Meeting Minutes: Ad-Hoc Code Review & Rulemaking Committee

Date: March 11, 2019
Time: 9:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road No., St. Paul, MN 55117-4344

Committee Members Present
Richard Becker
Mike Herman
Rick Jacobs (chair)
Cathy Tran

Committee Members Absent
John Flagg

DLI Staff & Visitors
Suzanne Todnem, General Counsel (DLI)
Brad Jensen (DLI)
Jim Peterson (Public)
Mike Johnson (J-Berd)
David Radziej (Metro PHCC)
Todd Stelmachor (Visu Sewer)
Ken Breske (MC Tool & Safety Sales)
Rex Ollenburg (ADS)
Aaron Ganson (ADS)
Stephanie Menning (MN Utility Contractors)
Judd Stattine(MN Utility Contractors)
Gary Thaden (MMCA)
Trevor Ogilvie (City of Minneapolis)
Ken Loucks (IW Consulting) - via teleconference
Matt Marciniak (IAPMO)
Alex Bartley (MDH) - via teleconference
Scott Thompson, Ruth Thompson (My Plumbing Training) – via teleconference

1. Call to Order

The meeting was called to order by Chair Jacobs at 9:16 a.m. Introductions and housekeeping announcements were made. Attendance was taken; a quorum was met with 4 of 5 members present.

2. Approval of meeting agenda

A motion was made by Herman seconded by Becker, to approve the Agenda as presented. The vote was unanimous with 4 votes in favor; the motion carried.

3. Approval of previous meeting minutes

Tran suggested minor grammar edits on 2nd page under Special Business, Chapter 6. Change "becase" to "because" and all words spelling from "preventor" to "preventer". A motion was made by Becker, seconded by Tran, to approve the previous draft minutes as amended. The vote was 4 votes in favor; the motion carried.

4. Regular Business

Approval of Expense Reports – Chair will approve expenses presented at the meeting.

5. Special Business

Reviewed RFAs submitted regarding chapters 7, 8, 9, and 10 of the 2018 Uniform Plumbing Code (UPC):

Chapter 7:

A. **RFA PB0107** Proposal: Add polypropylene pipe per ASTM F2736 and ASTM F2764 to Tables 701.1 and 1401.1.

Mr. Aaron Ganson of Advanced Drainage Systems, Inc. presented PB0107 to the committee. Mr. Ganson requested to add polypropylene pipe per ASTM F2736 and ASTM F2764 to Table 701.1 for building sewer and on referenced standard, Table 1401.1 as Minnesota amendments. Mr. Ganson stated that this would allow larger diameter pipe sizes for building sewers and has a history of performance and nothing new.

Committee discussed proposed language from RFA. Some questions were raised about directional fittings, joint fittings, and testing. Mr. Ganson clarified directional fitting is not available, this new material would need a transitional fitting such as a Fernco connection from the building drain to this sewer pipe and for use for manhole-to-manhole connections. Referenced standard and manufacturer installation recommendation is in accordance with ASTM D2321. The material would still be subject to testing requirements. Mr. Ganson noted that there is no problem holding air test at 5 psi for 15 minutes, consistent with PVC pipe requirements. Mr. Ganson also noted that a proposed change has been submitted at the national level for the 2021 UPC.

Recommendation RFA PB0107(Table 701.1): *Committee recommended adding the ASTM standards, and joints and connections section as proposed and make the necessary renumbering with the UPC 2018. Table 701.1 has been renumbered Table 701.2 in the 2018 UPC and Table 1401.1 has been renumbered 1701.1, which will be reflected in the recommendation to the Board. The submitted proposal shows the tables with 2012 UPC numbering:*

TABLE 701.1
MATERIALS FOR DRAIN, WASTE, VENT PIPE AND FITTINGS

MATERIAL	UNDERGROUND DRAIN, WASTE, VENT PIPE AND FITTINGS	ABOVEGROUND DRAIN, WASTE, VENT PIPE AND FITTINGS	BUILDING SEWER PIPE AND FITTINGS	REFERENCED STANDARD(S) PIPE	REFERENCED STANDARD(S) FITTINGS
Polypropylene (PP)	--	--	X	ASTM F2736, ASTM F2764	ASTM F2736, ASTM F2764

TABLE 1401.1
REFERENCED STANDARDS

STANDARD NUMBER	STANDARD TITLE	APPLICATION	REFERENED SECTIONS
ASTM F 2736-13e1	6 to 30 in. (152 To 762 mm) Polypropylene (PP) Corrugated Single Wall Pipe and Double Wall Pipe	Piping, Plastic	Table 701.1
ASTM F2764/F2764M-11ae2	30 to 60 in. (750 to 1500 mm) Polypropylene (PP) Triple Wall Pipe and Fittings for Non-pressure Sanitary Sewer Applications	Piping, Plastic	Table 701.1

4714.0705 JOINTS AND CONNECTIONS.

UPC subsection 705.XX added and amended as follows:

705.XX Polypropylene Pipe and Joints. Joining methods for polypropylene pipe and fittings shall be installed in accordance with the manufacturer's installation instructions and shall comply with Section 705.XX.1 through 705.XX.2.

705.XX.1 Mechanical Joints. Mechanical joints shall be designed to provide a permanent seal and shall be of the mechanical or push-on joint type. The push-on joint shall include an elastomeric gasket in accordance with ASTM D3212 and shall provide a compressive force against the spigot and socket after assembly to provide a permanent seal.

B. **RFA PB0121** DLI with multiple proposals.

B(1). **RFA PB0121, Section 715.3.** Proposal: amend rule part 4714.0715 regarding section 715.3 to reflect the language of UPC 2018.

Proposed language: "**715.3 Existing Sewers.** Replacement of existing building sewer and building storm sewers using cured-in-place pipe lining trenchless methodology and materials shall be installed in accordance with ASTM F 1216. ~~Replacement using cured-in-place pipe liners shall not be used on collapsed piping or when the existing piping is compromised to a point where the installation of the liners will not eliminate hazardous or insanitary conditions.~~ Cast-iron soil pipes and fittings shall not be repaired or replaced by using this method aboveground or belowground. Replacement using cured-in-place pipe liners shall not be used on collapsed piping or when the existing piping is compromised."

Tran presented the proposed change of Section of 715.3 to the committee. This proposed change would reflect the language of the UPC 2018. The proposed change would not allowed cast iron to be repaired and replaced by cure-in-place pipe method ("CIPP").

Members of the Minnesota Utility Contractors Association (MUCA) approached the Committee to express their concerns against the proposed change. Concerns raised from members of MUCA include:

1) Removing CIPP for cast iron pipe is self–serving the interest of the product manufacturer and not efficient,
2) There is not sufficient information from the standards to eliminate CIPP on cast iron piping,
3) Minnesota residents are no longer able to benefit from this method, and

4) ASTM F1216 CIPP method is made to repair deteriorated pipe and should be used for rehabilitation of pipes including cast iron pipes.
5) CIPP is not just a repair but a replacement of a pipe.
6) National standards do not have specific written language restricting the use CIPP.

MUCA also pointed out that California has amended their code to allow CIPP on cast iron piping in their state.

The proposed language is an effort to align language with the national code. Based on the review of the national process resulting in the 2018 UPC, Cast Iron Soil Pipe Institute does not support CIPP for the repair or replacement of partially/fully deteriorated cast iron pipe. CIPP for cast iron pipes conflicts with the manufacturer's instructions and product standards. ASTM Standard F1216, has provisions for investigation of pipes that are collapsed and crushed, or reduction of pipes more than 40 percent that should not be repaired by CIPP. MUCA can approach IAPMO to propose a change in the national code to reflect their request or seek additional information from CISPI to validate their position on CIPP.

Jim Peterson commented that when the state first looked at CIPP, a CISPI representative raised concerns with him relating to reduction in pipe size and restriction to flow. In addition, there were failures in the Duluth area on CIPP that was brought up to him about 15 years ago when he was at DLI which he believed involved CIPP in cast iron piping. It was never determined what the specific failures were but the issue came to DLI at the time. Peterson stated he does not believe that CISPI would benefit from eliminating CIPP for cast iron, as 99 percent of sewer replacements are replaced with plastic piping rather than cast iron.

A lengthy discussion on the term "compromised" as used in the code as being subjective.

Becker suggested the committee request additional information from CISPI to gain a better understanding of their position to not allow their product to be lined with CIPP and present to the full board for consideration. Information from the UPC national committee discussions and MUCA's position and provided information should be obtained to share with the full Board. .

Committee consensus that the full board should have a full discussion and make a decision on this proposed change.

Recommendation of RFA PB0121, Section 715.3: *The Committee agreed to make no recommendation to the Plumbing Board either way. This is an item that the full Board needs to consider as the proposed change is consistent with the 2018 UPC and UPC Committees have had the same discussions already. This would allow time to collect information from the national level for more consideration.*

B(2). **RFA PB0121, Section 701.1 Drainage Piping**. Proposal: minor corrections and renumbering to coordinate with numbering changes in the 2018 UPC.

Recommendation Section 701.1. *No concerns from members as this is cleanup of language necessary for renumbering and should be recommended to full Board for consideration.*

B(3). **RFA PB0121, Section 705.10.2. Expansion Joints.** Proposal: delete Minnesota rule amendment and use the 2018 UPC language.

Comments from committee members and the public relating to concerns of expansion and contraction issues in plastic pipe (solid/foam core), and should be considered in Minnesota due to extreme weather

conditions. Discussion relating to when access panels should be provided for servicing for mechanical expansion joints and when not provided. Futher discussion on expansion joints and that there should be prescriptive method to conservatively provide a 2-foot offset expansion method and a provision for a certified engineer to sign off but not every project has a certified engineer. This proposal on Section - 705.10.2 is on access to expansion joints. Provisions for expansion for plastic pipe are addressed in a different proposal by DLI under Table 313.1 Hangers and Supports, for 2-foot pipe offset expansion method, which has been tabled.

The definition of "expansion joint" in the code includes pipe and fittings that would include pipe offset methods as well as mechanical joints. If not amended, pipe offsets must also be accessible.

Recommendation of Section 705.10.2: *The Committee agreed to recommend to the Plumbing Board as proposed.*

B(4). **RFA PB0121, Section 707.4.1 Back-to-Back.** Proposal: to eliminate the cleanout requirement for back-to-back (or common) vertical fixture drains installed at same level by deleting Section 707.4.1 in its entirety. Subsection 707.4.1 is unique to Minnesota. The use of double fixture fittings allows the drain cleaning equipment to directly access the vertical drain through the double fixture fittings rather then previous sanitary tee used for back-to-back vertical fixture drain installation. The use of the double fixture fittings allows for sufficient access for drain cleaning thus eliminating the need for a cleanout.

The committee also considered **RFA PB0108 (**by Mike Johnson) and **RFA PB0109** (by Scott Thompson) at the same time since both requests were consistent with this request, which were to delete **Section 707.4.1.** in its entirety.

Recommendation of Section 707.4.1: *The Committee agreed to recommend to the Plumbing Board as proposed.*

B(5). **RFA PB0121, Section 707.4. Exceptions (#3).** proposal: to delete exception #3 of Section 707.4. DLI stated that deleting this exception would require cleanouts on the upper floors of a building as there are not enough cleanouts provided on the upper floors of a building to sufficiently cleanout those drains. The code does not allow the removal of a fixture or using a fixture trap as a cleanout.

Committee discussed cleanouts and preference to be in line with UPC for uniformity, and may cause more confusion by deleting the exception. There is nothing in code to limit the owners to add more than minimum requirement of cleanouts. Concerns regarding greasy and other commercial kitchen waste from the use of commercial kitchen sinks on upper floors and other types of similar fixtures were discussed. The drains serving these fixtures are problematic and access through a cleanout for cleaning and unclogging is necessary. There is a need to cleanout the drains serving those sinks on upper floors because otherwise the traps on the commercial sinks need to be cut to cleanout the drain when clogged. The question is what would be considered a "commercial kitchen sink" and then provide clear language for enforcement. That is, the code needs to define "commercial kitchen sink." DLI added that we should target the significant problem sinks which are typically the three-compartment sinks, food preparation sinks, mop sinks, and laundry sinks. Proper location of cleanouts for commercial kitchen sinks should be addressed to prevent cross-contamination of these fixtures, and access to cleanouts due to the size of the compartments.

Recommendation of Section 707.4 Exception #3: *The consensus of the Committee (Becker, Herman, & Jacob) was to deny this proposed amendment as is. Members agreed to have DLI revise the RFA and resubmit new language for further reconsider and address cleanout requirements for urinals and commercial kitchen sinks.*

B(6). **RFA PB0121, 710.10. Sump and Receiving Tank and Vents.** proposal: to add an exception to Section 710.10 for vents serving elevator sumps and pool sumps to not terminate through the roof.

Recommendation of Section 710.10: *The Committee agreed to recommend to the Plumbing Board as proposed.*

B(7). **RFA PB0121, Table 717.1. Maximum/Minimum Fixture Unit Loading on Building Sewer Piping.** proposal: add language to provide an option for the Authority Having Jurisdiction to accept fixture loading less than the minimum fixture loading required by this table for building sewers while maintaining the minimum scouring pipe velocity of two feet per second. This situation often arises when there are building sites with anticipated future expansion where a larger sewer is proposed.

"* Loadings less than the listed mininums must be approved by the Authority Having Jurisdiction."

The proposed language is subjective and should be more clear and not subjective. The proposed language would result in inconsistencies among the different cities/AHJs. The proposed language provides an opportunity for complying with code, and being subject to AHJ's approval is in line with current code requirements governing design and installation of building sewers (Section 718.0).

Recommendation of Table 717.1. *The Committee agreed to recommend to the Plumbing Board as proposed.*

B(8). **RFA 0121, 719.6 Manholes.** proposal: add an additional option to join pipe to manholes and similar structures to provide a water tight connection. The proposed option is the prevalent method used in Minnesota for many projects to connect pipes to manholes and similar structures. It is more practical and realistic than the current option in code, and currently approved as an alternate method by DLI on many projects.

"719.6 Manholes. Approved manholes shall be permitted to be installed in lieu of cleanouts, where first approved by the Authority Having Jurisdiction. The maximum distance between manholes shall not exceed 300 feet (91 400 mm). Connections to manhole and similar structures must be provided as follow:

a.The inlet and outlet connections shall be made by the use of a flexible compression joint not less than 12 inches (305 mm) and not exceeding 3 feet (914 mm) from the manhole. No flexible compression joints shall be embedded in the manhole base ; or

b. Approved resilient rubber joints must be used to make watertight connections to manholes, catch basins, and other structures."

Recommendation of 719.6. *The Committee agreed to recommend to the Plumbing Board as proposed.*

C. **RFA 0119,** Jason Kruger, Minnesota Concrete Pipe Association. Submitter was not present at meeting. Proposal: Amend Table 701.1 of Chapter 7 to add ASTM C76 reinforced concrete pipes as follows:

RCP should be added to **Table 701.1 in Chapter 7.**

MATERIAL	UNDERGROUND DRAIN, WASTE, VENT PIPE AND FITTINGS	ABOVEGROUND DRAIN, WASTE, VENT PIPE AND FITTINGS	BUILDING SEWER PIPE AND FITTINGS	REFERENCED STANDARD(S) PIPE	REFERENCED STANDARD(S) FITTINGS
REINFORCED CONCRETE PIPE	--	--	X	ASTM C76	ASTM C443

The following need to be added to **Table 1401.1 REFERENCED STANDARDS**

STANDARD NUMBER	STANDARD TITLE	APPLICATION	REFERENCED SECTIONS
ASTM C76	REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE	PIPING, NON-METALLIC	Table 701.1

Recommendation on RFA PB0119: Recommend to accept the proposed request with added language in foot note to state "**For storm sewer application only" and with proper connections and reformatting/renumbering as necessary (both tables are renumbered in the 2018 UPC).

Chapter 8

RFA0090 (Michael Daleiden, M&D Plumbing & Heating), **Section 807.3.** Request to consider airgap fittings and associated problems with their use on domestic dishwashers. Submitter not present.

Committee noted that this Section 807.3 relates to the proposed amendment under Section 414.3. Concensus of members was to have language in line with previous recommnded language under Section 414.3:

"**807.3 Domestic Dishwashing Machine.** No domestic dishwashing machine shall be directly connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting on the discharge side of the dishwashing machine; or run the discharge line as high as possible under the countertop, securely fastened. Listed air gaps shall be installed with the flood-level (FL) marking at or above the flood level of the sink or drainboard, whichever is higher."

Chapter 9

A. **RFA PB0117** (Dennis Anderson). **Section 908.2. Horizontal Wet Venting for a Bathroom Group.** Proposal: delete section 908.2 in its entirety.

Committee discussed and recommended the code be in line with 2018 UPC for uniformity and this section should not be deleted. Members expressed that this is a new method that might not be familiar with many yet, but when designed and installed correctly, it is not a problem.

Recommendation on Section 908.2 *The committee declined to recommend the proposal as presented; the committee's recommendation is to maintain section 908.2.*

B. **RFA PB0122** (Richard Blaylock). Section 911.0 Circuit Venting (AKA Battery Venting). Proposal:adoption of circuit venting method under 2018 UPC.

Recommendation on Section 911.0 *The Committee agreed to recommend to the Plumbing Board as proposed, no action is necessary for this request since the 2018 UPC has an entire new section on circuit venting and therefore, would be adopted by default.*

Chapter 10

C. **RFA PB0111** Proposal: Add an exception to Section 1014.2.2 Vent.

"1014.2.2 **Vent.** A vent shall be installed downstream of hydromechanical grease interceptors in accordance with the requirements of this code.

Exception: When installed exterior to the building, hydromechanical grease interceptor venting requirements shall be in accordance with manufacturers installation instructions."

Ken Loucks, via telephone, from IW Consulting Services LLC presented RFA PB0111.

Mr. Loucks stated that there is some confusion out there when vents are required for exterior hydromechanical grease interceptors because not all manufacturers required vents on their exterior hydromechanical interceptors to properly function without vents.

Tran asked if Mr. Loucks had approached the national level for a model code change. Mr. Loucks stated that after Minnesota they would seek approval at the national level next. In addition, Tran asked Mr. Loucks if the standard requires a vent, and he stated for testing purposes in worse case scenario the standard has venting installed. Tran states the standard in which the hydromechanical interceptors are listed to has venting requirements and therefore, this request contradicts the standard the interceptor is listed to.

Discussions by members on when a vent is required and when not required for outside hydromechanical grease interceptor as there are many site conditions and many different designs. Members agreed the design and installation must function in the worst case scenario per established standard and code. This proposed exception should be requested and addressed at the national level for the change.

Recommendation of RFA PB0111 (Section 1014.2.2) The Committee declined to recommend the proposed amendment in RFA PB0111, the committee's recommendation is to leave the 2018 UPC language as is.

RFA PB0112, Mike Johnson, **1017.2 Design of Interceptors.** Proposal: Establish set sizing for garages used for storage with 10 or more vehicles; sizing should not be determined by the AHJ. Johnson stated that because interceptor sizing for garages with 10 or more vehicles is subject to the AHJ's decision on each project, thereare delays on many projects and often oversized.

Committee discussed the request regarding proper sizing of flammable waste interceptors for above 10 vehicles in storage garages. Often a 35 cubic foot size interceptor is acceptable by many jurisdictions for any vehicle storage over 10 vehicle garages but sometimes not depending how large the garage is. The existing code language is based on the desire for a performance-based code. The primary issue raised is sizing for garages that store more than 10 vehicles. Committee discussed possibility of 35 cubic feet being the maximum size for any size vehicle storage garage above 10 vehicles.

Committee agreed to table this discussion until the next meeting to gather more information and review specific proposed language to minimize unintended consequences before making a recommendation to the Board.

6. Adjournment

A motion to adjourn by Becker , seconded by Tran. The vote was unanimous with 4 votes; the motion carried.

Respectfully submitted,

Cathy Tran, PE