut-and-Tie Method** (Klein)
 - ✓ **Punching Shear Design of Two-Way Slabs and Footings** (Ospina)
 - ✓ **One-Way Shear Design** (Sanders)
6. **Subcommittee reports and on-going 445 activities** (Sub-Committee Chairs)
 - ✓ 445-A Strut and Tie, and Update on STM Ballot/Document (Sanders)
 - ✓ 445-B Seismic Shear (Pujol)
 - ✓ 445-C Slab Shear (Ospina)
 - ✓ 445-D Beam Database (Reineck/Fitik)
 - ✓ 445-E Torsion (Sneed)
7. **Future technical sessions** (Group and Sub-committee Chairs)
 - ✓ Fall 2019 (Cincinnati, OH) – Oct. 20-24, 2019
None
 - ✓ Spring 2020 (Chicago/Rosemont, IL) – Mar. 29-Apr. 2, 2020
"Topics related to the ACI318-19 Code Change Proposals" (Belarbi)
 - ✓ Fall 2020 (Raleigh, NC) – Oct. 25-29, 2020
"Torsion Design Examples" (Sneed/Greene)
 - ✓ Spring 2021 (Baltimore, MD) - Mar. 28-Apr. 1, 2021
"Strut-and-Tie Method Guide" (Sanders/Lubell/Novak)
8. **Liaison Reports**

ACI445/421/352- (Polak/Hammill)
9. **Technical presentations** (*15 mns for presentations and 2 mns for Q/A*)

"Cracking and Size Effects in Reinforced Concrete" by **Evan C. Bentz**
10. **New business** (Open)

Discussions on "Look Ahead" and future activities/goals of 445 (main and subs)
11. **Next meeting and wrap-up** (Belarbi)
12. **Adjourn** (Belarbi)

445 - Shear and Torsion--Joint ACI-ASCE

Committee Mission:

Develop and report information on the analysis and design of concrete members subjected to shear and/or torsion in combination with bending and axial force, including prestressing.

Goals:

1. Assist 318-affiliated committees and subcommittees to address life-safety issues and to make other improvements in the ACI 318 Building Code
2. Develop a committee document that provides guidance for the use of the strut-and-tie method as a full member design procedure
3. Complete the review and distribution of a database of punching shear test data; Assess shortcomings in current punching shear provisions and provide evaluation of improved approaches
4. Merge the beam shear database efforts of members of 445 for the development and distribution of complete (collection) databases for researchers and of reduced size (selected) databases for use in the evaluation of design code provisions
5. Support ACI 318 affiliated committees to develop improved two-way and one-way shear design provisions
6. Develop a new 445 committee document on torsion that presents design examples for challenging torsion design and assessment problems
7. Work with ACI committee 446 in examining the roles of fracture and non-fracture bases for design provisions
8. Work even more closely with other national and international agencies to advance the state-of-the-art
9. Sponsor sessions focused on the dissemination of committee work.

445-0A - Shear & Torsion - Strut & Tie

Committee Mission

Develop and report information on Strut-and-Tie Models.

Goals:

1. Develop "STM Guidelines Document for 318"
2. Develop Change Proposals for Consideration of 318E

445-0B - Shear & Torsion - Seismic Shear

Committee Mission:

Determine the extent to which provisions for design primarily against shear failure need to be modified for cyclic loads

Goals:

1. Compile and vet data on the response of walls for the NEES shearwall database
2. Identify models currently available to estimate
 - i. stiffness
 - ii. shear strength of walls and columns and compare to wall and column databases
3. Evaluate current provisions for shear failure for members subjected to cyclic loads based on results of Goal 2
4. Propose methods to estimate drift capacity of walls and columns

445-0C - Shear & Torsion - Punching Shear

Committee Mission

Support 445 in activities related to punching shear and facilitate discussions on punching shear and punching shear code change proposals

Goals:

1. Develop punching databanks
2. Organize an international session jointly with fib
3. Publication of an SP

445-0D - Shear & Torsion - Shear Databases

Committee Mission:

Develop databases of shear tests on structural concrete members for research and code development purposes

Goals:

1. Maintain and update existing databases
2. Develop databases for PC beams with and without stirrups
3. Develop databases for
 - i. non-slender RC beams w & w/o stirrups
 - ii. deep beams with vertical and horizontal reinforcement
 - iii. RC beams with axial loads w & w/o stirrups
 - iv. lightweight RC and PC beams w & w/o stirrups

445-0E - Shear & Torsion – Torsion

Committee Mission:

Develop and report information on the analysis and design of concrete member subjected to torsion in combination with shear, bending, and axial force, including prestressing

Goals: 1)

1. Develop a collection of additional examples of torsion in structural concrete
2. Support 445 and 318-E on issues involving torsion
3. Maintain report on Torsion in Structural Concrete (445.R-12)

Spring 2019 – Quebec City, Quebec, Canada

Meeting Schedule by Time

	SUNDAY March 24	TIME	ROOM
445-0A	Shear & Torsion- <i>Strut & Tie</i>	9:30a- 12:30p	C-2104 A
445-0B	Shear & Torsion- <i>Seismic Shear</i>	9:30a – 11:30a	H-Lauzon
445-0E	Shear & Torsion-<i>Torsion</i>	12:30p—2:00p	C-203
445-0C	Shear & Torsion- <i>Punching Shear</i>	1:00p - 3:00p	H-Courville
445-0D	Shear & Torsion- <i>Shear Databases</i>	2:00p - 5:00p	C-305
	MONDAY March 25		
445-Main	Shear & Torsion	2:00p – 6:00p	C-206 A
	TUESDAY March 26		
318-0E	Section and Member Strength	7:30a-12:30p	C-307A
	WEDNESDAY March 27		
318	Structural Concrete Building Code	8:00a-6:00p	C-200 A

Meeting Schedule by Committee/Subcommittee

	COMMITTEE	DAY	TIME	ROOM
318	Structural Concrete Building Code	Wed	8:00a-6:00p	C-200 A
318-0E	Section and Member Strength	Tue	7:30a-12:30p	C-307A
445-Main	Shear & Torsion	Mon	2:00p – 6:00p	C-206 A
445-0A	Shear & Torsion- <i>Strut & Tie</i>	Sun	9:30a- 12:30p	C-2104 A
445-0B	Shear & Torsion- <i>Seismic Shear</i>	Sun	9:30a – 11:30a	H-Lauzon
445-0C	Shear & Torsion- <i>Punching Shear</i>	Sun	1:00p - 3:00p	H-Courville L
445-0D	Shear & Torsion- <i>Shear Databases</i>	Sun	2:00p - 5:00p	C-305
445-0E	Shear & Torsion-<i>Torsion</i>	Sun	12:30p—2:00p	C-203

~~445-0E meeting is cancelled for Spring 2019 ACI Convention~~