AGENDA
PTI DC-20 Building Design Committee
Tuesday, May 7, 2019
1:30 p.m. to 5:30 p.m.
Hyatt Regency Seattle

Voting Members Present (x of 14)

Carol Hayek - Chair, TAB Contact
CCL

Martin Maingot - Secretary, V
SCA Consulting Engineers

Tim Christie, NV
Post-Tensioning Institute

Hamid Ahmady
Suncoast Post-Tension Ltd

Rashid Ahmed
Walker Consultants

Bryan Allred
Seneca Structural Engineering Inc.

Asit Baxi
Baxi Engineering Inc.

Martin A Cuadra
Uzun and Case, LLC

Jonathan Hirsch
Bentley Systems, Inc.

Thomas Kang
Seoul National University

Don Kline
Kline Engineering and Consulting, LLC

Frank Malits
Cagley and Associates Inc.

J.R. Mujagic
Bekaert Corporation

Eric Ober
SGH

Zuming Xia
Structural Technologies

Associate Members Present

Joseph Ales
Walter P Moore and Assoc., Inc

Ryan Bonniwell
Ericksen Roed and Associates

Kyle Boyd
S.A. Miro

Anantha Chittur
BASE

Michael Hopper
Leslie E. Robertson Associates

Spencer Lee
ADAPT

Ralf Leistikow
Wiss, Janney, Elstner Associates, Inc.

Rafael Machado
Ellinwood Machado, LLC

Carine Magalhaes
ADAPT

Siva Munuswamy
Thornton Tomasetti, Inc

Srinivasan Neelamegam
CCL USA

Otto Schwarz
Ryan Biggs Clark Davis Engineering and Surveying

Roberta Suarez
Martin-Martin

Todd Whisenhunt
Thornton Tomasetti

Mark Yerges
CVM Engineers, Inc.
ACTION ITEMS FROM LAST / THIS MEETING

<table>
<thead>
<tr>
<th>Item #</th>
<th>Subject</th>
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<td>PTI DC20.2-88: Restraint Cracks and their Mitigation</td>
<td>Contributions to be finalized. Connection details and FEM section to be finalized per committee direction. Compilation of a full draft for ballot by end of the year 2018.</td>
<td>All</td>
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<td>PTI Staff recommends a revised approach to this reference publication</td>
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<td>Summary of chapters being authored by and reviewed by DC-20 members</td>
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<td>Hirsch Dual-Banded TG</td>
<td>December 2018 Ongoing</td>
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<td>7</td>
<td>Temperature Tendons</td>
<td>Tech Note will go to DC-20 ballot after resolution of the Dual-Banded Tech Note</td>
<td>PTI Staff</td>
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<td>8</td>
<td>Structural Detailing for PT Buildings</td>
<td>Tim is starting direct discussions with PT suppliers to obtain their input on problematic details. Ultimate publication goal is before the end of 2019</td>
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<td>9</td>
<td>Update from DC-20A BIM Subcommittee</td>
<td>Finishing BIM chapter for PT Manual 7th Edition and starting IFC in Exchange Model work with ACI 131</td>
<td>Malits</td>
<td>Chapter – April 2019 IFC - Ongoing</td>
</tr>
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</table>

**Agenda Item**

**Expected Outcome / Actions Taken**

**A. General**

A.1 Call to Order
A.2 Introductions
A.3 Committee Roster / Changes
A.4 PTI Antitrust Policy

A.1
A.2
A.3.1 Anantha Chittur of BASE, Inc. has joined as a new Associate Member.
A.3.2 For all members, please remember that meeting attendance, return of ballots and task group/committee assignments participation is monitored and evaluated by the Chair and PTI Staff on a regular basis.
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<td><strong>A.4 Policy reminder included with agenda</strong></td>
<td></td>
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<td><strong>B. Agenda &amp; Minutes</strong></td>
<td><strong>B.1 Approval of Agenda</strong>&lt;br&gt;<strong>B.2 Approval of Minutes from 9/27/18 (Meeting ballot required)</strong>&lt;br&gt;Vote on Minutes from 9/27/18 Colorado Springs meeting approval&lt;br&gt;Motion / Second: Name / Name&lt;br&gt;Result: X-X-X (Y-N-A)</td>
</tr>
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<td><strong>C. Actions Taken Between Meetings</strong></td>
<td><strong>C.1.1 Ballot DC-20-1801 (Technical Note – Dual Banded PT Tendon Layout) ended 10/12/18.</strong>&lt;br&gt;<strong>C.1.2 Ballot DC-20-1802 (Technical Note – Shrinkage &amp; Temperature PT) ended 1/12/19.</strong>&lt;br&gt;C.2.1 Web meetings were held on 12/11/18 and 1/31/19 to resolve negatives and substantive comments from Ballot DC-20-1801.&lt;br&gt;C.2.2 Web meetings were held on 2/12/19 and 3/1/19 to resolve negatives and substantive comments from Ballot DC-20-1802.</td>
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<td>1. <strong>Action Item 1: (Design Webinar Modules)</strong>&lt;br&gt;1.1. Module production</td>
<td><strong>1.1 Modules 1, 2, 3 and 6 have been completed and submitted to other PTI staff for review. Modules 4 and 7 will be submitted in May for other PTI staff review. Modules 5, 8 and 9 are still in production, and an alternative speaker might be sought for Module 10. After other PTI staff review, completed modules will go to select committee members and original module authors for final QA/QC review before proceeding with post to PTI website.</strong></td>
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<td><strong>2. Action Item 2: (PTI DC20.2-88, Restraint Cracks and their Mitigation)</strong>&lt;br&gt;2.1. Review progress&lt;br&gt;2.2 Need to publish updated document as DC20.2-19 before the end of 2019</td>
<td><strong>2.1 Updates from each task group:</strong>&lt;br&gt;2.1.1 Causes of Cracking (Martin C., Eric) – Complete except for obtaining figures needed from ACI 224.4R-13 document in response to request that was submitted to ACI.&lt;br&gt;2.1.2 Connection Details (Kyle, Mark Y., Asit) –&lt;br&gt;2.1.3 Concrete Drying Shrinkage Mitigation Strategies (Martin M.) –&lt;br&gt;2.1.4 Equations, ¼&quot; value and Examples (Asit, Rashid, Eric, Carol) –&lt;br&gt;2.1.5 FEM Analysis (Mike H., Mark Y.) –</td>
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<td><strong>3. Action Item 3: (DC20.7-01, Design, Construction and Maintenance of CIP PT Concrete Parking Structures)</strong>&lt;br&gt;3.1 Need to start on update of this document after Action Item 2 goes to ballot</td>
<td><strong>3.1 Board has set new priorities for recapture of market share in specific markets, and parking structures is one of them. Therefore, this publication has become a priority in 2019. Need to start on update of this document after DC20.2-19 goes to ballot. Task Group (maximum of 5 people) needs to be established.</strong></td>
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<td>4. Action Item 4: (ACI 318 Reference – New PTI publication) 4.1 Need to start on creation of this document after Action Item 2 goes to ballot</td>
<td>4.1 A reference document that guides the reader to all PT related sections of 318 and serves as a companion document to 318. This would begin with 318-14 and then be updated with each new release of 318, 318-19 being next and soon. Need to start on creation of this document after DC20.2-19 goes to ballot. Task Group (maximum of 5 people) needs to be established.</td>
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<td>5. Action Item 5: (PT Manual 7th Edition) 5.1 Review progress 5.2 Plan for review process</td>
<td>5.1 Tim to provide update on TAB review ballot progress to date; PTI major priority with 2 chapter per month ballot review cycle 5.2 PT Manual 7th Edition must publish in 2020. 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 TAB balloting complete: Chapter 5: Analysis and Design Fundamentals; Martin C, Jonathan Hamid and Siva Chapter 9: PT Concrete Floors; Hamid, Carine Chapter 10: PT Parking Structures; Otto, Martin C, Bryan, and Eric Chapter 18: Fire resistance – Martin C; CRSI to potentially assist with review Chapter 19: Durability (buildings &amp; bridges); Martin M, Kyle B, Ralph L Ballot will start in May: Chapter 8: Seismic Design of PT Concrete Structures; Martin M, Bryan Allred, Kyle B Chapter XZ: BIM; Carine, Srini, Rob Ballot will start in June: Chapter 7: Design examples; Siva and Eric Chapter XX: Sustainability; Martin M, Srin Ballot will start in July or later: Chapter 6: Detailing and Construction Procedures for Buildings; Zuming, Mark, Rashid; Chapter XY: Anchorage Zone Design; Zuming, Siva;</td>
</tr>
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<td>6. Action Item 6: (Dual-Banded PT Layout) 6.1 Review progress of testing 6.2 Review progress of Tech Note</td>
<td>6.1 Tim, Martin C., Carol to provide update 6.2 Tech Note ballot resolved in January 2019. Jonathan and Kyle to provide update</td>
</tr>
<tr>
<td>7. Action Item 7: (Temperature Tendons) 7.1 Review progress of Tech Note</td>
<td>7.1 Tech Note ballot resolved in March 2019. Tim to provide update</td>
</tr>
<tr>
<td>8. Action Item 8: (Structural Detailing for PT Buildings) 8.1 Review progress of proposed new publication</td>
<td>8.1 Tim is starting direct discussions with PT suppliers to obtain their input on problematic details. Ultimate publication goal is before the end of 2019.</td>
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<td><strong>9. Action Item 9: (Update from DC-20A BIM Subcommittee)</strong>&lt;br&gt;9.1 Update on current work of the BIM subcommittee</td>
<td>9.1 Subcommittee Chair Malits to provide update</td>
</tr>
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<td><strong>E. New Business</strong>&lt;br&gt;E.1 Review of documents and identification of those in need of revision&lt;br&gt;E.2 FAQ for practical vs. ACI 318 provisions for column punching shear integrity reinforcement in PT slabs&lt;br&gt;E.3 FAQ for ACI 318 8.6.2 provision for minimum P/A and bonded reinforcement</td>
<td>E.1 List of documents for review:&lt;br&gt;PTI DC20.1-87 Strength and Behavior of Closely Spaced Post-Tensioned Mono-strand Anchorages&lt;br&gt;PTI DC20.2-88 Restraint Cracks and their Mitigation in Unbonded Post-Tensioned Building Structures (Revised in Progress)&lt;br&gt;PTI DC20.3-89 Structural Integrity of Building Constructed with Unbonded Tendons&lt;br&gt;PTI DC20.4-90 Earthquake Performance of Unbonded Post-Tensioned Buildings&lt;br&gt;PTI DC20.5-90 Evaluation of the Condition of a Post-Tensioned Concrete Parking Structure After 15 Years of Service&lt;br&gt;PTI DC20.6-99 Design Fundamentals of Post-Tensioned Concrete Floors (Next priority after parking structures)&lt;br&gt;PTI DC20.7-01 Design, Construction and Maintenance of Cast-in-Place Post-Tensioned Concrete Parking Structures (Priority starting in 2019)&lt;br&gt;PTI DC20.8-04 Design of Post-Tensioned Slabs Using Unbonded Tendons&lt;br&gt;PTI DC20.9-11 Guide for Design of Post-Tensioned Buildings&lt;br&gt;Create spreadsheet or Gantt chart to show schedule slated for review/updating activity for various documents. &lt;br&gt;E.2 Discuss need for FAQ document to address this issue&lt;br&gt;E.3 Discuss need for FAQ document to address this issue</td>
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<td><strong>F. Next Meeting</strong>&lt;br&gt;2019 PTI Committee Days, Santa Fe, New Mexico October 2-4, 2019 Web Meetings:</td>
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<td><strong>G. Adjourn</strong></td>
<td>Meeting adjourned at</td>
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## AGENDA / MEETING EXHIBITS

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<td>Roster / A.4</td>
<td>Sign-In Sheet / PTI Anti-Trust Policy</td>
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<td>B.2</td>
<td>Minutes from 9/27/18 Colorado Springs Meeting</td>
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At a meeting on October 8, 1980, the Board of Directors first discussed the Institute's status and policies regarding compliance with antitrust laws. After review of both the internal and external compliance procedures, the following resolution was approved:

"The staff, officers, directors and members of the Post-Tensioning Institute are reminded that they are required to comply with the spirit and specific requirements of the antitrust laws on all activities within the scope of, and related to, the official functions of PTI. Further, this restated position, along with appropriate explanatory material, should be placed in all meeting folders/books periodically, beginning with the 8th of October meeting of PTI."

On July 24, 2012 and again on October 7, 2015, the Executive Committee authorized Legal Counsel to review and update this Policy Statement in the perspective of the Department of Justice Business Review Letter of July 30, 1997 and current case law. As a continuing guide for your participation in PTI's meetings, please review and continue to adhere to the following "Legal Limitation on Discussions at PTI Meetings."

**LEGAL LIMITATION ON DISCUSSIONS AT PTI MEETINGS AND EVENTS**

A free exchange of ideas on matters of mutual interest to the members is necessary for the success of all meetings. Indeed, such an exchange of views is essential to the successful operation of every trade association and the law specifically allows legitimate exchange of views pertaining to, e.g., quality control, safety, building design and construction integrity, etc.

It is not the purpose of this memorandum to discourage the exploration in depth of any matters of legitimate concern to meeting participants. Nevertheless, to ignore certain antitrust ground rules, either through ignorance or otherwise, is to create a civil and criminal hazard businessmen simply cannot afford.

It is for these reasons that PTI provides you with a reminder that certain areas of formal and informal communication between competitors or between manufacturers and their suppliers and customers must be avoided, as posing potential antitrust problems.

The Sherman Antitrust Act, the Clayton Act, the Federal Trade Commission Act, and the Robinson-Patman Act comprise the basic federal antitrust laws, which set forth the broad areas of conduct considered illegal as restraints of trade. In general, agreements or understandings between competitors that operate as an impediment to free and open competition are forbidden. Federal antitrust prohibitions forbid any "agreement or understanding...to substantially lessen competition or tend to create a monopoly in any line of commerce." An important point to keep in mind is that communications and discussions between competitors or between sellers and customers, about matters which may be considered anti-competitive, often comprise the evidence from which courts infer antitrust violations. **It is the policy of the Post-Tensioning Institute that such agreements, understandings or communications shall not be tolerated at any formal or informal meetings or social events of the Institute.**

The general prohibitions contained in the federal antitrust laws, have been particularized in the form of a series of consent decrees, originally entered against a number of member companies of various trade associations and the associations themselves. It is important to note that these laws not only apply to PTI members, but also to PTI itself. Often trade associations have been and are presently co-defendants in cases brought by the Justice Department and the Federal Trade Commission (“FTC”). Recently, the FTC has stated: “Because trade associations are by their nature collaborations among competitors, the Commission and courts have long been concerned with anti-competitive restraints imposed by such organizations under the guise of codes of conduct. Competing for customers, cutting prices, and recruiting employees are hallmarks of vigorous competition. Agreements among competitors not to engage in these activities injure consumers by increasing prices and reducing quality and choice.” Similar “codes” or policies and requirements that encourage directly or indirectly members’ unlawful activity are strictly forbidden by PTI in the course of its business with its members.
SPECIFIC EXAMPLES OF ACTIVITIES AND PRACTICES PROHIBITED
AT ALL PTI MEETINGS AND EVENTS:

Included in activities and practices which are forbidden, and are contrary to the policy of the Institute, both under the general antitrust laws and the consent decrees, subject to the said Business Review Letter, are the following:

- Agreeing to allocate markets, customers or suppliers among competitors, classify certain customers or suppliers being entitled to preferential treatment by manufacturers, and establish geographic trading areas.

- Participating in any plan designed to induce any manufacturer or distributor to sell or refrain from selling, or discriminate in favor of, or against any particular customer or class of customers.

- Agreeing in any manner to fix or otherwise establish bids, prices (including price increases, decreases, standardization or stabilization), profits, costs, contract terms affecting price (such as discounts and credit terms), etc. because, e.g. prices were too low, with the exception of certain resale pricing agreements between manufacturers and retailers or distributors.

- Agreeing in any manner to limit or restrict the quality of products to be produced (e.g., restrictions on selling coated strand to certain customers).

- Participating in any plan which has the effect of discriminating against, or excluding competitors, suppliers or customers.

These examples are provided to guide you in your discussions during formal and informal PTI meetings and social events. If the occasion arises, more specific advice will be provided by legal counsel, who is required by Article IV, Section 7 of the PTI By-Laws to be present at all meetings of the Board of Directors and the Executive Committee.
Voting Members Present (11 of 15)

Carol Hayek, Chair  
Martin Maingot, Secretary  
Hamid Ahmady  
Rashid Ahmed  
Bryan Allred  
Asit Baxi  
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CVM Engineers

Visitors Present

Bjorn Vors  
Dan Moser

University of Saskatchewan  
Walker Consultants
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#### A. General

A.1 Call to Order
A.2 Introductions
A.3 Committee Roster / Changes
A.4 PTI Antitrust Policy
A.5 Annual Report

#### Expected Outcome / Actions Taken

A.1 Meeting start time: 1:05 pm
A.2 All those present introduced themselves
A.3 Frank Malits to chair BIM Subcommittee (DC-20A) and replace Bill Klorman, the former chair. Attendance and ballot returns will be monitored by PTI to ensure appropriate member participation in committee activities
A.4 Policy reminder included with agenda
A.5 Annual report due end of October 2018; outline 2018 and establish 2019 goals

#### B. Agenda & Minutes

B.1 Approval of Agenda
B.2 Approval of Minutes from 5/8/18 (Meeting ballot required)

#### Expected Outcome / Actions Taken

B.2 Vote on Minutes from 5/8/18 approval
Motion / Second: Martin C. / Jonathan H.
Result: 9-0-0 (Y-N-A)
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<td><strong>C. Actions Taken Between Meetings</strong></td>
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<td>C.1 Letter Ballots</td>
<td>C.1 Tech Note for Dual-Banded PT Slabs. Ballot period (8/27/18-9/26/18). Ballot extended to October 12, 2018, and ballot resolution will take place via a web meeting (date TBD)</td>
</tr>
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<td>C.2 Web Meetings (none)</td>
<td>C.2 No web meetings were held between Convention and Committee Days</td>
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<td><strong>1. Action Item 1: (Design Webinar Modules)</strong></td>
<td></td>
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<td>1.1. Module production</td>
<td>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. Review to be from a technical and QA/QC perspective by original module authors and others as deemed appropriate.</td>
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<td><strong>2. Action Item 2: (PTI DC20.2-88, Restraint Cracks and their Mitigation)</strong></td>
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<td>2.1. Review progress</td>
<td>2.1 Updates from each task group:</td>
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<td>2.2 PTI goal is to finish and start ballot no later than 11/1/18</td>
<td>1. Causes of Cracking – Martin C., Eric; mostly complete however still in need of photos/diagrams/figures like ACI 224.4. Tim to execute release form required by ACI after we determine which figures are desired.</td>
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<td>2. Connection Details – Kyle, Mark Y., Asit; Lots of good discussion about RTS details provided for review. Proposed details to be appropriately annotated per committee comments</td>
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<td>3. Concrete Drying Shrinkage Mitigation Strategies – Martin M.</td>
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<td>4. Equations, ¼” value and examples – Asit, Rashid, Eric, Carol; in progress</td>
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<td>5. FEM Analysis – Mike H., Mark Y.; purpose of FEM analysis is to show a direct comparison between full restraint and partial restraint using FEM to predict location of stress concentrations that unfortunately did not correlate well with crack map of actual building. Carol and Tim to follow up with Mike and Mark to confirm intent and provide further direction.</td>
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<td>4.1 PTI Staff update</td>
<td>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. Staff task.</td>
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| 5.2 Plan for review process | 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) Chapter 5: Analysis and Design Fundamentals; Martin C, Jonathan Hamid and Siva; **TAB balloting complete**
2) Chapter 6: Detailing and Construction Procedures for Buildings; Zuming, Mark, Rashid;
3) Chapter 7: Design examples; Siva and Eric
4) Chapter 8: Seismic Design of PT Concrete Structures; Martin M, Bryan Allred, Kyle B;
5) Chapter 9: PT Concrete Floors; Hamid, Carine. **TAB balloting complete**
6) Chapter 10: PT Parking Structures; Otto, Martin C, Bryan, and Eric; **Ready for final review before TAB balloting**
7) Chapter 18: 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. **Ready for final review before TAB balloting**
8) Chapter 19: Durability (buildings and bridges); Martin M, Kyle B, Ralph L Ready for final review before TAB balloting
9) Chapter XX: Sustainability; Martin M, Srini;
10) Chapter XY: Anchorage Zone Design; Zuming, Siva;
11) Chapter XZ: BIM; Carine, Srini, Rob. **DC-20A needs to ballot**

| 6. Action Item 6: (Two-Way Banded) | 6.1 Review progress of testing
6.2 Review progress of Tech Note |
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<tr>
<td>6.1 Tim, Martin C. to provide update; Martin described highlights of presentation by Virginia Tech. Need to follow up on equivalent frame design and make sure that it correlates with the drawings already prepared for FEM. It seems there is a small discrepancy with rebar. Need to touch base with Carin Roberts to get results. Martin C., Tim and JR to follow up. T1 test to start end of November 2018.</td>
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<tr>
<td>6.2 Tech Note for Dual-Banded PT Slabs completed in August. Ballot period (8/27/18-9/26/18). Ballot extended to October 12, 2018, and ballot resolution will take place via a web meeting (date TBD)</td>
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<thead>
<tr>
<th>E. New Business</th>
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<tbody>
<tr>
<td>E.1 Tech Note for Shrinkage and Temperature Reinforcement</td>
<td>E.1 Tech Note for Shrinkage and Temperature Reinforcement for One-Way Slab and Beam Systems is complete, and it will go to DC-20 ballot after resolution of the Dual-Banded Tech Note</td>
</tr>
<tr>
<td>E.2 Structural Detailing for PT Buildings</td>
<td>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.</td>
</tr>
</tbody>
</table>
| E.3 Review of documents and identification of those in need of revision | E.3 List of documents for review:
PTI DC20.1-87 Strength and Behavior of Closely Spaced Post-Tensioned Mono-strand Anchorages |
<table>
<thead>
<tr>
<th>Agenda Item</th>
<th>Expected Outcome / Actions Taken</th>
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<tbody>
<tr>
<td>E.4 FAQ for practical vs. ACI 318 provisions for column punching shear</td>
<td>PTI DC20.2-88 Restraint Cracks and their Mitigation in Unbonded Post-Tensioned Building Structures (Revision in Progress)</td>
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<td>integrity reinforcement in PT slabs</td>
<td>PTI DC20.3-89 Structural Integrity of Building Constructed with Unbonded Tendons</td>
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<tr>
<td>E.5 Update from DC-20A Subcommittee (BIM)</td>
<td>PTI DC20.4-90 Earthquake Performance of Unbonded Post-Tensioned Buildings</td>
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<td>PTI DC20.5-90 Evaluation of the Condition of a Post-Tensioned Concrete Parking Structure After 15 Years of Service</td>
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<td>PTI DC20.6-99 Design Fundamentals of Post-Tensioned Concrete Floors</td>
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<td>PTI DC20.7-01 Design, Construction and Maintenance of Cast-in-Place Post-Tensioned Concrete Parking Structures (Priority starting in 2019)</td>
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<td>PTI DC20.8-04 Design of Post-Tensioned Slabs Using Unbonded Tendons</td>
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<td>PTI DC20.9-11 Guide for Design of Post-Tensioned Buildings</td>
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</table>

Create spreadsheet or Gantt chart to show schedule slated for review/updating activity for various documents.

E.4 Discuss need for FAQ document to address this issue

E.5 Frank provided an update on DC-20A Subcommittee activities. 2 major topics, finishing BIM chapter in PTI Manual; primary focus for next two years is IFC exchange model. Work in conjunction with ACI 131. Need participation from PT suppliers to cover plant certification, delivery, materials, etc.

**F. Next Meeting**

2019 PTI Convention
Hyatt Regency Seattle
May 5-8, 2019

Web Meetings:

Web meeting will be held to resolve Dual Banded PT Slabs Tech Note ballot, date TBD.

**G. Adjourn**

Meeting adjourned at 5:20 pm.

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**AGENDA / MEETING EXHIBITS**

<table>
<thead>
<tr>
<th>Exhibit #</th>
<th>Subject</th>
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<tr>
<td>Roster / A.4</td>
<td>Sign-In Sheet / PTI Anti-Trust Policy</td>
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</table>
Committee Attendance Sheet

**Committee:** DC-20  
**Date:** 09/27/18

**Meeting Location:** HERITAGE F, THE ANTLERS BY WYNDHAM  
COLORADO SPRINGS, CO

---

*I have read, understand, and agree to comply with PTI Anti-Trust Policy (attached).

**Note to Committee members and visitors:** All Committee meetings of the Post-Tensioning Institute should be conducted in a manner encouraging free and open discussion and debate of agenda items and matter properly before that Committee. Committee members and visitors are cautioned that such discussion and debate is solely for the purposes of the Charter of the Committee and PTI business. To that end, Committee discussions and debates are not considered public in nature, and, as such are to be held in confidence and do not become the official policy of PTI until properly reported, balloted, and published pursuant to procedures established by or by the adoption by the PTI Board of Directors. Committee members and visitors shall not quote, publish, use, or make use of, any oral or written drafts, drawings, calculations, or other materials, which are uttered or transcribed during the course of such meetings.

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*Signature:*

Don Kline, Kline Eng.
At a meeting on October 8, 1980, the Board of Directors first discussed the Institute's status and policies regarding compliance with antitrust laws. After review of both the internal and external compliance procedures, the following resolution was approved:

"The staff, officers, directors and members of the Post-Tensioning Institute are reminded that they are required to comply with the spirit and specific requirements of the antitrust laws on all activities within the scope of, and related to, the official functions of PTI. Further, this restated position, along with appropriate explanatory material, should be placed in all meeting folders/books periodically, beginning with the 8th of October meeting of PTI."

On July 24, 2012 and again on October 7, 2015, the Executive Committee authorized Legal Counsel to review and update this Policy Statement in the perspective of the Department of Justice Business Review Letter of July 30, 1997 and current case law. As a continuing guide for your participation in PTI's meetings, please review and continue to adhere to the following "Legal Limitation on Discussions at PTI Meetings."

LEGAL LIMITATION ON DISCUSSIONS AT PTI MEETINGS AND EVENTS

A free exchange of ideas on matters of mutual interest to the members is necessary for the success of all meetings. Indeed, such an exchange of views is essential to the successful operation of every trade association and the law specifically allows legitimate exchange of views pertaining to, e.g., quality control, safety, building design and construction integrity, etc.

It is not the purpose of this memorandum to discourage the exploration in depth of any matters of legitimate concern to meeting participants. Nevertheless, to ignore certain antitrust ground rules, either through ignorance or otherwise, is to create a civil and criminal hazard businessmen simply cannot afford.

It is for these reasons that PTI provides you with a reminder that certain areas of formal and informal communication between competitors or between manufacturers and their suppliers and customers must be avoided, as posing potential antitrust problems.

The Sherman Antitrust Act, the Clayton Act, the Federal Trade Commission Act, and the Robinson-Patman Act comprise the basic federal antitrust laws, which set forth the broad areas of conduct considered illegal as restraints of trade. In general, agreements or understandings between competitors that operate as an impediment to free and open competition are forbidden. Federal antitrust prohibitions forbid any "agreement or understanding...to substantially lessen competition or tend to create a monopoly in any line of commerce." An important point to keep in mind is that communications and discussions between competitors or between sellers and customers, about matters which may be considered anti-competitive, often comprise the evidence from which courts infer antitrust violations. It is the policy of the Post-Tensioning Institute that such agreements, understandings or communications shall not be tolerated at any formal or informal meetings or social events of the Institute.

The general prohibitions contained in the federal antitrust laws, have been particularized in the form of a series of consent decrees, originally entered against a number of member companies of various trade associations and the associations themselves. It is important to note that these laws not only apply to PTI members, but also to PTI itself. Often trade associations have been and are presently co-defendants in cases brought by the Justice Department and the Federal Trade Commission ("FTC"). Recently, the FTC has stated: "Because trade associations are by their nature collaborations among competitors, the Commission and courts have long been concerned with anti-competitive restraints imposed by such organizations under the guise of codes of conduct. Competing for customers, cutting prices, and recruiting employees are hallmarks of vigorous competition. Agreements among competitors not to engage in these activities injure consumers by increasing prices and reducing quality and choice." Similar "codes" or policies and requirements that encourage directly or indirectly members' unlawful activity are strictly forbidden by PTI in the course of its business with its members.
SPECIFIC EXAMPLES OF ACTIVITIES AND PRACTICES PROHIBITED
AT ALL PTI MEETINGS AND EVENTS:

Included in activities and practices which are forbidden, and are contrary to the policy of the Institute, both under the general antitrust laws and the consent decrees, subject to the said Business Review Letter, are the following:

- Agreeing to allocate markets, customers or suppliers among competitors, classify certain customers or suppliers being entitled to preferential treatment by manufacturers, and establish geographic trading areas.

- Participating in any plan designed to induce any manufacturer or distributor to sell or refrain from selling, or discriminate in favor of, or against any particular customer or class of customers.

- Agreeing in any manner to fix or otherwise establish bids, prices (including price increases, decreases, standardization or stabilization), profits, costs, contract terms affecting price (such as discounts and credit terms), etc. because, e.g. prices were too low, with the exception of certain resale pricing agreements between manufacturers and retailers or distributors.

- Agreeing in any manner to limit or restrict the quality of products to be produced (e.g., restrictions on selling coated strand to certain customers).

- Participating in any plan which has the effect of discriminating against, or excluding competitors, suppliers or customers.

These examples are provided to guide you in your discussions during formal and informal PTI meetings and social events. If the occasion arises, more specific advice will be provided by legal counsel, who is required by Article IV, Section 7 of the PTI By-Laws to be present at all meetings of the Board of Directors and the Executive Committee.