

Plumbing Board
 c/o Department of Labor and Industry
 443 Lafayette Road North
 St. Paul, MN 55155-4344
 www.dli.mn.gov

Plumbing Board Request for Action

PRINT IN INK or TYPE

NAME OF SUBMITTER Cathy Tran	PURPOSE OF REQUEST (check all that apply): <input type="checkbox"/> New Code <input checked="" type="checkbox"/> Code Amendment <input type="checkbox"/> Repeal of an existing Rule
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The Minnesota Plumbing Code (MN Rules, Chapter 4714) is available at <http://www.dli.mn.gov/CCLD/PlumbingCode.asp>.

Specify the purpose of the proposal: (If recommendation for code change for fixture, appurtenance, material, or method, check all that apply)

- Appurtenance (e.g., water conditioning equipment) Test Method
 Other (describe) _____

Does your submission contain a Trade Secret? Yes No

If Yes, mark “**TRADE SECRET**” prominently on each page of your submission that you believe contains trade secret information. Minnesota Statutes, section 13.37, subdivision 1(b), defines “trade secret” as follows:

“Trade secret information” means government data, including a formula, pattern, compilation, program, device, method, technique or process (1) that was supplied by the affected individual or organization, (2) that is the subject of efforts by the individual or organization that are reasonable under the circumstances to maintain its secrecy, and (3) that derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.

Note that, although “trade secret” information is generally not public, the Board and its committees may disclose “trade secret” information at a public meeting of the Board or committee if reasonably necessary for the Board or committee to conduct the business or agenda item before it (such as your request.) The record of the meeting will be public.

Describe the proposed change. The Minnesota Plumbing Code (Minnesota Rules Chapter 4714) is available via the World Wide Web at <http://www.revisor.leg.state.mn.us/arule/4714/>

NOTE:

- Please review the Minnesota Plumbing Code and include all parts of the Code that require revision to accomplish your purpose.
- The proposed change, including suggested rule language, should be *specific*. If modifying existing rule language, underline new words and ~~strike through deleted words~~. Please list all areas of the Minnesota Plumbing Code that would be affected.

See Attached proposed amendments for Chapter 7

Office Use Only			
RFA File No. PB0121	Date Received by DLI	Dated Received by Committee	Date Forwarded to Board
Title of RFA	By: _____		
Committee Recommendation to the Board: <input type="checkbox"/> Accept <input type="checkbox"/> Reject <input type="checkbox"/> Abstain			
Board approved as submitted: <input type="checkbox"/> Yes <input type="checkbox"/> No		Board approved as modified: <input type="checkbox"/> Yes <input type="checkbox"/> No	
This material can be made available in different forms, such as large print, Braille or audio. To request, call 1-800-342-5354.			

Need and Reasons For the Change. Thoroughly explain the need and why you believe it is reasonable to make this change. During a rulemaking process, the need and reasonableness of all proposed rule changes must be justified; therefore, a detailed explanation is necessary to ensure the Board thoroughly considers all aspects of the proposal.

See Below for specific reasons for each proposed change.

If your product/method standard(s) is not currently listed in both national codes, your Request For Action will not be considered by the Board or its committees, however, you are welcome to present at any Board meeting during the Open Forum section of the Agenda.

The proposal must be accompanied by copies of any published standards, the results of testing, and copies of any product listings, as documentation of the health, sanitation and safety performance of any materials, methods, fixtures, and/or appurtenances. If none are available, please explain:

Please attach electronic scanned copies of any literature, standards and product approvals or listings. Printed or copyrighted materials, ***along with written permission from the publisher to distribute the materials at meetings***, should be sent to the Plumbing Board, c/o Department of Labor and Industry, 443 Lafayette Road No., St. Paul, MN 55155-4344.

Primary reason for change: (check only one)

- | | |
|---|---|
| <input type="checkbox"/> Protect public, health, safety, welfare, or security | <input type="checkbox"/> Mandated by legislature |
| <input type="checkbox"/> Lower construction costs | <input checked="" type="checkbox"/> Provide uniform application |
| <input type="checkbox"/> Encourage new methods and materials | <input checked="" type="checkbox"/> Clarify provisions |
| <input type="checkbox"/> Change made at national level | <input checked="" type="checkbox"/> Situation unique to Minnesota |
| <input type="checkbox"/> Other (describe) _____ | |
-

Anticipated benefits: (check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Save lives/reduce injuries | <input type="checkbox"/> Provide more affordable construction |
| <input checked="" type="checkbox"/> Improve uniform application | <input type="checkbox"/> Provide building property |
| <input type="checkbox"/> Improve health of indoor environment | <input type="checkbox"/> Drinking water quality protection |
| <input type="checkbox"/> Provide more construction alternatives | <input checked="" type="checkbox"/> Decrease cost of enforcement |
| <input type="checkbox"/> Reduce regulation | <input type="checkbox"/> Other (describe) _____ |
-

Economic impact: (explain all answers marked "yes")

1. Does the proposed change increase or decrease the cost of enforcement? Yes No If yes, explain

2. Does the proposed change increase or decrease the cost of compliance? Yes No If yes, explain
Include the estimated cost increase or decrease, and who will bear the cost increase or experience the cost decrease:

3. Are there less costly or intrusive methods to achieve the proposed change? Yes No If yes, explain

4. Were alternative methods considered? Yes No If no, why not? If yes, explain what alternative methods were considered and why they were rejected.

5. If there is a fiscal impact, try to explain any benefit that will offset the cost of the change. If there is no impact, mark "N/A."

6. Provide a description of the classes of persons affected by a proposed change, who will bear the cost, and who will benefit.

7. Does the proposed rule affect farming operations? (Agricultural buildings are exempt from the Minnesota Building Code under Minnesota Statutes, Section 326B.121.) Yes No If yes, explain

Are there any existing Federal Standards? Yes No If yes, list:

Are there any differences between the proposed change and existing federal regulations?

Yes No Not applicable Unknown

If yes, describe each difference & explain why each difference is needed & reasonable.

Minnesota Statutes, section 14.127, requires the Board to determine if the cost of complying with proposed rule changes in the first year after the changes take effect will exceed \$25,000 for any small business or small city. A small business is defined as a business (either for profit or nonprofit) with less than 50 full-time employees and a small city is defined as a city with less than ten full-time employees.

During the first year after the proposed changes go into effect, will it cost more than \$25,000 for any small business or small city of comply with the change? Yes No If yes, identify by name the small business(es or small city(ies).

Will this proposed plumbing code amendment require any local government to adopt or amend an ordinance or other regulation in order to comply with the proposed plumbing code amendment? Yes No, If yes, identify by name the government(s) and ordinances(s) that will need to be amended in order to comply with the proposed plumbing code amendment.

Additional supporting documentation may also be attached to this form. Are there any additional comments you feel the Committee/Board may need to consider? If so, please state them here:

Information regarding submitting this form:

- Submissions are received and heard by the Committee on an “as received” basis. **Any missing documentation will delay the process, and your proposal will be listed as the date it was received “Complete.”**
- **Submit any supporting documentation to be considered**, such as manufacturer’s literature, approvals by other states, and engineering data electronically to DLI.CCLDBOARDS@state.mn.us. Once your Request For Action form has been received, it will be assigned a file number. Please reference this file number on any correspondence and supplemental submissions.
- **For copyrighted materials that must be purchased from publishers, such as published standards, product approvals or testing data, listings by agencies (IAPMO, ASSE, ASTM, etc..) you may send just 2 copies, along with written permission from the publisher to distribute the materials at meetings, via U.S. Mail to: Plumbing Board, c/o Department of Labor and Industry, 443 Lafayette Road No., St. Paul, MN 55155-4344.**
- **For materials that must be submitted by U.S. Mail, please include a copy of your “Request For Action” form originally submitted and reference your assigned RFA file number.**

Information for presentation to the Committee and/or Board:

- Limit presentations to 5 minutes or less.
- Be prepared to answer questions regarding the proposal and any documentation.

Information regarding Committee and/or Board function:

- The Plumbing Board or designated committee.

I understand that any committee action is a recommendation to the Plumbing Board and is not to be considered final action.

SUBMITTED BY NAME Cathy Tran	FIRM NAME DLI	SUBMITTER'S E-MAIL ADDRESS Cathy.tran@state.mn.us
NAME, PHONE NUMBER & E-MAIL ADDRESS OF PRESENTER TO THE COMMITTEE (if different):		

ADDRESS	CITY	STATE	ZIP CODE
PHONE 651 284 5898	SIGNATURE (original or electronic)	DATE 2/19/19	

For Assistance or questions on completing this form, contact Cathy Tran, Department of Labor and Industry at 651-284-5898.

For Office/Committee Use Only Proposal received completed? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Date Proposer notified of gaps:	Mode of notification (e.g., e-mail)	Date returned to Proposer:	Date materials re-received:

Code Section	DLI Chapter 7 Proposed Change	Justification
4714.0701	<p>701.12 Drainage Piping. Materials for drainage piping shall be in accordance with one of the referenced standards in Table 701.1 except that:</p> <p>(1) Galvanized wrought-iron and galvanized steel pipe shall not be used underground and shall be kept not less than 6 inches (152 mm) aboveground.</p> <p>(2) ABS and PVC DWV piping installations shall be installed in accordance with applicable standards referenced in Table 1401.1 <u>1701.1</u>.</p> <p>(3) No vitrified clay pipe or fittings shall be used aboveground or where pressurized by a pump or ejector. They shall be kept not less than 12 inches (305 mm) belowground.</p> <p>(4) Copper tube for drainage and pipe venting shall have a weight of not less than that of copper drainage tube type DWV.</p> <p>(5) Stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground.</p> <p>(6) Cast-iron soil pipe and fittings shall be listed and tested in accordance with standards referenced in Table 1401.1. Such pipe and fittings shall be marked with country of origin and identification of the original manufacturer in addition to markings required by referenced standards.</p> <p>UPC Table 701.1 is not amended.</p>	<p>Restructuring within the UPC requires renumbering Section 701.1 to 701.2, and Table 1404.1 to Table 1701.1. Additional pipe materials are proposed for Table 701.1, requiring the last sentence to be deleted.</p>
4714.0705	<p>705.10.2 Expansion Joints. Expansion joints shall be accessible and shall be permitted to be used where necessary to provide for expansion and contraction of the pipes.</p> <p>(delete 4714.0705.10.2 in its entirety)</p>	<p>The existing Minnesota amendment duplicates Section 705.9.2 of the 2018 UPC, making the amendment unnecessary.</p>
4714.0707	<p>707.4.1 Back-to-Back. A cleanout shall be provided on a common vertical fixture drain or common vent serving two fixture traps that connect to a vertical drain at the same level. The cleanout shall be the same nominal pipe size as the drain serving the fixtures. Where the vertical drain is accessible through the trap opening, the cleanout may be eliminated.</p> <p>(delete 4714.0707.4.1 in its entirety)</p>	<p>The use of double fixture fittings appears to allow the drain cleaning equipment to be better directed into the drainage system, allowing for the elimination of the cleanout requirement where drains enter a vertical pipe at the same level.</p>
4714.0707 (new)	<p>Exceptions:</p> <p>(3) Excepting the building drain and its horizontal branches, a cleanout shall not be required on a pipe or piping that is above the floor level of the lowest floor of the building.</p> <p>(delete exception no. 3 in its entirety)</p>	<p>Exception 3 is deleted from Section 707.4 to require cleanouts on the upper floors of a building, similar to the lowest floor. This would permit the drainage system on upper floors to be cleaned without cutting into the drainage system.</p>
4714.0710 (new)	<p>710.10 Sump and Receiving Tank Covers and Vents. Sumps and receiving tanks shall be provided with substantial covers having a bolt-and-gasket-type manhole or equivalent opening to permit access for inspection, repairs, and cleaning. The top shall be provided with a vent pipe that shall extend separately through the roof or, where permitted, be combined with other vent pipes. Such vent shall be large enough to maintain atmospheric pressure within the sump under normal operating conditions and, in no case, shall be less in size than that required by Table 703.2 for the number and type of fixtures discharging to the sump, nor less than 1½ inches (40 mm) in diameter. Where</p>	<p>Section 710.10 makes no exception for the vents serving elevator sumps or pool deck drain sumps to terminate within the building, and does not prohibit these vents from connecting to the sanitary vent system. These types of sumps are required to discharge indirectly to the drainage system, and the fixtures discharging to the sumps are not trapped. Should the sump vents connect to the sanitary vent system, sewer gas would have an open pathway to enter the building. This proposed change adds an exception and clarifies that it's not necessary for vents on top of pool sump and elevator sump to</p>

Code Section	DLI Chapter 7 Proposed Change	Justification																							
	<p>the preceding requirements are met and the vent, after leaving the sump, is combined with vents from fixtures discharging to the sump, the size of the combined vent need not exceed that required for the total number of fixtures discharging into the sump. No vent from an air-operating sewage ejector shall combine with other vents. Exception: Vents serving sumps connected to elevator pit drains or swimming pool deck drains need not extend through the roof and must not connect to any other vent pipe.</p>	<p>vent through the roof and must not connect to other vent pipe.</p>																							
<p>4714.0715</p>	<p>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.</p>	<p>In accordance with the Cast Iron Soil Pipe Institute, ASTM and CISPI standards for cast iron soil pipe and fittings prohibit the repair of cast iron soil pipes and fittings by any means which is reflected in the 2018 UPC. Since ASTM F1216 allows for the repair of partially deteriorated piping and conflicts with the manufacturer’s instructions and product standards per the Cast Iron Soil Pipe Institute. This proposed change is to reflect the 2018 UPC language that cast iron pipe and fittings shall not be repaired and replaced by ASTM 1216, and maintain consistency with the current 2018 UPC and manufacturer’s instructions and product standards.</p>																							
<p>4714.0717 Table 717.1 (new)</p>	<p>TABLE 717.1 Maximum/Minimum Fixture Unit Loading on Building Sewer Piping</p> <table border="1" data-bbox="337 1024 922 1281"> <thead> <tr> <th rowspan="2">Size of Pipe (inches)</th> <th colspan="3">SLOPE (inches per foot)</th> </tr> <tr> <th>1/16</th> <th>1/8</th> <th>1/4</th> </tr> </thead> <tbody> <tr> <td>6 and smaller</td> <td colspan="3">(As specified in Table 703.2/No minimum loading)</td> </tr> <tr> <td>8</td> <td>1950/1500</td> <td>2800/625</td> <td>3900/275</td> </tr> <tr> <td>10</td> <td>3400/1600</td> <td>4900/675</td> <td>6800/300</td> </tr> <tr> <td>12</td> <td>5600/1700</td> <td>8000/725</td> <td>11 200/325</td> </tr> </tbody> </table> <p>* Loadings less than the listed minimums must be approved by the Authority Having Jurisdiction. For SI units: 1 inch = 25 mm, 1 inch per foot = 83.3 mm/m</p>	Size of Pipe (inches)	SLOPE (inches per foot)			1/16	1/8	1/4	6 and smaller	(As specified in Table 703.2/No minimum loading)			8	1950/1500	2800/625	3900/275	10	3400/1600	4900/675	6800/300	12	5600/1700	8000/725	11 200/325	<p>The minimum drainage fixture unit loadings are difficult to meet at lower slopes as most buildings do not contain enough fixtures to provide these minimum loadings. A 6-inch sewer is often not large enough for a given building, and an 8-inch sewer often will not meet the required minimum loading at the slope a building site permits. This requires either the sewer to be an alternative engineered design under Section 301.5, or a lift station to be installed when gravity drainage is feasible. The previous MN plumbing code, Chapter 4715, did not prescribe minimum drainage fixture unit loadings. The required minimum loading in Table 717.1 for 8-inch pipe is greater than the maximum permissible loading under the previous code. It can be demonstrated mathematically using Manning’s Equation with a coefficient of n=0.015 that pipe velocity greater than two feet per second will be achieved at the slopes listed in the table. Two feet per second is a recognized minimum velocity that provides scouring of the waste pipe. By adding the proposed language, building sites with anticipated future expansion can be accommodated, and pumping equipment and associated costs may be eliminated.</p>
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<p>4714.0719 (new)</p>	<p>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). <u>Connections to manhole and similar structures must be provided as follow:</u> 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</p>	<p>Resilient rubber joints at manhole connections are needed and necessary to provide a water tight connections to structures such as manholes, catch basins, and similar structures. These types of joints appear to be the prevalent method used in Minnesota to join pipes to manholes and concrete manufacturers. The inclusion of these joints as approved manhole connections provides an additional option to the designer or owner, reduces cost, and reduces administrative processing of</p>																							

Code Section	DLI Chapter 7 Proposed Change	Justification
	b. <u>Approved resilient rubber joints must be used to make watertight connections to manholes, catch basins, and other structures.</u>	alternate installation method requests, therefore increase uniform statewide administration.