



International Code Council

PUBLIC COMMITTEE MEETING #3 MEETING MINUTES

ICC 1150 3D Automated Construction Technology for 3D Concrete Walls Consensus Committee (IS-3DACT)

The third public meeting of the ICC 1150 3D Automated Construction Technology for 3D Concrete Walls Consensus Committee (IS-3DACT) was convened on December 15, 2023, to discuss the scope of the working groups for the development of the ICC 1150 standard.

1. Meeting Opening

- a. Opening remarks, objective of the meeting, and housekeeping:

Staff Secretariat, Melissa Sanchez called the meeting to order at 10:03 am PST and welcomed all committee members, invited parties, and ICC staff. Ms. Sanchez noted that the ICC Code of Ethics, Section 5.1.10 Representation of Interests in Council Policy #7, and Council Policy #50 regarding Antitrust guidelines, were enacted. These documents are on ICC’s website under Corporate Governance.

- b. Quorum and membership review:

Ms. Sanchez called the roll of the IS-3DACT with the following members registering attendance. Ms. Sanchez noted there was enough for a quorum.

NAME	2023 IS-3DACT COMMITTEE MEETING			
	intro 9/18/23	#1 10/20/23	#2 11/17/23	#3 12/15/2023
Jared Brewe [A]	x	X	X	X
Gabriel Carrera [D]		X	X	X
Bora Gencturk [C]	x	X	X	X
Rory Hamaoka [H]	x	X	X	
Werner Hellmer[H]	x	X	X	X
Maryam Hojati [D]	x	X	X	
Berok Khoshnevis [D]		X	X	X
Jeff Martin [A]	x	X		X
Doug Mayer [H]	x	X		X
Paul Messplay [H]	x	X	X	X
Aubrey Smading [B]	x	X	X	X
Adil Tamimi [D]	x			
Bing Tian [A]	x	X	X	X
TOTAL	11/13	12/13	10/13	10/13

Interested parties in attendance included Josh Gebelein (Parsons) and Stephan Mansour (ASTM)

2. Approval of Agenda

Chair Mr. Bora Gencturk asked for a motion for approval of the agenda. Mr. Paul Messplay motioned, and Mr. Doug Mayer seconded. The agenda was unanimously approved.

3. Approval of Previous Meeting Minutes:

Mr. Gencturk asked for a motion for approval of the previous meeting minutes. Mr. Messplay motioned and Mr. Bing Tian seconded. The previous meeting minutes were unanimously approved.

4. Update on Work Groups:

a. Materials Work Group (Bing Tian)

Mr. Tian summarized the second working group session that took place on December 1, 2023 with 4 committee members and 1 ICC staff member in attendance. Mr. Tian presented the Table of Contents that was decided on in the working group session.

Mr. Gencturk started the committee discussion on the Table of Contents.

- *For Section 303 Mr. Gencturk suggested changing the title from “Slump” to “Workability”. Mr. Mayor asked about the specific definition of “fresh” state. Mr. Gencturk and Mr. Tian suggested to refer to ACI terminology and a definition should be added under the Workability section. Mr. Jared Brewe inquired about qualification type of testing in the Workability section. Mr. Berok Khoshnevis asked if Bulk density was for dry powder. Mr. Tian responded that it was for wet mixed material. Mr. Gencturk brought up that bulk density is a property needed for structural assessment. Mr. Werner Hellmer commented that the term bulk density is less common on the field than the term unit weight. Mr. Tian responded by saying that Section 303 is for laboratory testing and field testing can be added to a different section.*
- *For Section 304 Mr. Gencturk commented that it will be a struggle to come up with a universal testing method that will cover how rebars are placed in 3D concrete. Mr. Hellmer agreed and stated that for normal concrete consolidation is used to ensure an adequate bond. Mr. Gencturk noted that 3D concrete cannot be consolidated and more thought needs to go into this. He suggested that Section 304 and 305 need to specify that testing methods depend on whether there is reinforcement and/or fibers. Mr. Tian agreed.*
- *Mr. Gencturk agreed that Section 305 should use what is already out there with ASTM and ACI.*
- *For Section 306 Mr. Gencturk asked if non-traditional aggregates should be considered. Mr. Tian suggested a two-step process where aggregates are identified for any tendency for ASR and then the manufacturer needs to provide further evidence that stability is achieved by using other measures. Mr. Brewe had two questions – 1) Are exposure categories according to ACI 318 being referred to or is the committee creating new ones and 2) If regular mortar is used to fill in a 3D printed shell, does this mortar have to comply with the standard or follow ACI 318 / IBC? Mr. Tian and Mr. Gencturk both agreed that using ACI 318 exposure categories is the way to go and that regular mortar that is not 3D printed concrete is outside the scope of this standard. Mr. Gencturk further stated that this should be explicitly written in the standard in the beginning. Mr. Mayer asked a question about including W/C ratio. Mr. Tian suggested that the standard be based on performance and not prescriptive, which is what defining a W/C would do. For the rest of the Table of Contents there were no further comments.*

b. Structural Work Group (Jared Brewe)

Mr. Brewe stated that due to scheduling conflicts, no feasible time could be found for the Structural Work Group to meet. Thus, he will continue to find a time to discuss the Table of Contents for the Structural Work Group before the next public meeting.

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Mr. Gencturk starts the committee discussion on the scope. Ms. Maryam Hojati states that the word “wall” should be added to the scope as the standard is meant to consider only walls. Mr. Brewe replied that a discussion on incorporating other types of structural members were discussed. Mr. Gencturk states it’s a good idea to restrict scope to wall.

5. Voting of the Table of Contents for materials and structural working groups.
Mr. Gencturk suggested that voting be postponed until the Structural Working Group could meet and the Table of Contents is finalized. The committee was in favor of this.

6. Discussion of Initial Draft.

Ms. Sanchez pulled up the initial draft. Section 6 on Design Report is discussed. It is decided to change it to Minimum Acceptable Criteria.

7. Next Meeting.

With no objection Mr. Gencturk set the next meeting to be on January 12, 2024 at 10 am PST. Mr. Carrera cannot make the next meeting. The Structural working group will set their own meeting time before this meeting.

8. New Business.

No new business was brought up.

9. Action Items & Adjournment

The action items from the meeting were summarized as follows:

<i>Structural working group to meet for Table of Contents</i>	<i>Mr. Brewe</i>
<i>Finalize the Table of Contents and Circulate it.</i>	<i>Mr. Tian and Mr. Brewe</i>
<i>Update Timeline for Work Plan</i>	<i>Mr. Tian, Mr. Brewe, Mr. Gencturk, Ms. Sanchez</i>

With no other questions or comments before the committee Mr. Gencturk moved to adjourn the meeting. Mr. Messplay motions for adjourning and Mr. Carrera seconds the motion. The meeting is adjourned at 11:03 am PST.