

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

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Date: 6/17/21

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Model Code:

2018 IBC; 2018 IRC; 2018 IEBC

Telephone number: 651-284-5884

Code or Rule Section: Varies

Firm/Association affiliation, if any: DLI/CCLD

Code or rule section to be changed: MR 1335

Intended for Technical Advisory Group ("TAG"): Flood Resistant Design and Construction

General Information

Yes **No**

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:

change language contained the model code book? If so, list section(s).

change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

delete language contained in the model code book? If so, list section(s).

delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

add new language that is not found in the model code book or in Minnesota Rule.

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.
No.

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and words proposed to be deleted. Include the entire code (sub) section or rule subpart that contains your proposed changes.

From the IBC:

1612.1 General. Within flood hazard areas as established in Section 1612.3, all new construction of buildings, structures, and portions of buildings and structures, including substantial improvement and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads. For buildings that are located in more than one flood hazard area, the provisions associated with the most restrictive flood hazard area shall apply.

1612.2 Design and Construction. The design and construction of buildings and structures located in flood hazard areas including coastal high-hazard areas and coastal A zones shall be in accordance with Chapter 5 of ASCE 7 and ASCE-24 this rule chapter.

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in engineering report entitled "The Flood Insurance Study for [INSERT NAME OF JURISDICTION]," dated [INSERT DATE OF ISSUANCE], AS AMDENDED OR REVISED WITH THE ACCOMPANYING Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

1612.3.1 Design flood elevations. Where design flood design elevations are not included in the flood hazard areas established in Section 1612.3, or where floodways are not designated, the building official is authorized to require the applicant to do one of the following:

1. Obtain and reasonably utilize any design flood elevation and floodway data available from a federal, state, or other source.
2. Determine the design flood elevation or floodway in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations shall be undertaken by a registered design professional who shall document that the technical methods used reflect currently accepted engineering practice.

1612.3.2 Determination of impacts. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed work will not increase the design flood elevation more than 1 foot at any point within the jurisdiction of the applicable governing authority.

1612.4 Flood Hazard Documentation. The following documentation shall be prepared and sealed by a registered design professional and submitted to the building official:

1. For construction in flood hazard areas other than coastal high-hazard areas or coastal A zones:
 - 1.1. The elevation of the lowest floor including the basement shall be documented, certified, and submitted to the building official upon placement and prior to further vertical construction. Prior to final inspection the same documentation shall be resubmitted to the building official for final confirmation.
 - 1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.
 - 1.3. For dry floodproofed nonresidential buildings, construction documents shall include a statement that the dry floodproofing is designed in accordance with ASCE 24.

2. For construction in coastal high-hazard areas and coastal A zones:
 - 2.1. The elevation of the bottom of the lowest horizontal structural member shall be documented, certified, and submitted to the building official upon placement and prior to further vertical construction. Prior to final inspection the same documentation shall be resubmitted to the building official for final confirmation.
 - 2.2. Construction documents shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements Chapter 16.
 - 2.3. For breakaway walls designed to have a resistance of more than 20 psf determined using allowable stress design, construction documents shall include a statement that the breakaway wall is designed in accordance with ASCE 24.

From the IRC:

R322.1 General. Buildings and structures scoped to Minnesota Rule 1309, constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2(4) by the flood design plan adopted by the local authority having jurisdiction, and substantial improvement and repair of substantial damage of buildings and structures in flood hazard areas, shall be designed and constructed in accordance with the provisions contained in this Section R322. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

R322.1.1 Alternative provisions. As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of ~~this code~~ the Minnesota Residential Code and the limitations therein.

R322.1.2 Structural systems. Structural systems of buildings and structures shall be designed, connected, and anchored to resist flotation, collapse, or permanent lateral movement due to structural loads and stresses from flooding equal to the design flood elevation.

R322.1.3 Flood-resistant construction. Buildings and structures erected in areas prone to flooding shall be constructed by methods and practices that minimize flood damage.

R322.1.4 Establishing the design flood elevation. The design flood elevation shall be used to define flood hazard areas. At a minimum, the design flood elevation shall be the higher of the following:

1. The base flood elevation at the depth of peak elevation of flooding, including wave height, that has a 1 percent (100-year flood) or greater chance of being equaled or exceeded in any given year.
2. The elevation of the design flood associated with the area designated on a flood hazard map adopted by the community or otherwise legally designated.

R322.1.4.1 Determination of design flood elevations. If design flood elevations are not specified, the building official is authorized to require the applicant to comply with either of the following:

1. Obtain and reasonably use data available from a federal, state, or other source.
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations undertaken by a registered design professional who shall document that the technical methods used reflect currently accepted engineering practice. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval.

R322.1.4.2 Determination of impacts. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall demonstrate that the effect of the proposed buildings and structures on design flood elevations, including fill, when combined with other

existing and anticipated flood hazard area encroachments, will not increase the design flood elevation by more than 1 foot at any point within the jurisdiction.

R322.1.5 Lowest floor. The lowest floor shall be the lowest floor of the lowest enclosed area, including basement and excluding any unfinished flood-resistant enclosure that is useable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the building or structure in violation of this section R322.

R322.1.6 Protection of mechanical, plumbing, and electrical systems. Electrical systems, equipment and components; heating, ventilating, air-conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall be located at or above the elevation required in Section R322.2 or R322.3. If replaced as part of a substantial improvement, electrical systems, equipment and components; heating, ventilating, air-conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall meet the requirements of this section R322. Systems, fixtures, and equipment and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

Exception: Locating electrical systems, equipment and components; heating, ventilating, air-conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment is permitted below the elevation required in Section R322.2 or R322.3 provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses including the effects of buoyancy during the occurrence of flooding to the design flood elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided that they conform to the provisions of the electrical part of ~~this code~~ Minnesota Rule 1309 for wet locations.

R322.1.7 Protection of water supply and sanitary sewage systems. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems in accordance with the plumbing provisions of ~~this code~~ Minnesota rule chapter 4715. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters in accordance with the plumbing provisions of Minnesota rule chapter 4715, ~~this code and Chapter 3 of the International Private Sewage Disposal Code~~.

R322.1.8 Flood-resistant materials. Building materials and installation methods used for flooring and interior and exterior walls and wall coverings below the elevation required in Section R322.2 or R322.3 shall be flood damage-resistant materials that conform to the provisions of FEMA TB-2.

R322.1.9 Manufactured homes. The bottom of the frame of new and replacement manufactured homes on foundations that conform to the requirements of Section R322.2 or R322.3, as applicable, shall be elevated to or above the elevations specified in Section R322.2 (flood hazard areas including A Zones) or R322.3 in coastal high-hazard areas (V Zones and Coastal A Zones). The anchor and tie-down requirements of the applicable state or federal requirements shall apply. The foundation anchorage of manufactured homes to be located in identified floodways shall be designed and constructed in accordance with ASCE 24.

R322.1.10 As-built elevation documentation. A registered design professional shall prepare and seal documentation of the elevations specified in Section R322.2 or R322.3.

R322.2 Flood hazard areas (including A Zones). Areas that have been determined to be prone to flooding and that are not subject to high-velocity wave action shall be designated as flood hazard areas. Flood hazard areas that have been delineated as subject to wave heights between 1 ½ feet and 3 feet or otherwise designated by the jurisdiction shall be designated as Coastal A Zones and are subject to the requirements of Section R322.3. Buildings and structures constructed in whole or in part in flood hazard areas shall be designed and constructed in accordance with Sections R322.1 through R322.2.3.

R322.2.1 Elevation requirements.

1. Buildings and structures in flood hazard areas, including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot or the design flood elevation, whichever is higher.
2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than the

depth number specified in feet on the FIRM plus 1 foot, or not less than 3 feet if a depth number is not specified.

3. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot, or the design flood elevation, whichever is higher.

Exception: Enclosed areas below the design flood elevation, including basements with floors that are not below grade on all sides, shall meet the requirements of Section 322.2.2.

R322.2.2 Enclosed area below design flood elevation. Enclosed areas, including crawl spaces, that are below the design flood elevation shall:

1. Be used solely for parking of vehicles, building access or storage.
2. Be provided with flood openings that meet the following criteria and are installed in accordance with Section R322.2.2.1:
 - 2.1. The total net area of nonengineered openings shall be not less than 1 square inch of each square foot of enclosed area where the enclosed area is measured on the exterior of the enclosure walls, or the openings shall be designed as engineered openings and the construction documents shall include a statement by a registered design professional that the design of the openings will provide for equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters as specified in Section 2..2.2 of ASCE 24.
 - 2.2. Openings shall be not less than 3 inches in any direction in the plane of the wall.
 - 2.3. The presence of louvers, blades, screens and faceplates or other covers and devices shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.

R322.2.2.1 Installation of openings. The walls of enclosed areas shall have openings installed such that:

1. There shall be not less than two openings on different sides of each enclosed area; if a building has more than one enclosed area below the design flood elevation, each area shall have openings.
2. The bottom of each opening shall not be more than 1 foot above the higher of the final interior grade or floor and the finished exterior grade immediately under each opening.
3. Openings shall be permitted to be installed in doors and windows; doors and windows without installed openings do not meet the requirements of this section.

R322.2.3 Foundation design and construction. Foundation walls for buildings and structures erected in flood hazard areas shall meet the requirements of Minnesota Rule 1309, Chapter 4.

Exception: Unless designed in accordance with Section R404:

1. The unsupported height of 6-inch plain masonry walls shall not be more than 3 feet.
2. The unsupported height of 8-inch plain masonry walls shall not be more than 4 feet.
3. The unsupported height of 8-inch reinforced masonry walls shall not be more than 8 feet.

For the purpose of this exception, unsupported height is the distance from the finished grade of the under-floor space to the top of the wall.

R322.2.4 Tanks. Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood. Above-ground tanks shall be installed at or above the elevation required in Section R322.2.1 or shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood.

R322.3 Coastal high-hazard areas (including V Zones and Coastal A Zones where designated).

Areas that have been determined to be subject to wave heights in excess of 3 feet or subject to high-velocity wave action or wave induced erosion shall be designated as coastal high-hazard areas. Flood hazard areas that have been designated as subject to wave heights between 1 ½ feet and 3 feet or otherwise designated by the jurisdiction shall be designated as Coastal Z Zones. Buildings and structures constructed in whole or in part in coastal high-hazard areas and Coastal A Zones, where designated, shall be designed and constructed in accordance with Sections R322.3.1 through R322.3.10.

R322.3.1 Location and site preparation.

1. New buildings and buildings that are determined to be substantially improved pursuant to the definition of substantial improvement per Minnesota Rule 1311 shall be located landward of the reach of mean high tide.
2. For any alteration of sand dunes and mangrove stands, the building official shall require submission of an engineering analysis that demonstrates that the proposed alteration will not increase the potential for flood damage.

R322.3.2 Elevation requirements.

1. Buildings and structures erected within coastal high hazard areas and Coastal A Zones, shall be elevated so that the bottom of the lowest horizontal structural members supporting the lowest floor, with the exception of piling, pile caps, columns, grade beams and bracing, is elevated to or above the base flood elevation plus 1 foot or the design flood elevation whichever is higher.
2. Basement floors that are below grade on all sides are prohibited.
3. The use of fill for structural support is prohibited.
4. Minor grading, and the placement of minor quantities of fill, shall be permitted for landscaping and for drainage purposes under and around buildings and for support of parking slabs, pool decks, patios and walkways.
5. Walls and partitions enclosing areas below the design flood elevation shall meet the requirements of Sections R322.3.5 and R322.3.6.

R322.3.3 Foundations. Buildings and structures erected in coastal high-hazard areas and Coastal A Zones shall be supported on pilings or columns and shall be adequately anchored to such pilings or columns. The space below the elevated building shall be either free of obstruction or, if enclosed with walls, the walls shall meet the requirements of Section R322.3.5. Pilings shall have adequate soil penetrations to resist the combined wave and wind loads (lateral and uplift). Water-loading values used shall be those associated with the design flood. Wind-loading values shall be those required by the Minnesota Residential Code. Pile embedment shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the piling. Pile systems design and installation shall be certified in accordance with Section 322.3.9. Spread footing, mat, raft, or other foundations that support columns shall not be permitted where soil investigations that are required in accordance with Section 401.4 indicate that soil material under the spread footing, mat, raft or other foundation is subject to scour or erosion from wave-velocity flow conditions. If permitted, spread footing, mat, raft or other foundations that support columns shall be designed in accordance with ASCE 24.

Exception: In Coastal A Zones, stem wall foundations supporting a floor system above and backfilled with soil or gravel to the underside of the floor system shall be permitted provided that the foundations are designed to account for wave action, debris impact, erosion and local scour. Where soils are susceptible to erosion and local scour, stem wall foundations shall have deep footings to account for the loss of soil.

R322.3.4 Concrete Slabs. Concrete slabs used for parking, floors of enclosures, landings, decks, walkways, patios and similar uses that are located beneath structures or slabs that are located such that if undermined or displaced during base flood conditions could cause structural damage to the building foundation, shall be designed and constructed in accordance with one of the following:

1. To be structurally independent of the foundation system of the structure, to not transfer flood loads to the main structure, and to be frangible and break away under flood conditions prior to base flood conditions. Slabs shall be a maximum of 4 inches thick, shall not have turned down edges, shall not contain reinforcing, shall have isolation joints at pilings and columns, and shall have control or construction joints in both directions spaced not more than 4 feet apart.

2. To be self-supporting, structural slabs capable of remaining intact and functional under base flood conditions, including erosion and local scour, and the main structure shall be capable of resisting any added flood loads and effects of local scour caused by the presence of the slabs.

R322.3.5 Walls below design flood elevation. Walls and partitions are permitted below the elevated floor, provided that such walls and partitions are not part of the structural support of the building or structure and:

1. Electrical, mechanical and plumbing system components are not to be mounted on or penetrate through walls that are designed to break away under flood loads; and
2. Are constructed with insect screening or open lattice; or
3. Are designed to break away or collapse without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. Such walls, framing and connections shall have a resistance of not less than 10 and not more than 20 pounds per square foot as determined using allowable stress design; or
4. Where wind loading values of ~~this code~~ the Minnesota Residential Code exceed 20 pounds per square foot, as determined using allowable stress design, the construction documents shall include documentation prepared and ~~sealed~~ certified by a registered design professional that:
 - 4.1. The walls and partitions below the design flood elevation have been designed to collapse from a water load less than that which would occur during the base flood.
 - 4.2. The elevated portion of the building and supporting foundation system have been designed to withstand the effects of wind and flood loads acting simultaneously on structural and nonstructural components. Water-loading values used shall be those associated with the design flood. Wind-loading values shall be those required by ~~this code~~ the Minnesota Residential Code.
5. Walls intended to break away under flood loads as specified in Item 3 or 4 have flood openings that meet the criteria in Section R322.2.2, Item 2.

R322.3.6 Enclosed areas below design flood elevation. Enclosed areas below the design flood elevation shall be used solely for parking of vehicles, building access or storage.

R322.3.6.1 Protection of building envelope. An exterior door that meets the requirements of Minnesota Residential Code Section R609 shall be installed at the top of stairs that provide access to the building and that are enclosed with the walls designed to break away in accordance with Section R322.3.5.

R322.3.7 Stairways and ramps. Stairways and ramps that are located below the lowest floor elevations specified in Section R322.3.2 shall comply with one or more of the following:

1. Be designed and constructed with open or partially open risers and guards.
2. Stairways and ramps not part of the required means of egress shall be designed and constructed to break away during design flood conditions without causing damage to the building or structure, including foundation.

Areas below stairways and ramps shall not be enclosed with walls below the design flood elevation unless such walls are constructed in accordance with Section R322.3.5.

R322.3.8 Decks and porches. Attached decks and porches shall meet the elevation requirements of Section R322.3.2 and shall either meet the foundation requirements of this section or shall be cantilevered from or knee braced to the building or structure. Self-supporting decks and porches that are below the elevation required in Section R322.3.2 shall not be enclosed by solid, rigid walls, including walls designed to break away. Self-supporting decks and porches shall be designed and constructed to remain in place during base flood conditions or shall be frangible and break away under base flood conditions.

R322.3.9 Construction documents. The construction documents shall include documentation that is prepared and ~~sealed~~ certified by a registered design professional that the design and methods of construction to be used meet the applicable criteria of this section.

R322.3.10 Tanks. Underground tanks shall be anchored to prevent flotation, collapse and lateral movement under conditions of the base flood. Above-ground tanks shall be installed at or above the

elevation required in Section R322.3.2. Where elevated on platforms, the platforms shall be cantilevered from or knee braced to the building or shall be supported on foundations that conform to the requirements of Section R322.3.

From the IEBC: [Discuss if we want to include scoping from the IEBC for buildings scoped to MR 1309.](#)

405.2.5 Building Repairs in Flood hazard areas. In flood hazard areas, buildings that have sustained substantial damage shall be brought into compliance with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309, as applicable.

502.3 Building Additions in Flood Hazard Areas. For buildings and structures in flood hazard areas established in Section 1612.3 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309,, any addition that constitutes a substantial improvement of the existing structure shall comply with the flood design requirements for new construction and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309, any additions that do not constitute substantial improvement of the existing structure are not required to comply with the flood design requirements for new construction.

[Consider adding language to limit daisy chaining projects to avoid substantial improvement.](#)
[Look at the definition of Substantial Structural Alteration from MR 1311.](#)

Substantial structural alteration. An alteration in which the gravity load-carrying structural elements altered within a 5-year period support more than 30 percent of the total floor and roof area of the building or structure. The areas to be counted toward the 30 percent shall include mezzanines, penthouses, and in-filled courts and shafts tributary to the altered structural elements.

Proposed:

[Substantial Improvement valuation determination shall include all additions and alterations within a 5-year period of the permit application date.](#)

Exception: Historical buildings as defined by Minnesota Rule 1300.0070, Subpart 12a.

503.2 Building Alterations in Flood Hazard Areas. For buildings and structures in flood hazard areas established in Section 1612.3 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309, any alteration that constitutes a substantial improvement of the existing structure shall comply with the flood design requirements for new construction and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309, any alterations that do not constitute substantial improvement of the existing structure are not required to comply with the flood design requirements for new construction.

Proposed:

[Substantial Improvement valuation determination shall include all additions and alterations within a 5-year period of the permit application date.](#)

Exception: Historical buildings as defined by Minnesota Rule 1300.0070, Subpart 12a.

NEW: 1006.4 Change of Occupancy in Flood Hazard Areas. For buildings and structures in flood hazard areas established in Section 1612.3 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309, any change of occupancy that results in the building being

assigned to a higher flood risk category shall comply with the flood design requirements for new construction and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309, any change of occupancy that results in the building being assigned to a an equal or lower flood risk category is not required to comply with the flood design requirements for new construction.

1103.3 Building Additions in Flood Hazard Areas. Additions and foundations in flood hazard areas shall comply with the following requirements:

1. For horizontal additions that are structurally interconnected to the existing building:
 - 1.1. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309.
 - 1.2. If the addition constitutes substantial improvement, the existing building and the addition shall comply with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309.
2. For horizontal additions that are not structurally interconnected to the existing building:
 - 2.1. The addition shall comply with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309.
 - 2.2. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309.
3. For vertical additions and all other proposed work that, when combined constitute substantial improvement, the existing building shall comply with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309.
4. For a raised or extended foundation, if the foundation work and all other proposed work, when combined, constitute a substantial improvement, the existing building shall comply with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309.
5. For a new foundation or replacement foundation, the foundation shall comply with Section 1612 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309.

1402.6 Buildings Relocated to Flood Hazard Areas. For buildings and structures relocated into flood hazard areas as established in Section 1612.3 for buildings scoped to Minnesota Rule 1305, or Section R322 for buildings scoped to Minnesota Rule 1309, buildings and structures shall comply with the flood design requirements for new construction and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

4. Will this proposed code change impact other sections of a model code book or an amendment in Minnesota Rule? If so, please list the affected sections or rule parts.

Need and Reason

1. Why is the proposed code change needed?

2. Why is the proposed code change a reasonable solution?
3. What other considerations should the TAG consider?

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain.
2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain.
3. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.
4. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
Architects, Engineers, Construction Contractors, Building Officials and Inspectors.
2. What are the probable costs to the agency and to any other State agencies of implementing and enforcing of the proposed rule? Is there an anticipated effect on state revenues?

There should be no additional costs to state agencies.
3. Are there less costly intrusive methods for achieving the purpose of the proposed rule?
4. Can you think of other means or methods to achieve the purpose of the proposed code change? If so, please explain what they are and why your proposed change is the preferred method or means to achieve the desired result.
5. What are the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals?
6. What are the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?
7. Are you aware of any federal regulation or federal requirement related to this proposed code change? If so, please list the federal regulation or requirement and your assessment of any differences between the proposed rule and the federal regulation or requirement.
8. Please include an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule.

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can considered by the TAG.