



**AGENDA**

**PTI DC-20 Building Design Committee**

Thursday, September 27, 2018

1:00 PM – 5:00 PM

The Antlers, Colorado Springs, CO

**Voting Members Present (x of 14)**

- |                           |                                     |
|---------------------------|-------------------------------------|
| Carol Hayek, Chair        | CCL USA, Inc.                       |
| Martin Maingot, Secretary | SCA Consulting Engineers            |
| Hamid Ahmady              | Suncoast Post Tension, Ltd.         |
| Rashid Ahmed              | Walker Parking Consultants          |
| Bryan Allred              | Seneca Structural Engineering, Inc. |
| Asit Baxi                 | Baxi Engineering Inc.               |
| Martin Cuadra             | Uzun & Case Engineers               |
| Jonathan Hirsch           | Bentley Systems                     |
| Thomas Kang               | Seoul National University           |
| Don Kline                 | Kline Engineering & Consulting, LLC |
| Bill Klorman              | Klorman Construction                |
| JR Mujagic                | Bekaert Corporation, Inc.           |
| Eric Ober                 | Simpson, Gumpertz & Heger           |
| Zuming Xia                | Structural Technologies             |
| Tim Christle, NV          | PTI Staff                           |

**Associate Members Present**

- |                     |   |
|---------------------|---|
| Joseph Ales         | Walter P Moore & Associates, Inc.                       |
| Ryan Bonniwell      | Ericksen Roed & Associates                              |
| Kyle Boyd           | S.A. Miro, Inc.   |
| Michael Hopper      | Leslie E. Robertson Associates                          |
| Spencer Lee         | ADAPT Corporation                                       |
| Ralf Leistikow      | Wiss, Janney, Elstner Associates                        |
| Rafael Machado      | Ellinwood + Machado                                     |
| Carine Magalhaes    | ADAPT Corporation                                       |
| Sivakumar Munuswamy | Thornton Tomasetti, Inc.                                |
| Srini Neelamegam    | CCL USA, Inc.   |
| Otto Schwarz        | Ryan Biggs   Clark Davis Engineering and Surveying, P.C |
| Rob Suarez          | Martin/Martin, Inc.                                     |
| Todd Whisenhunt     | Thornton Tomasetti                                      |
| Mark Yerges         | CVM Engineers   |

**Visitors Present**

**ACTION ITEMS FROM LAST / THIS MEETING**

Item #	Subject	Action	Responsible	Deadline / Completed
1	Design Webinar Modules	PTI Staff to provide audio only recordings for all module presentations	PTI Staff	December 31, 2018

2	PTI DC20.2-88: Restraint Cracks and their Mitigation	Contributions to be sent by end of June. Compilation of a full draft for ballot by end of summer	All	June 2018
3	DC20.7-01: Design, Construction and Maintenance of CIP PT Concrete Parking Structures	<b>On Hold</b> pending completion of other current priorities		<b>On Hold</b>
4	ACI 318 Reference	PTI Staff recommends a revised approach to this reference publication	PTI Staff	2019
5	PT Manual 7 <sup>th</sup> Edition	Summary of chapters being authored by and reviewed by DC-20 members	All	Ongoing
6	Two-Way Banded	Tech note to be sent for ballot; Testing: Two-Way Banded TG to continue efforts and assisting in test configuration. Release drawings for T1	Hirsch Dual-Banded TG	June 2018 May 2018

Agenda Item	Expected Outcome / Actions Taken
<b><u>A. General</u></b> A.1 Call to Order A.2 Introductions A.3 Committee Roster / Changes A.4 PTI Antitrust Policy A.5 Annual Report	
<b><u>B. Agenda &amp; Minutes</u></b> B.1 Approval of Agenda B.2 Approval of Minutes from 5/8/18 (Meeting ballot required)	B.2 Vote on Minutes from 5/8/18 approval Motion / Second: Name / Name <b>Result: X-X-X (Y-N-A)</b>
<b><u>C. Actions Taken Between Meetings</u></b> C.1 Letter Ballots  C.2 Web Meetings (none)	C.1 Tech Note for Dual-Banded PT Slabs. Ballot period (8/27/18- 9/26/18). Ballot may be extended, and ballot resolution will take place via a web meeting.  C.2 No web meetings were held between Convention and Committee Days
<b><u>1. Action Item 1: (Design Webinar Modules)</u></b> 1.1. Module production	1.1 Tim has been working on these recordings since July. Goal is to have all 10 modules complete by the end of 2018. Finished modules will be released to select committee members for final review before proceeding with post to website.
<b><u>2. Action Item 2: (PTI DC20.2-88, Restraint Cracks and their Mitigation)</u></b>	2.1 Updates from each task group: 1. Causes of Cracking – Martin C., Eric 2. Connection Details – Kyle, Mark Y., Asit

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2.1. Review progress 2.2 PTI goal is to finish and start ballot no later than 11/1/18	3. Concrete Drying Shrinkage Mitigation Strategies – Martin M. 4. Equations, ¼” value and examples – Asit, Rashid, Eric, Carol 5. FEM Analysis – Mike H., Mark Y.
<b><u>3. Action Item 3: (DC20.7-01, Design, Construction and Maintenance of CIP PT Concrete Parking Structures)</u></b> 3.1 On hold pending completion of other current priorities	3.1 However, Board has set new priorities for recapture of market share in specific markets, and parking structures is one of them. Therefore, this publication will become a priority in 2019.
<b><u>4. Action Item 4: (ACI 318 Reference)</u></b> 4.1 PTI Staff update	4.1 PTI Staff, based on various inputs, is now recommending a revised approach to this publication. A reference document that guides the reader to all PT related sections of 318. This would begin with 318-14 and then be updated with each new release of 318, 318-19 being next. Need to create a small Task Group to complete this document.
<b><u>5. Action Item 5: (PT Manual 7<sup>th</sup> Edition)</u></b> 5.1 Review progress 5.2 Plan for review process	5.1 Tim to provide update on review/progress to date  5.2 Per PTI Staff, PT Manual is targeting early 2020 final publication date. The list below represents a summary of the “DC-20 reviewers” responsibility matrix in item 5.1 with remaining Chapters to be released for review  1) <u>Chapter 5</u> : Analysis and Design Fundamentals; Martin C, Jonathan Hamid and Siva; <b>TAB balloting complete</b> 2) <u>Chapter 6</u> : Detailing and Construction Procedures for Buildings; Zuming, Mark, Rashid; 3) <u>Chapter 7</u> : Design examples; Siva and Eric 4) <u>Chapter 8</u> : Seismic Design of PT Concrete Structures; Martin M, Bryan Allred, Kyle B; 5) <u>Chapter 9</u> : PT Concrete Floors; Hamid, Carine. <b>TAB balloting complete</b> 6) <u>Chapter 10</u> : PT Parking Structures; Otto, Martin C, Bryan, and Eric; <b>Ready for final review before TAB balloting</b> 7) <u>Chapter 18</u> : Fire resistance – Professor Kodur in progress as update author. Martin C; CRSI to potentially assist with review. Restrained vs. unrestrained conundrum. Mike Hopper may have a contact at Princeton U that may be able to help further define R vs. UR conditions. <b>Ready for final review before TAB balloting</b> 8) <u>Chapter 19</u> : Durability (buildings and bridges); Martin M, Kyle B, Ralph L <b>Ready for final review before TAB balloting</b> 9) <u>Chapter XX</u> : Sustainability; Martin M, Srini; 10) <u>Chapter XY</u> : Anchorage Zone Design; Zuming, Siva;

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	11) <u>Chapter XZ</u> : BIM; Carine, Srini, Rob. <b>DC-20A needs to ballot</b>
<b>6. Action Item 6: (Two-Way Banded)</b> 6.1 Review progress of testing 6.2 Review progress of Tech Note	6.1 Tim, Martin C. and JR to provide update  6.2 Tech Note for Dual-Banded PT Slabs completed in August. Ballot period (8/27/18-9/26/18). Ballot may be extended, and ballot resolution will take place via a web meeting.
<b>E. New Business</b> E.1 Tech Note for Shrinkage and Temperature Reinforcement E.2 Structural Detailing for PT Buildings E.3 Review of documents and identification of those in need of revision E.4 FAQ for practical vs. ACI 318 provisions for column punching shear integrity reinforcement in PT slabs	E.1 Tech Note for Shrinkage and Temperature Reinforcement is complete, and it will go to DC-20 ballot after resolution of the Dual-Banded Tech Note  E.2 Tim is starting direct discussions with PT suppliers to obtain their input on problematic details. Ultimate publication goal is before the end of 2019.  E.3 List of documents for review: PTI DC20.1-87      Strength and Behavior of Closely Spaced Post-Tensioned Mono-strand Anchorages PTI DC20.2-88      Restraint Cracks and their Mitigation in Unbonded Post-Tensioned Building Structures PTI DC20.3-89      Structural Integrity of Building Constructed with Unbonded Tendons PTI DC20.4-90      Earthquake Performance of Unbonded Post-Tensioned Buildings PTI DC20.5-90      Evaluation of the Condition of a Post-Tensioned Concrete Parking Structure After 15 Years of Service PTI DC20.6-99      Design Fundamentals of Post-Tensioned Concrete Floors PTI DC20.7-01      Design, Construction and Maintenance of Cast-in-Place Post-Tensioned Concrete Parking Structures PTI DC20.8-04      Design of Post-Tensioned Slabs Using Unbonded Tendons PTI DC20.9-11      Guide for Design of Post-Tensioned Buildings  E.4 Discuss need for FAQ document to address this issue
<b>F. Next Meeting</b> 2019 PTI Convention Hyatt Regency Seattle May 5-8, 2019 <b>Web Meetings:</b>	

Agenda Item	Expected Outcome / Actions Taken
<b>G. <u>Adjourn</u></b>	

**AGENDA / MEETING EXHIBITS**

Exhibit #	Subject
Roster / A.4	Sign-In Sheet / PTI Anti-Trust Policy
A.5	Annual Report
B.2	Minutes from 5/8/18 meeting in Minneapolis
2.1.1	DC20.2-88 reorganized
2.1.2	RTS Details
2.1.5	Crack Mitigation Document FEM Analysis
6.2	Tech Note – Dual Banded PT Tendon Layout
E.1	Tech Note – Shrinkage and Temperature Reinforcement