

318 Sub D – Flexure and Axial Loads

ACI Spring Convention
Hyatt Regency Century Plaza
Los Angeles, CA

Wednesday, April 2, 2008

8:30 AM – 1:00 PM

Directors 2

Minutes

1. Call to order and welcome

Chair Frosch called the meeting to order, welcoming both members and guests.

2. Introductions

The committee Chair requested that each member and guest introduce themselves.

Members in attendance:

Frosch (chair), Bommer, Browning, Garcia, Ghosh, Klemencic, Mlakar, Parra-Montesinos, Pincheira, Saiidi, Santana, Taylor, Salmon (consulting)

3. Code reorganization

A discussion regarding the code reorganization effort was held. In general, the comments regarding the reorganization effort were positive. Concern was discussed regarding the detail of Chapter 8 (toolbox) in the reorganized code. It was felt that this material will be needed first to make sure that the provisions in the member chapters are referring to the proper material. Luis indicated that the simplified design publication IPS-1 also includes a toolbox. Luis will provide the chair with an electronic copy of this document for distribution to the subcommittee.

4. Sub D responsibilities

Chair Frosch discussed the sections of the code that will be under the purview of the subcommittee for the upcoming 2011 and 2014 codes. For the 2011 code, the responsibilities will remain as outlined for previous code cycles. For the 2014 code, an outline of the proposed responsibilities under the reorganized format was discussed. Based on discussions with SubC, it has been agreed that all new materials related to analysis will be developed and balloted within SubC. SubD would handle any minor changes needed for analysis procedures for the 2011 code and coordinate with SubC.

5. Items to consider

a. Items from previous code cycle promised as new business

Each of the items that were listed as new business from both the response to TAC and Public Comments for the 2008 code was considered by the subcommittee. Several items were considered but not deemed necessary to be carried forward as new business while several items will be taken up by the subcommittee. Listed below is the response to each item from both the public and TAC comments.

Public Comments

No.	Commenter	Response
183	Munshi, Javeed	Positive and negative moments are commonly used. It was not felt that this item should be carried forward as new business.
193	Furlong, Richard	The addition of commentary will be considered for the 2011 code. The reorganization (2014 code) should allow improved flow to highlight biaxial considerations. Lead: Andy Taylor
222	Diaz, Manuel	It was not felt that this item should be carried forward as new business. Without specific examples, the subcommittee did not feel that there is a problem.
223	Lai, James	This comment is referred to Sub E. Action: Send to SubE
226	Lai, James	This item will be considered as new business. Lead: Ron Klemencic
227	Munshi, Javeed	This item is related to #226 and will be considered as new business.

TAC Comments

No.	Response
66	The Committee 372 report will be reviewed and the subcommittee will consider adding this reference. Lead: JoAnn Browning
89	This item will be considered as new business and is related to public comments 226 and 227.
90	This item will not be directly considered as new business. However, as part of the code reorganization effort, the consistency of terminology use throughout the code will be considered.
98	The comment by French and Kelly were considered. Based on discussion of the comments, it was felt that the current code provisions are correct and a change is not needed. However, as part of the code reorganization, the use of the suggested terminology $P\Delta$ will be considered.
117	The code reorganization effort will consider the consistency of terminology use throughout the code.
134	The suggested title will be considered along with other changes to Ch.14 for the 2014 code. Lead: Luis Garcia

b. Definition of balanced strain conditions (10.3.2)

The current definition of balanced strain conditions is not specific regarding the location of steel that should be considered if multiple layers of tension reinforcement exist. Discussion ensued regarding options to clarify. It was suggested that 10.3.2 could be integrated with 10.3.3. However, if 10.3.2 is removed, there is an impact to Appendix B. This impact can be resolved by two methods. The first is to move 10.3.2 to Appendix B while the second is to remove Appendix B. **Lead: Allan Bommer**

Further discussion ensued regarding the merits of maintaining or removing Appendix B. It was felt that there would be significant benefits of removal of the Appendix for the 2011 edition of the code. A major benefit is that it would make transition to the reorganized code more straightforward. **Lead: Andy Taylor**

c. *Strain limits for flexural members*

The merits of changing the strain limit for flexural reinforcement (10.3.5) were discussed. The consensus of the committee was to maintain a limit for flexural reinforcement, but to simplify the section for designers by requiring that these members be designed as tension controlled. **Lead: Guillermo Santana**

d. *Puddling of concrete in slabs at walls*

The current code provides no guidance on the issue of puddling of slabs at the intersection with walls. Research has been conducted by Scott Alexander and Carlos Ospina on puddling at the intersection of slab/columns which may be helpful. It was the understanding of the chair that the Alexander-Ospina study indicates there may be problems with the existing provisions for slab/column puddling. This research merits study in formulating new requirements. **Lead: Ron Klemencic**

e. *Shrinkage and temperature reinforcement in large footings*

As discussed in reviewing the items considered as new business from the previous code cycle, these reinforcement requirements will be reviewed. There is considerable interpretation of these requirements not only by designers using ACI 318, but ACI 350 provides even a different interpretation. **Lead: Ron Klemencic**

f. *Others*

Other items of new business were discussed:

Walls: Luis indicated that the walls chapter should be strengthened. It has been the same since 1971 and primarily addresses out of plane effects. The chapter should be turned around with in-plane effects addressed first. In addition, there should be interaction with Chapter 21 (seismic). A goal will be to provide the new requirements for the 2011 code. **Lead: Luis Garcia**

Minimum Reinforcement Requirements: Alan indicated that the minimum reinforcement requirements should be reviewed. While the current requirements are based on d, this can be problematic. One possibility is to use a multiple of the cracking moment. **Lead: Alan Bommer**

Composite Columns: A discussion was held regarding the jurisdiction of composite columns. Section 10.16 covers composite columns, but there has been correspondence from a committee of AISC regarding the removal of this section from the ACI code. Gustavo indicated that there may be merits to expanding some of the material in 10.16. **Lead: Gustavo Parra**

6. New business

It was requested by the subcommittee members to receive a word version of 318-08 to assist in preparing code changes.

7. Adjourn

The meeting was adjourned at noon.