



AGENDA

TAC Specifications Committee

Hilton Hotel New York City
Concourse E
Wednesday April 20, 2005
7:00 to 10:00 AM

Voting Members:

Nicholas J. Carino, Chair
Todd R. Watson, Secretary (Non-voting)
Jon B. Ardahl
William L. Barringer
William C. Bretnall
Jeffrey W. Coleman
D. Gene Daniel

I. Leon Glassgold
Ronald L. Hollrah
Alfred L. Kaufman, Jr.
W. Calvin McCall
Myles A. (Tony) Murray, TAC
Contact
Aimee Pergalsky
Arthur T. Weiss, Jr.

Associate Members

Karl J. Bakke
James R. Baty
Daniel P. Dorfmueller
Sidney Freedman

Kenneth G. Kazanis
William H. Oliver, Jr.
Robert J. Ryan
Michael S. Stenko

1. Call to Order and Introduction of Members and Visitors

1.1 Approval of Agenda

ACTION: Are any changes to the agenda required?

1.2 Approval of Minutes

ACTION: Does TSC approve the Minutes of the 2004 fall meeting in San Francisco?

1.3 Membership Report

REPORT: The current TSC roster is shown as Exhibit 1. Members are asked to review the roster and inform Secretary Watson of any corrections.

ACTION: Are there any ACI members that should be encouraged to join TSC?

2. ACI Specification Manual (*ASpM*)

The 2002 version of the *ACI Specifications Manual* is available on the ACI Web site at: http://www.concrete.org/COMMITTEES/com_forms.htm

2.1 Punchlist

As a result of the TAC review and comments received during the balloting of the 2002 edition, new items to be considered in the next revision have been identified. A punchlist of these items is shown as Exhibit 2.1. Some of the items were approved by TSC Ballots 03-1 and 04-1, and these are ready for submission to TAC as noted on the punchlist. Six new items were submitted for approval in TSC Ballot 05-1, with a canvassing date of April 8, 2005. The six ballot items are covered in Sections 2.2 to 2.7 of this agenda.

ACTION: Are there any other proposed changes to the *Manual* that should be added to the punchlist?

2.2 TSC Ballot 05-1 Item 1 (Units of Measurement)

Rationale: In March 2004, the ACI Board of Direction adopted a new policy on metrication, which states: “all new and revised ACI specifications, standards, and other publications shall use dual units...Specifications may be published in two separate versions as approved by TAC.” The Board no longer endorses ACI publications in SI units only (codes are an exception). Therefore revisions are proposed for Sections 1.3.5 and 3.3.

BALLOT RESULTS: ___ Affirmative ___ Negative ___ Not Returned

ACTION: Negative votes will be discussed and resolved.

2.3 TSC Ballot 05-1 Item 2 (Summary of Changes)

Rationale: To assist users of the *Manual*, it is recommended that a “Summary of Changes” section be added that lists the sections that have changed since the previous edition. The sections to be listed in the Summary will be added as an editorial change upon TAC approval of changes to the *Manual*. It is proposed that this section be inserted after the Preface.

BALLOT RESULTS: ___ Affirmative ___ Negative ___ Not Returned

ACTION: Negative votes will be discussed and resolved.

2.4 TSC Ballot 05-1 Item 3 (Improve description of guide specification)

Rationale: It has been recommended that the treatment of “guide specification” in the *Manual* be revised to make it easier for the reader to understand the distinction between a reference specification and a guide specification. A more concise definition is proposed and additional language is recommended for Section 4.

BALLOT RESULTS: ___Affirmative ___ Negative ___Not Returned

ACTION: Negative votes will be discussed and resolved.

2.5 TSC Ballot 05-1 Item 4 (Registered Design Professional)

Rationale: ACI 318 has adopted the term “registered design professional”. To indicate the distinction between “Architect/Engineer” and “registered design professional” add the latter term to 1.2.2 Terms Used in Specifications. The definition is taken from ACI 318-05. Note that there is debate within ACI Committee 318 on whether the proper term should be “licensed design professional.” To avoid a conflict with ACI, let us ballot this version of the term and change it when ACI 318 changes it.

BALLOT RESULTS: ___Affirmative ___ Negative ___Not Returned

ACTION: Negative votes will be discussed and resolved.

2.6 TSC Ballot 05-1 Item 5 (Wording for Scope)

Rationale: The new ACI policy on specifications is intended to avoid conflicting requirements in Project Specifications that refer to ACI specifications. There are ACI specifications that deal with the same subjects covered in the specifications intended to support projects designed in accordance with ACI codes. To permit committees to continue writing specifications that have wider application than projects designed in accordance with ACI codes and at the same time avoid conflicting requirements, the scope of certain specifications shall indicate that they are not applicable to projects designed by ACI codes.

BALLOT RESULTS: ___Affirmative ___ Negative ___Not Returned

ACTION: Negative votes will be discussed and resolved.

2.7 TSC Ballot 05-1 Item 6 (Revise introduction to checklists)

Rationale: Project Specifications may refer to ACI Codes and ACI Specifications. To avoid conflicts, the minimum requirements for items covered in both documents must be the same. The ACI Specification may recommend more restrictive requirements than the code minimum in the Optional Requirements Checklist. It is proposed to delete paragraph F4 of the Foreword to Checklists and include that information in Section 3.4.

BALLOT RESULTS: ___Affirmative ___ Negative ___Not Returned

ACTION: Negative votes will be discussed and resolved.

3. Status of Specification Activities

Background: TSC members are assigned as liaisons to ACI committees known to be working on or planning to work on a specification. Committee members are appointed as associate members of TSC (unless the TSC liaison is also a member of the committee). Exhibit 3 summarizes ACI specification activities and current membership assignments.

REPORT: TSC Liaison and Associate Members are asked to report their respective committees' activities, update Exhibit 3, and discuss any actions required of TSC.

Committee 117: Liaison Tony Murray. Associate Member Karl Bakke.
Committee 301: Liaison Jon Ardahl.
Committee 303: Liaison Alfred Kaufman. Associate Member Dan Dorfmueller.
Committee 305: Liaison Aimee Pergalsky. Associate Member Robert Ryan.
Committee 306: Liaison Aimee Pergalsky. Associate Member Robert Ryan.
Committee 308: Liaison Aimee Pergalsky.
Committee 330: Liaison Art Weiss. Associate Member Ken Kazanis.
Committee 336: Liaison Art Weiss. Associate Member Billy Oliver.
Committee 346: Liaison Alfred Kaufman.
Committee 347: Request for a specification pending.
Committee 350: Liaison Jon Ardahl.
Committee 423: Liaison Gene Daniel.
Committee 503: Liaison Tony Murray.
Committee 506: Liaison Jon Ardahl.
Committee 530: Liaison pending committee decision on future of specification.
Committee 533: Liaison Art Weiss. Associate Member Sidney Freedman.
Committee 548: Liaison Art Weiss. Associate Member Mike Stenko.
Committee 551: Liaison Alfred Kaufman. Associate Member Jim Baty.

4. Specification Review

Background: Section 1.3.3 of the *ASpM* explains the TSC review process for ACI specifications. The intent is for TSC to review new and revised documents when they are being balloted by the committees. The process has yet to be implemented fully. ACI staff has been made aware of all specification-writing committees so that TSC reviews will be triggered when documents are being balloted.

REPORT: No specifications were submitted for review:

5. Requests for New Specifications

REPORT: Staff has received a request from Committee 304 to develop a guide specification on underwater concreting (See Exhibit 5).

ACTION: Does TSC approve this request?

(If this specification is approved by TAC, TSC will need to appoint a liaison member to the committee.)

6. Planning

6.1 TSC Mission

The TSC mission is: “Assist the technical committees in preparing and maintaining specifications in the correct format and language, and manage specification development by the Institute.”

6.2 Proposed Goals for 2005

- Assist TAC in reorganization of ACI 301;
- Maintain database of ACI specification activities;
- Review draft specifications in a timely manner;
- Develop training program for writing ACI specifications;
- Maintain punch list for future revision to the *ACI Specifications Manual*;
- Submit for TAC review approved revisions of *2002 ACI Specifications Manual*.

ACTION: Does TSC approve the proposed Goals for 2005?

7.0 ACI Specification Policy

7.1 Background

Refer to the minutes of the previous three TSC meeting for background. On February 8, 2004, Chair Carino submitted to TAC the TSC recommendation for the reorganization of ACI 301. At the fall 2004 meeting, TAC selected Cal McCall for a three-year term to implement this reorganization. Chair Carino has been working with TAC, ACI staff, and Cal McCall on details of the reorganization. At the New York City convention, a meeting will be held with Chairs of the committees directly affected by the new format for ACI 301.

REPORT: Carino will report.

7.2 e-Specifications

ACI Staff, TSC, and ACI 301 Chair McCall have been discussing the idea of preparing an “active” electronic specification that can be tailored to a specific project and included directly in the project specifications. Action on this item is tabled until additional direction is provided by ACI.

REPORT: Carino will report.

8. Training on Specification Writing

8.1 Workshop

At the San Francisco meeting, TSC approved an outline for a proposed TSC workshop on writing specifications. Art Weiss, Nick Carino, Aimee Pergalsky, and Jeff Coleman were appointed to a task group to prepare PowerPoint slides for the workshop. Carino was assigned #2 from the outline, Introduction to TSC, and Jeff Coleman was assigned #6, Style, Language, and Usage. The other items on the outline still need to be assigned. TSC members Pergalsky and Weiss forwarded the Chair information that they had accumulated on the subject. Carino will prepare detailed outlines for different modules for discussion.

REPORT: Carino will distribute copies of the draft modules.

ACTION: Additional volunteers will be sought to expand the draft modules.

9. New Business

10. Next Meeting

Given the new schedules for ACI 318 and ACI 301, should meeting time be maintained at Wednesday morning 7:00 to 10:00 am?

11. Adjournment

EXHIBITS:

- Exhibit 1 — TSC Roster with Contact and Assignment Information
- Exhibit 2.1 — *ASpM* Punch List
- Exhibit 3 — ACI Specifications Activity Database
- Exhibit 5 — ACI 304 Proposal

Copies:

Anthony E. Fiorato, President, ACI
James R. Cagley, Vice President, ACI
Thomas Verti, Vice President, ACI
José M. Izquierdo, Past President, ACI
William R. Tolley, Executive Vice President, ACI
Sharon L. Wood, Chair, ACI TAC
Daniel W. Falconer, Secretary, ACI-TAC

Exhibit 1
TSC Contact Information

September 2004			
Name	Assignment	Telephone No.	E-Mail Address
TSC Officers and TAC Contacts			
Nicholas J. Carino	Chair	301/975-6063	ncarino@nist.gov
Todd R. Watson	Secretary TSC (NV)	248/848-3728	todd.watson@concrete.org
Sharon Wood	Chair TAC	512/471-7298	swood@mail.utexas.edu
Daniel W. Falconer	Secretary TAC	248/848-3726	daniel.falconer@concrete.org
M. A. (Tony) Murray	TAC Contact	303/688-8244	tmurray@restruction.com
Voting Members			
Jon B. Ardahl	301, 350, 506	785/887-9991	ard00097@netzero.net
William L. Barringer		505/293-8368	joy2Bill@aol.com
William C. Bretnall		216/241-7078	bbretnall@gba-engineers.com
Jeffrey W. Coleman		952/841-0200	jwcoleman2@cs.com
D. Gene Daniel	305, 423	479/636-1856	dgenedinc@aol.com *
I. Leon Glassgold		410/3355-4390	102126.1102@compuserve.com
Ronald L. Hollrah		KC 913-897-3651 CO 970-752-1990	hollrah@earthlink.net
Alfred L. Kaufman, Jr.	303, 346, 551	925/866-2780	akaufman@rmcpmi.com
W. Calvin McCall		704/392-1506	wcmccall@concretees.com
M. A. (Tony) Murray	117, 503	303/688-8244	tmurray@restruction.com
Aimee Pergalsky	306, 308	216/491-9265	geoaimee@aol.com
Arthur T. Weiss, Jr.	330, 336, 533, 548	770/860-1942	aweiss7501@aol.com
Associate Members			
Karl J. Bakke	117	303/674-2290	karl.bakke@kalmanfloor.com
James R. Baty	551	319/895-6911	jbaty@cfawalls.org
Daniel P. Dorfmueller	303	513/933-0489	dorf@go-concepts.com
Sidney Freedman	533	312/786-0300	sfreedman@pci.org
Kenneth G. Kazanis	330	248/354-9050	ken.kazanis@lafarge-na.com
William H. Oliver, Jr.	336	713/207-4379	billy.oliver@centerpointenergy.com
Robert J. Ryan	305, 306,	216/839-7500	robert.ryan@degussa.com
Michael S. Stenko	548	914/636-1000	mstenko@transpo.com
*Text e-mail messages only; mail hard copies of any attached files			

Exhibit 2.1
2002 ACI Specification Manual Punch List of Future Changes

Section	Issue	Action
APPROVED REVISIONS		
1.2	“Architect/Engineer” is not in agreement with ACI 116R, which uses “architect-engineer.”	Sept. 2003 Minutes, Item 2.2.2: TSC voted to keep “Architect/Engineer” and to notify ACI Committee 116 of their action. DONE Note: See new item on this definition under proposed revisions.
1.2.1/1.2.2	“Accepted” versus “specified” – “Accepted” is an action taken by the Architect/Engineer, rather than the Specifier.	Sept. 2003 Minutes, Item 2.2.3: Move the definition of Specifier in section 1.2.2 to 1.2.1. Revise definitions. Approved in TSC ballot 03-1. March 2004 Minutes, Item 2.3: Change definition of “accepted” in the <i>ASpM</i> to “determined satisfactory by <u>Architect/Engineer Specifier</u> .” Change definition of “submitted” to “documents or materials provided to <u>Architect/Engineer Specifier</u> .” Move the definition of “Specifier” in section 1.2.2 Terms used in specifications to section 1.2.1 Terms used in this manual . DONE – incorporate into ASpM and submit to TAC
1.2.2, new 1.3.2	Define specification formats Product Prescription Performance	Sept. 2003: Aimee Pergalsky appointed to develop proposed wording. March 2004: Pergalsky sent proposed wording to Chair, who developed Item 5 on TSC Ballot 04-1. The proposal is to terms to 1.2.2 and add a new 1.3.2, as follows: <i>“descriptive specification</i> —a specification in which the exact properties of materials and methods of installation are defined. <i>Discussion:</i> It is a detailed, written description of the required properties of a product, material, piece of equipment and the workmanship required for its proper installation. No proprietary names are used. Also referred to as <i>prescriptive specification</i> .” <i>“performance specification</i> —a specification that defines required results, criteria by which performance will be judged, and methods of verification. <i>Discussion:</i> Performance specifications are statements of required results and methods for verifying compliance.” <i>“proprietary specification</i> —a specification in which brand names, model numbers, type

Section	<i>Issue</i>	<i>Action</i>
		<p>designations, manufacturers are specified.”</p> <p>“1.3.2 <i>Methods of specifying</i>—There are different methods for specifying Contractor requirements, including: descriptive (or prescriptive) specifications; performance specifications; and proprietary specifications.</p> <p>ACI specifications are of the first two types. The more common method is descriptive specifications in which the required attributes of products, materials, and workmanship are stated explicitly. Performance specifications state the required results and provide criteria for verifying compliance. The writing of effective performance specifications is challenging because standard methods for verifying compliance need to exist. In practice, ACI specifications typically include characteristics of descriptive specifications and performance specifications.”</p> <p>DONE – incorporate into ASpM and submit to TAC</p>
3.2	Add new P5 to Preface to explain non-mandatory language.	<p>Sept. 03 Minutes, Item 2.2.4. TSC Ballot 03-1, Negative by Daniel.</p> <p>March 2004, Item 2.4. Daniel’s negative found unrelated by a vote of 6 yes, 1 no (Daniel), and 1 abstain (Murray).</p> <p>Add a new P5 to the Preface: P5. The Specification is written to the Contractor. When a provision of this Specification requires action by Contractor, the verb “shall” is used. If Contractor is allowed to exercise an option when limited alternatives are available, the phrasing “either...or...” is used. Statements provided in the Specification as information to Contractor use the verbs “may” or “will.” Informational statements typically identify activities or options that “will be taken” or “may be taken” by Owner or Architect/Engineer.</p> <p>DONE – incorporate into ASpM and submit to TAC</p>

Section	Issue	Action
2.3	TAC 7/02: Clarify if all topics in Section 2.3 are required. Current language is unclear.	<p>March 2004: Art Weiss provided proposed wording to Chair, who incorporated it into Item 4 of TSC Ballot 04-1. The proposed wording is:</p> <p>“2.3 Outline of an ACI Reference Specification An ACI reference specification shall be a single or multiple-item specification. A single-item specification deals with a single product or process, and is analogous to a CSI narrow-scope specification. A multiple-item specification contains more than one Section, and is similar to a CSI broad-scope specification. The general outline of an ACI reference specification shall <u>take the form required as either a single-item specification or a multiple-item specification as depicted by the outlines in Article 2.3.1.</u> include such topics as identified in Section 3. Not all topics listed in Section 3 are required for an ACI reference specification, but applicable topics shall be included in the order shown in Section 3 and subsection 2.3. Items in an ACI reference specification shall be ordered as follows: 1- <u>A reference specification may include such topics as identified in Section 3 of this Manual. Not all topics listed in Section 3 are required for an ACI reference specification, but applicable topics shall be included in the order shown in Section 3 of this Manual, and in the case of a multiple-item specification, properly incorporated into the appropriate Section of the specification.”</u></p> <p>“2.3.1 Single-item formatOutline of single-item specification” “2.3.2 Multiple-item formatOutline of multiple-item specification”</p> <p>DONE – incorporate into ASpM and submit to TAC</p>
3.3 Definitions	TAC 7/02: “Including definitions for all terms in a spec that are not in 116R could be overwhelming; however, a clear statement that significant, important, pertinent, or etc., terms should be defined will be difficult. Also, I am not sure what is meant by terms used in unique ways.”	<p>Sept. 2003: Jon Ardahl appointed to develop proposed wording.</p> <p>Carino prepared ballot item 7 on TSC Ballot 04-1. The proposed wording is:</p> <p>“Definitions—Define <u>technical terms used in the specification that are not included in ACI 116R or terms that have different meanings than those in ACI 116R</u>are used in unique ways. <u>In either case, the committee should submit the definitions to ACI Committee 116 for possible inclusion in ACI 116R.”</u></p> <p>DONE – incorporate into ASpM and submit to TAC</p>

Section	<i>Issue</i>	<i>Action</i>
3.4.5	Consider recommending a structured format for checklist items: <ul style="list-style-type: none"> • Statement of requirement • Guidance to specifier • References 	Sept. 2003: Al Kaufman appointed to develop proposed wording. Carino prepared ballot item 6 on TSC Ballot 04-1. The proposed wording is: <u>“3.4.5 Format for checklist items—Use the following format for each checklist item. In the left column provide the numbering of the referenced Article and provide a brief description of the subject. In the right column include the following:</u> <ul style="list-style-type: none"> • <u>Concise statement of the requirement;</u> • <u>Concise guidance to Specifier (optional); and</u> • <u>References for additional guidance (optional).”</u> <p>DONE – incorporate into ASpM and submit to TAC</p>
4.4	Should guide specifications include mandatory and optional checklists? A critical review of Chapter 4 is needed.	<p>4.4 Contents of Guide Specification and Commentary</p> <p>ACI guide specifications <u>consist</u> of example specifications <u>language</u> and alternatives in mandatory language, accompanied by commentary in nonmandatory language. There are no default requirements <u>or values provided, checklists and relevant options are identified in the commentary and within the specification. A two-column format is recommended to separate guide specification from commentary.</u></p> <p>4.4.1 Checklist—<u>A Mandatory Requirements Checklist is provided that designates all job specific information to be supplied by the Specifier.</u></p> <p>4.4.2 Commentary—<u>The accompanying commentary provides relevant options as identified by the ACI technical committee that prepares the guide specification. A two-column format is recommended to separate guide specification from commentary.</u></p> <p>DONE – incorporate into ASpM and submit to TAC</p>

Section	Issue	Action
5.3.4	Revise wording on “Options” to avoid “may.”	<p>TSC Ballot 03-1, Negatives by Ardahl and McCall were persuasive. Ballot TSC 04-1 Item proposed the following:</p> <p>“5.3.4 Options—Use <u>It is acceptable to use the verb “may” to indicate that Contractor can exercise an option of its own choice if prescribed conditions are satisfied. It is better to rewrite the sentence to avoid using “may.” Use “shall either ... or...” where Contractor has limited, specified alternatives. Do not use “may” to indicate an alternative choice, because when “may” is used, Contractor is not obligated to perform the actions.</u></p> <p><u>Examples:</u> <u>Use: When surface temperature of concrete is within 20 °F of ambient or surrounding temperature, protection measures may be removed.</u> <u>Use(best): Protection measures are not required when surface temperature of concrete is within 20 °F of the ambient or surrounding temperature.</u> <u>Do not use: Concrete may be consolidated by vibration or rodding.</u> <u>Use: Consolidate concrete either by vibration or rodding.”</u></p> <p>DONE – incorporate into ASpM and submit to TAC</p>
PROPOSED REVISIONS		
Preface	Summary of changes	<p>Oct. 2004: Add a summary of changes to the beginning of the <i>ASpM</i>.</p> <p>Status: Ballot Item #2 on TSC Ballot 05-1.</p>
1.2	Define “registered design professional”	<p>Oct. 2004: Revisit the definition of “architect/engineer.” At their meeting in San Francisco, ACI Committee 318 decided to use the term “registered design professional.”</p> <p>Status: Ballot Item #4 on TSC Ballot 05-1</p>
1.2	Improve description of guide specification.	<p>Oct. 2004: Create an exact definition for a guide specification.</p> <p>Status: Ballot Item #3on TSC Ballot 05-1.</p>

Section	<i>Issue</i>	<i>Action</i>
1.3.5, 3.3	Dual units in an ACI Specification	<p>Oct. 2004: In Washington, D.C., the Board of Direction approved a recommendation from TAC that all documents except codes be in dual units. Previously, the policy was that documents needed to be in SI only, or in dual units. TSC needs to decide if dual units are acceptable in a specification, or if two separate documents should be published, as is done with ACI codes. Depending on the TSC's decision, sections 1.3.5 and 3.3 of the <i>ASpM</i> may need to be modified, and a recommendation for further modifications to the metrication policy may need to be submitted to TAC.</p> <p>Status: Ballot Item #1 on TSC Ballot 05-1.</p>
F4	To avoid potential conflicts in Project Specifications, clarify that specification cannot be more restrictive than a code.	<p>Oct. 2004: Propose new wording for the main text of the <i>ASpM</i> stating that specifications cannot be more restrictive than the codes. If such wording is developed and approved, paragraph F4 of the forward may be able to be deleted.</p> <p>Status: Ballot Item 6 on TSC Ballot 05-1.</p>
3.3	Scope of a specification.	<p>Add a sentence to the scope of specifications that are not intended to apply to projects designed in accordance with an ACI code.</p> <p>Status: Ballot Item 5 on TSC Ballot 05-1.</p>

Exhibit 3
ACI SPECIFICATIONS ACTIVITY DATABASE

Comm. No.	Title	Specification	Status	Comment/ Action	TSC Liaison	Nonvoting TSC Members
117	Tolerances	Standard Specifications for Tolerances for Concrete Construction and Materials	117-90	Open for public discussion Nov. 1, 2004 – Jan. 31, 2005	Murray	Bakke
301	Specifications for Concrete	Specifications for Structural Concrete	301-99	Public discussion 5/1 – 7/31/04. Committee finalized response to public comments.	Ardahl (M)*	Not needed
303	Architectural CIP Concrete	Standard Specification for Cast-in-Place Architectural Concrete	303.1-97	Not currently revising the specification.	Kaufman	Dorfmueller
305	Hot Weather Concreting	Standard Specification for Hot Weather Concreting	In Preparation	Approved by TAC 9/03. 3/04, committee has responded to TAC comments and will ballot responses.	Daniel	Ryan
306	Cold Weather Concreting	Standard Specification for Cold Weather Concreting	306.1-90 (R-98)	No action on Spec. Working on report first.	Pergalsky	Ryan
308	Curing Concrete	Standard Specification for Curing Concrete	308.1-98	Revision reviewed by TSC 9/03; not approved by TAC Planning new Specs. Need TAC approval of request	Pergalsky (M)*	Not needed

Comm. No.	Title	Specification	Status	Comment/ Action	TSC Liaison	Nonvoting TSC Members
330	Concrete Parking Lots and Site Paving	Standard Specification for Plain Concrete Parking Lots	330.1-03	New version published. Not revising at this time; working on the guide.	Weiss	Kazanis
336	Footings, Mats, and Drilled Piers	Specification for the Construction of Drilled Piers	336.1-01	No action reported.	Weiss	Oliver
346	CIP Pipe	Specification for Cast-in-Place Concrete Pipe	346-01	Review in progress.	Kaufman (M)*	Not needed
347	Formwork for Concrete	(Proposed specification on formwork)	Planning	TAC approval pending TSC recommendations on specification policy.		
350	Environmental Structures	Proposed Specification for Environmental Engineering Concrete Structures	In preparation	TSC/TAC approval to proceed given 4/02; Committee plans to ballot draft before the NY. Have to review changes to ACI 301 and 350 and work those into spec. Will send to TSC with ballot.	Ardahl (M)*	Not needed
423	Prestressed Concrete	Specification for Unbonded Single Strand Tendons and Commentary	423.6-01/423.6R-01	Carino and ACI staff to separate into two specs: an ACI reference spec and an ASTM materials spec.	Daniel	423 Chair (Bruce Russell) to appoint TSC rep.

Comm. No.	Title	Specification	Status	Comment/ Action	TSC Liaison	Nonvoting TSC Members
503	Adhesives in Concrete	Standard Specification for Bonding Concrete, Steel, Brick and Other Materials to Hardened Concrete with a Multi-Component Epoxy Adhesive	503.1-92 R97		Murray (M)*	Not needed
		Standard Specification for Bonding Plastic Concrete to Hardened Concrete with a Multi-Component Epoxy Adhesive	503.2-92 R-97			
		Standard Specification for Producing a Skid Resistant Surface on Concrete by the Use of a Multi-Component Epoxy System	503.3-92 R97	Need to check for conflicts with 548 Specs		
		Standard Specification for Repairing Concrete with Epoxy Mortars	503.4-92 R97			
		Standard Specification for Crack Repair by Epoxy Injection	In preparation	Submitted to TAC, Fall 2002. Approved by TAC. Committee responding.		
506	Shotcreting	Specifications for Shotcrete	506.2-95	Finalizing rewrite from ballot comments.	Ardahl (M)*	Not needed
		Guide Specification for Concrete for Underground Support	In preparation	TAC approval not requested; Ardahl review recommends against Guide Spec.; develop as Guide.		
530	Masonry Standards Joint Committee	Specification for Masonry Structures	530.1-99	Carino informed TAC Chair Wood that the 530 specification should follow ACI format.	(pending)	(pending)

Comm. No.	Title	Specification	Status	Comment/ Action	TSC Liaison	Nonvoting TSC Members
533	Precast Panels	Proposed Specification on Precast Panels	In preparation. TAC approval needed.		Weiss	Freedman
548	Polymers in Concrete	Standard Specifications for Latex Modified Concrete (LMC) Overlays	548.4-93 R98		Weiss	Stenko
		Standard Specifications for Type EM Polymer Concrete Overlays	not approved by TAC, committee revising	Specification was submitted to TAC for review at their July 2004 meeting. The document was not approved and was returned to the committee for revision, reballoting, and resubmission to TAC.		
		Standard Specifications for Type ES Polymer Concrete Overlays	not approved by TAC, committee revising	Specification was submitted to TAC for review at their July 2004 meeting. The document was not approved and was returned to the committee for revision, reballoting, and resubmission to TAC.		

Comm. No.	Title	Specification	Status	Comment/ Action	TSC Liaison	Nonvoting TSC Members
551	Tilt-Up Construction	Specification on Tilt-Up Construction	In preparation.	Committee ballot 12/02; Kaufman and Carino provided comments in March 2003.	Kaufman	Baty

*(M) indicates that the TSC liaison is also a member of the committee and an associate member from that committee is not necessary

Exhibit 5

An Outline of Proposed Guide Specifications for Underwater Concrete ACI 304 Committee

Purpose: Underwater concreting is often a critical component of the marine construction project. It is technically demanding, usually on the critical path of the project schedule, and involves complex construction logistics. Therefore, its significance in the project goes far beyond the concreting operations themselves. This is the area where sound design and competent construction planning can achieve a meaningful reduction in risk and cost. State-of-the art technology is available to ensure placement of high quality underwater concrete in a reliable manner. However, a significant number of failures have occurred largely due to improper concrete mixtures or improper placement procedures. Some of the problems occurred because the underwater concrete technologies have not been widely disseminated. Many of these problems occurred due to the lack of sound and comprehensive project specifications. The proposed work will review various existing specifications and, then, develop an ACI guide specification to outline the key specification requirements and to guide the industry practices.

Format: The Guide Specifications will follow the ACI Specification Manual format. It will be typically three-part specs with mandatory language, accompanied by commentary in non-mandatory language and options/alternatives. There will be no mandatory/optional requirements checklists.

Outline

Part 1 - GENERAL

Scope

Definition

Reference Standards

Project Conditions

Quality Control and Quality Assurance

Submittals including

- Qualification
- Concrete mixture proportions (if requested), and the trial batch test data
- Concrete production and transportation plans and equipment
- Concrete placement plans, procedures, and equipment
- Plan and details of placing, positioning and supporting reinforcement
- Sounding methods and equipment for underwater concrete
- Contingency plan

Part 2 - PRODUCT

General

Requirements for Materials

Performance requirements of concrete mixtures

- Strength

- Flowability;
- Self-compacting characteristics;
- Retention of workability/flowability
- Non-segregation
- Bleeding control
- Heat of hydration Control
- Controlled set times

Optional performance requirements for special applications

- Anti-washout characteristics
- Self-leveling characteristics
- Abrasion resistance
- Creep and shrinkage control

Requirements for concrete proportioning tests

- Mixture proportioning parameters (Pozzolan percentage, w/cm ratio, etc)
- Laboratory tests
- Large scale field tests

Part 3 - EXECUTION

General

Environment Protection

Storage and delivery of materials, and equipment

Batching and mixing of the concrete, and equipment

Delivery of concrete, and equipment

Concrete placement plans and procedures, and equipment

Concrete placement temperature

Weather condition for placement

Preparation of cold joints

Production trials

Requirements for contingency plans

Tolerances

Quality control