

AGENDA

TAC Construction Standards Committee (TCSC)

Wednesday, November 11, 2015, 7:30 – 10 AM

Sheraton Denver Downtown Hotel, Tower Court C
Denver, CO

1. Call to Order and Introduction of Members and Visitors

1.1 Approval of Agenda

1.2 Approval of Past Meeting Minutes

1.3 Amendments to the Agenda

2. Status of Specification Activities

2.1 Updates

BACKGROUND: TCSC members are assigned as liaisons to ACI committees known to be working on a specification. Liaisons are responsible for providing guidance on format and style to the specification writing committee. Liaisons have been given access to the committee's web site and ballots. In addition, these committees are asked to provide representation to TCSC and are appointed as associate members of TCSC.

Committee	TCSC Liaison*	Committee Representative
117	Eldon Tipping (M)	same
301	Jon Ardahl (M)	same
305	Jim Cornell (M)	same
306	Charles Hanskat	none
308	Aimee Pergalsky (M)	David Suchorski
310	Ed Ulrich	none
311	Al Kaufman	Claude Jaycox
327	Michael Sprinkel	Wayne Adaska
330	Eldon Tipping (AM)	Robert Varner
336	Billy Oliver (M)	same
346	Al Kaufman (M)	same
350	Jon Ardahl (M)	same
351	Pericles Stivaros	none
423	Charles Hanskat	James Rogers
440	Nick Carino	none
506	Charles Hanskat (M)	same
522	Aimee Pergalsky (AM)	Dale Fisher
548	Michael Stenko (M)	same
563	Michael Sprinkel (M)	same

* (M) denotes member of committee being supported. (AM) denotes associated member of committee being supported.

ACTION: TCSC Liaison and Associate Members are asked to report on their respective committees' activities and discuss any actions required of TCSC. Attachment 2.1, ACI

Specification Activity, has been updated on November 5, 2015, according to ACI staff records for TCSC reference.

3. Technical Committee Manual (TCM)

3.1 TCM Ballot

REPORT: The *TCM* Task Group met in mid-October to discuss the compiled comments and suggest revisions for the 2016 *TCM*. The responses to the comments and revisions are given in Attachment 3.1

There are several comments that are highlighted for TCSC to address. Refer to the Correspondence section of the TCSC Webpage for document matching the page and line numbers. (Revisions to the 2015 TCM, Chapter 6 – TCM)

ACTION: Chair Tipping is asked to report.

3.2 Licensed Design Professional (LDP) versus Architect/Engineer (A/E)

REPORT: At the 2014 Fall Meeting, Chair Tipping asked Ardahl to write brief reason statements for the separate uses of LDP, A/E, and LDE. These statements will be passed to the TAC TCM Task Group for inclusion in the next TCM.

Ardahl could not attend the meeting due to conflicts with ACI 350. Ardahl sent an email to staff on November 24, 2014, addressing the use of engineer in ACI documents (Attachment 3.2 of 2015 Kansas City Minutes).

The comments went back to TAC for further discussion. Senecal put ACI 132R-14, *Guide for Responsibility in Concrete Construction*, in the correspondence file.

ACTION: Chair Tipping is asked to report.

3.3 Guide for Specifying

REPORT: A task group (Tipping, Carino, and Ardahl) was formed to write a section for the TCM that would provide information on how to write a guide that offers direction on how to write a specification. ACI currently has such a guide document titled, “Guide for Specifying Underground Shotcrete (ACI 506.5R).” A copy of ACI 506.2R is available on the TCSC website in the Correspondence folder.

ACTION: Chair Tipping is asked to report.

4. Requests for New Specifications and review of specifications to TAC

REPORT: No new requests for specifications have been submitted since the last meeting. No specifications have been submitted for review since the last meeting

ACTION: This item is for information only.

5. ACI Committee E707

REPORT: The education committee, E707, Specification Education, meets on Tuesday, November 10, from 11:30a to 1p, in Terrace.

ACTION: A representative from the E707 is asked to report on their meeting.

6. New Business

7. Adjournment

Attachments:

2.1 — ACI Specifications Activity

3.1 — TCM Task Group Responses

Attachment 2.1
ACI SPECIFICATIONS ACTIVITY
(Updated March 7, 2015)

Committee	Specification	Document Number	Status
117 – Tolerances	Specification for Tolerances for Concrete Construction and Materials	117-10	Reapproved in 2015. 5 years until expiration.
	Specification for Tolerances for Precast Concrete	ITG 7-09	Will become a chapter in the next ACI 117
301 – Specifications for Concrete	Specifications for Structural Concrete	301-10	Committee is responding to Public Discussion comments. Public discussion ended October 23.
305 – Hot Weather Concreting	Specification for Hot Weather Concreting	305.1-14	Recently finished; 7 years until expiration
306 – Cold Weather Concreting	Standard Specification for Cold Weather Concreting	306.1-90 (2002)	No activity; past expiration
308 – Curing Concrete	Specification for Curing Concrete	308.1-11	No activity; 4 years until expiration
310 – Decorative Concrete	Specification for Polishing Finishes	New	Approval given in spring of 2014. Subcommittee J has posted draft and specification is to be discussed at fall meeting.
311 – Inspection of Concrete	Specification for Ready-Mixed Concrete Testing Services	311.6-09	No activity; 2 years until expiration
	Inspection Services Specification for Cast-in-Place Concrete Construction	311.7-14	Recently finished; 7 years until expiration
327 – Roller-Compacted Concrete Pavements	Specification for Roller-Compacted Concrete Pavements	New	Approval given in spring of 2013
330 – Concrete Parking Lots and Site Paving	Specification for Unreinforced Concrete Parking Lots	330.1-14	Recently finished; 7 years until expiration
336 – Footings, Mats, and Drilled Piers	Specification for the Construction of Drilled Piers	336.1-01	Past expiration. According to their spring 2015 minutes, the draft is close to being available for review.
346 – CIP Pipe	Specification for Cast-in-Place Concrete Pipe	346-09	No activity; 2 years until expiration
350 – Environmental Structures	Specification for Tightness Testing of Environmental Engineering Concrete Containment Structures	350.1-10	No activity; 3 years until expiration
	Specifications for Environmental Concrete Structures	350.5-12	Recently finished; 5 years until expiration
351 – Foundations for Equipment and Machinery	Specification for Installation of Cementitious Grouting between Foundations and Equipment Bases	351.4-14	Recently finished; 7 years until expiration

Committee	Specification	Document Number	Status
	Specification for Installation of Epoxy Grout between Foundations and Equipment Bases.	351.5-15	Recently finished; 8 years until expiration
423 – Prestressed Concrete	Specification for Unbonded Single-Strand Tendon Materials	423.7-14	Recently finished; 7 years until expiration
440 – Fiber Reinforced Polymer Reinforcement	Specification for Construction with Fiber-Reinforced Polymer Reinforcing Bars	440.5-08	No activity; 1.5 years until expiration
	Specification for Carbon and Glass Fiber-Reinforced Polymer Bar Materials for Concrete Reinforcement	440.6-08	This specification is being moved to ASTM D30.10. It is WK43339. ASTM D30.10 Committee working on ballot resolutions.
	Specification for Carbon and Glass Fiber-Reinforced Polymer (FRP) Materials Made by Wet Layup for External Strengthening of Concrete and Masonry Structures	440.8-13	Recently finished; 5 years until expiration
	Specification for Construction with Externally Bonded Fiber-reinforced Polymer (FRP) Materials Using the Wet Layup Method	440.X	Approval given in spring of 2014
506 – Shotcreting	Specification for Shotcrete	506.2-13	Recently finished; 6 years until expiration
	Guide for Specifying Underground Shotcrete	506.5R-09	Revising in subcommittee; 1.5 years until expiration
522 – Pervious Concrete	Specification for Pervious Concrete Pavement	522.1-13	Recently finished; 6 years until expiration
548 – Polymers and Adhesives in Concrete	Specification for Latex-Modified Concrete Overlays	548.4-11	No activity; 2 years until expiration
	Specification for Type EM (Epoxy Multi-Layer) Polymer Overlay for Bridge and Parking Garage Decks	548.8-07	No activity; Due
	Specification for Type ES (Epoxy Slurry) Polymer Overlay for Bridge and Parking Garage Decks	548.9-08	No activity; Due
	Specification for Type MMS (Methyl Methacrylate Slurry) Polymer Overlays for Bridge and Parking Garage Decks	548.10-10	No activity; 3 years until expiration
	Specification for Bonding Hardened Concrete and Steel to Hardened Concrete with an Epoxy Adhesive	548.12-12	Recently finished; 5 years until expiration

Committee	Specification	Document Number	Status
	Specification for Bonding Fresh Concrete to Hardened Concrete with a Multi-Component Epoxy Adhesive	548.13-14	Recently finished; 7 years until expiration
	Standard Specification for Producing a Skid Resistant Surface on Concrete by the Use of a Multi-Component Epoxy System	503.3-10	No activity; 3 years until expiration
	Standard Specification for Repairing Concrete with Epoxy Mortars	548.14-14 (503.4-92)	Recently finished; 8 years until expiration
	Specification for Crack Repair by Epoxy Injection	503.7-07	No activity; Due
563 – Specifications for Repair of Structural Concrete in Buildings	Specification for Repair of Existing Structural Concrete	New	Balloting

Attachment 3.1

No.	Initials	Page #	Line #	Comment	Committee Response
1.	eju	General		The present Chapter 6 is such an immense improvement over what we worked with in the eighties and nineties that I stand and applaud ACI!!! I have already sent it to our engineers.	Thank you!
2.	CJ	all		Change all 'Project Specifications' to 'Contract Documents' for consistency.	Staff incorporated
3.	eju	1	1	Add "The construction specifications may include Owner provided services that the contractor is required to use to execute his work." Comment: in earthwork and foundation construction the owner provides construction testing and engineering interpretation of conditions and test results. Who and what is provided greatly effects the contractors work.	Staff incorporated
4.	CJ	1	4	Delete 'and are intended'. Or substitute 'must'	Staff incorporated
5.	CJ	1	8	Delete 'analogous' substitute 'similar' same as in line 11	Staff incorporated
6.	CJ	1	8	Change 'do not' to 'are not to' and add after 'commentaries' 'unless specifically permitted by TAC'	Staff incorporated
7.	CJ	1	17	Delete 'change' substitute 'incorporate'	Staff incorporated
8.	JBA	1	23	After (CSI) add the words "as modified by ACI."	Staff incorporated
9.	NJC	1	23	Lower case "construction specifications"	Staff incorporated
10.	JBA	1	38	Delete article 1.2 and renumber the following articles. This is not per CSI and should not be included in any specification. Requirements of a specification must never be explained in the document. This article is in conflict with page 8 lines 15 – 16 of this document. This requirement is also in conflict with page 9 lines 32-33 of this document .	TAC decided several years ago to have an interpretation section. While ACI follows CSI in many respects, ACI construction standards are ACI and not CSI.
11.	CJ	1	45	Change 1.7 to : 'Quality Control Acceptance of Work and Subsequent Quality Assurance Acceptance'	Staff incorporated
12.	CJ	1	54	In 3.4 add 'and inspection' after 'testing'	Staff incorporated
13.	JBA	2	8	Delete line. This chapter clearly states that specifications shall not have any appendix.	Staff incorporated
14.	JBA	2	15	This article needs to be expanded to covers multi-item specifications where some sections are mandatory and others are optional, such as ACI 301 and ACI 350.5.	Comments 67 and 68 have clarified the optional and mandatory requirements sections.
15.	MEK	2	15	Insert a space following 1.10.	Staff incorporated
16.	JBA	2	27	Delete line and renumber following article numbers.	Staff incorporated

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No.	Initials	Page #	Line #	Comment	Committee Response
17.	CJ	2	31	In 1.6 add after 'control' 'acceptance of work and subsequent quality assurance acceptance'	Staff incorporated
18.	MEK	2	32	Remove the hyphen and space from "available".	Staff incorporated
19.	CJ	2	46	In 2.3.4 after 'testing' add 'inspection'	Staff incorporated
20.	JBA	3	3	This article needs to be rewritten. As written it does not make sense especially when you look at ACI 301 and 350.5. The optional sections that could be added to the Mandatory Sections should be described. The Then in a new article should explain the optional sections that are not a part of the specification until the specifier adds them.	Comments 68 and 69 have clarified the optional and mandatory requirements sections.
21.	MEK	3	9	Remove the hyphen and space from "articles".	Staff incorporated
22.	CJ	3	44	Delete the two 'the' in this line. Not necessary	Staff incorporated
23.	CJ	3	46	Delete 'the'	Staff incorporated
24.	NJC	4	6	The word "specification" should be capitalized when it is referring to itself. This is analogous to using "this Code" in ACI 318. Make changes in all places where "this Specification" is written.	Staff incorporated
25.	NJC	4	7	Based on the ACI 301 response to a TAC comment, this should be revised to read: "By reference, this Specification becomes a Contract Documents and provides requirements for Contractor."	Staff incorporated
26.	CJ	4	10	In 1.1.5 after 'specification' add 'for consideration'	Staff incorporated
27.	CJ	4	14	In 1.1.8 change 'is also' to 'maybe' or delete second sentence.	Staff incorporated
28.	JBA	4	17	Delete Article 6.2.6.2 and the example wording in line 24-42. Renumber following articles. Requirements of a specification must never be explained in the document. The specification must be written in clear and concise language that does not need the interpretation statements.	Staff incorporated
29.	CJ	4	41	In 1.2.1.9 delete 'have included' add 'include' after 'may'	Section deleted
30.	CJ	4	47	Change 'of' to 'to' in 6.2.6.3	Staff incorporated
31.	JBA	4	48	Why should the Contractor have to download a copy of the ACI CT? The Contractor should not need to look up the definitions in ACI CT. Definitions that are important to the subject of the specification should be included in the documents. If the definition of a term needs to be changed from what is in the ACI CT then make the changes in the specification. The definitions in ACI CT are continually being revised and the new definition may not be acceptable with the intent of the specification that was published previously.	There is a way for people to access the information. There's merit in not repeating information in multiple locations to avoid internal conflict. You can reference a specific CT, eg, 2013 CT.

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32.	JBA	5		The proposed definition for “default requirement” is not a definition. This definition needs to be written so it clearly states what is a default requirement.	Definition deleted per Carino
33.	CJ	5	-	In ‘Architect/Engineer after ‘firm’ add ‘designing and’ after ‘documents’ add ‘and/’ Delete ‘or both’ ‘Contract Documents’ delete words after ‘Owner to’ and add ‘Contractors’	Staff incorporated
34.	CJ	5	-	Delete ‘Design’ in ‘Licensed Design Engineer’. Present wording implies ‘LDE’ can ‘design’ the building. (I know certain elements may be designed by the contractor.)	TAC is currently reviewing this term.
35.	CJ	5		Delete ‘Specifier’ It is covered in ‘Architect/Engineer, Definition	This should be addressed by TCSC.
36.	NJC	5		Change the definition of accepted: "accepted-determined by Architect/Engineer to be in compliance with Contract Documents." The current wording does not convey a measurable condition and is therefore subjective. 6.3.4 specifically warns not to use terms like "to the satisfaction of"	Staff incorporated
37.	NJC	5		Change the definition of Contract Documents. The current definition is not how the term is used in ACI specifications which refer to the documents being used during construction, not bidding. The current CT definition is used in ACI 301 and it drew comments during TAC review of ACI 301 because of the words "supplied by Owner to Contractor" and "contract conditions". The following definition addresses the TAC comments: "Contract Documents- set of documents that provide the basis for a construction project; these documents may include the Owner-Contractor Contract, Project Specifications, Project Drawings, and Addenda."	Staff incorporated
38.	NJC	5		Delete the term "default requirement" because it is not used in the text of ACI specifications. In the old Specification Manual, there were two lists of definitions: one for terms used in the Manual and the other for terms used in ACI Specifications. The term "default requirement" came from the first list, which was dropped when TAC added the Manual to the TCM. The meaning of "default requirement" is stated in 6.2.9.	Staff incorporated
39.	NJC	5		Delete the term "permitted". The term was used as a trigger to indicate that the Contractor might wish to consider a submittal. We have now taken the approach that the Contractor can make a submittal for anything covered in the specification. ACI 301 has searched its specification and removed this term from the text.	Staff incorporated
40.	NJC	5		Based on TAC comments on the ACI 301 review, "Project Specifications" and "Project Drawings" should have similar definitions. The added words about "service parameters" do not add clarity for the Contractor. Revise as follows:	Staff incorporated

Attachment 3.1

No.	Initials	Page #	Line #	Comment	Committee Response
				"Project Drawings-graphic presentations that detail requirements for Work and may include written notes." Project Specifications—the written document that details requirements for Work."	
41.	NJC	5		In the definition of "Work" delete the word "thereof" and add this to the list in 6.3.8 of legal jargon to be avoided	Staff incorporated
42.	JBA	5	1.x	Revise the wording to read as follows: "The following definitions shall govern in this specification."	Staff incorporated
43.	CJ	5	4	6.2.6.5 Add 'widely' before 'available' and 'to the industry'	Staff incorporated
44.	CJ	5	7	6.2.6.6 Add 'to the industry' after available.	Staff incorporated
45.	CJ	6	2	In 6.2.6.7 add 'and procedures' after 'data'	Staff incorporated
46.	CJ	6	9	6.2.6.9: Add 'quality' before 'control'	Staff incorporated
47.	CJ	6	10	Add 'and inspection' after 'testing'	Staff incorporated
48.	CJ	6	10	6.2.6.9 add after 'agency' and 'inspection agency' on lines 10 and 11	Staff incorporated
49.	CJ	6	23	In 6.2..7.4 add 'For Quality Control' after 'Inspections'	Staff incorporated
50.	CJ	6	24	Add sentence 'List inspection requirements that will be used by the Quality Assurance Agency'	Staff incorporated
51.	CJ	6	34	6.2.8.4 Add 'and responsibility for' after 'Work'	Staff incorporated
52.	CJ	6	39	In 6.2.9 Change 'Specifiers' to 'Architect/Engineer' and in line 40.	Defer back to TCSC
53.	NJC	6	39	Make the indicated changes: 6.2.9 Description of Notes to Specifiers Notes are appended to the specification and are not part of the specification. These notes are for the specifier and include general notes, foreword to checklists, references, and checklists. The general notes provide guidance on how to incorporate the ACI specification into Contract Documents. The foreword to the checklists explains how to modify the ACI specification in the Contract Documents for the project. There are two types of checklists: the mandatory requirements checklist and optional requirements checklist. The mandatory requirements checklist identifies information that is required to be included in Contract Documents because there is no default requirement in the specification. The optional requirements checklist identifies alternatives or optional additions to the default requirements or optional requirements for which there are no default requirements. A default requirement is a limiting requirement that has been selected for the specification. Unless otherwise specified in Contract Documents, default requirements are mandatory conditions of the specification. The optional requirements checklist provides guidance to the	Staff incorporated

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No.	Initials	Page #	Line #	Comment	Committee Response
				specifier in specifying alternative or additional requirements. Checklists do not provide explanations for the requirements; instead, refer to ACI guides and reports for additional information.	
54.	MEK	6	45	Why is “freezing and thawing” hyphenated? Also on line 1 of the next page (7).	Staff incorporated
55.	CJ	7	8	Change ‘specifiers’ to ‘Architect/Engineer’ and also in lines 25,32,34,35 and 45 (Notes to Specifiers’	Defer back to TCSC
56.	NJC	7	34	Make the following changes: F5. The Optional Requirements Checklist identifies specifier choices and alternatives or additions. The checklist identifies the sections, parts, and articles of ACI Specification XXX and the action required or available to the specifier. The specifier should review each of the items in the checklist and make adjustments to the needs of a particular project by including those selected alternatives or additions as mandatory requirements in the Project Specification.	Staff incorporated
57.	JBA	7	41	This article needs to be revised to address mandatory checklist items more clearly. The need to have only a minimum number of mandatory checklist items needs to be emphasized and why there should be a minimum number mandatory requirements. Also more guidance needs to be provided concerning ACI specifications that have Mandatory Sections and Optional Sections. Should Optional Sections have Mandatory checklist items that must be included in Contract Documents even if the optional section is not required for the project? If a mandatory checklist item must be included with an optional section then the trigger language should indicate when it should be specified. Recommend using “If (section title) is specified, ...”. An example would be “If architectural concrete is specified,”.	Comments 68 and 69 address this issue and have been incorporated.
58.	CJ	8	17	Change ‘specifier’ to ‘Architect/Engineer’ and in lines 23, 29, 30 and 39.	Defer back to TCSC
59.	NJC	8	21	Revise as follows: "6.2.9.3 Optional requirements checklists The specifier may want to require items either in place of or in addition to the default requirements in the cited reference specification. In addition, the specifier may wish to require items for which there are no default requirements in the specification. The optional requirements checklist informs the specifier of the options that may be invoked and can provide sample language that the specifier can use to invoke the	Staff incorporated

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No.	Initials	Page #	Line #	Comment	Committee Response
				optional requirement in Contract Documents. Limited discussion or citations explaining circumstances when an option should be invoked may be included."	
60.	NJC	9		Add the following: "6.2.9.5 Referral phrases and checklists The committee must ensure that there is an entry in the appropriate checklist for every occurrence of a referral phrase (see 6.3.11) in the text of the specification. Conversely, every checklist entry must refer to a provision with a referral phrase. If there is no referral phrase in a provision, there should not be a checklist entry referring to that provision."	Staff incorporated
61.	eju	9	32	Delete "where possible" everywhere in the entire chapter	Staff incorporated
62.	eju	9	38	Delete "If Possible"	Staff incorporated
63.	eju	9	32 & 33	Underscore and place in bold letters "Do not..."	Staff incorporated
64.	JBA	10	43	Revise this article to include the additional trigger language proposed in Comment 87.	Revised according to comment 65.
65.	NJC	10	43	There may cases where there is no default requirement, but the specifier may wish to invoke an optional requirement. In such cases, the referral phrase needed to trigger a checklist entry is "if specified" Revise 6.3.11 so it reads as follows (sorry I didn't use underline and strikeout). "6.3.11 Referral phrase Three types of referral phrases are used in ACI specifications to indicate to the Contractor that there may be additional requirements in Contract Documents and to alert the specifier that there is a checklist entry for that provision. If the referral phrase "as indicated in Contract Documents" is used in the provision, the specifier must include the provision requirements in Contract Documents for the specification to be complete. The Mandatory Requirements Checklist provides instructions on what needs to be specified. If the referral phrase "unless otherwise specified" is used in the provision, the specifier may wish include an alternative to the default requirement in Contract Documents. The Optional Requirements Checklist provides guidance on the alternative that may be specified in Contract Documents. If the referral phrase "if specified" is used in the provision, the specifier may wish include an additional requirement in Contract Documents. The specification does include a default requirement. The Optional Requirements Checklist provides	Staff incorporated

Attachment 3.1

No.	Initials	Page #	Line #	Comment	Committee Response
				<p>guidance on the requirement the specifier may wish to include in Contract Documents."</p> <p>To go along with this revision, the following should be added to 1.2 Interpretation. "1.2.1.10 The phrase "if specified" means the specifier may have included a requirement in Contract Documents for which is no default requirement in this Specification."</p>	
66.	CJ	10	46	Change 'Specifier' to 'Architect/Engineer' in lines 46 and 48 (6.3.11)	Defer back to TCSC.