



This document contains exhibits supporting Housing First Minnesota's comments in the matter of the proposed rules of the Minnesota Board of Electricity adopting and incorporating the 2020 National Electrical Code for use in Minnesota, Minnesota Rules, Chapter 1315; Revisor's ID Number R-4632; OAH Docket No. 82-9001-36673.

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Exhibit A: Minutes of Jan. 14, 2019, Board of Electricity Meeting

Meeting Minutes: Board of Electricity

Date: January 14, 2020
Time: 9:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Members Present:

Alfreda Daniels
Cole Funseth
Derrick Givens
Mike Hanson
Duane Hendricks – Vice-Chair
Chad Kurdi
Peter Lindahl – Secretary
Daniel Westberg – Chair
John Williamson
Weston Wilson

Members Absent:

David Curtis

DLI Staff & Visitors:

Jeff Lebowski (DLI)
Lyndy Logan (DLI)
Neil Furman (DLI)
Dean Hunter (DLI)
Marty Kumm (DLI)
Steve Dudley (DLI)
Todd Green (DLI)
Adam Hanson (ABC)
Michelle Dreier (Electrical Assn.)
Mike Murcek (Electrical Assn.)
Jerry Daniel (TX Dept of Licensing) – Tele
Yvonne Feinleib (TX Dept of Licensing) – Tele
Doug Jennings (TX Dept of Licensing) – Tele
Gary Krause (State of WI)
Anthony Tadysak (State of WI)
Dale Fisch (MNESTA)
Tim Fischer (Electrician)
Tony Maghrak (IBEW 6th District)
Jason Carlson (IBEW Local 292)
Ted Swenson (IBEW Local 292)
Travis Rust (IBEW Local 292)
Jeff Heimerl (IBEW Local 292)

DLI Staff & Visitors continued:

Robert Hokstad (IBEW Local 292)
Nicholas DeMers (IBEW Local 292)
Andy Snope (IBEW Local 292)
Aaron Olson (IBEW Local 292)
Jose Winkels (IBEW Local 292)
John Winkels (IBEW Local 292)
Philip Winkels (IBEW Local 292)
David Frary (IBEW Local 292)
Rick Coren (IBEW Local 292)
Jennifer Mudge (IBEW Local 292)
Brian Cole (IBEW Local 292)
Jay Nelson (IBEW Local 292)
Derrick Atkins (IBEW Local 292)
Myles Lembke (IBEW Local 292)
Marc Anderson (IBEW Local 292)
Clyde Fairbanks (IBEW Local 292)
Steve Russell (IBEW Local 292)
Eric Shaw (IBEW Local 292)
Jon Schander (IBEW Local 292)
Dan Ordahl (IBEW Local 292)
Mike Wermerskirchen (IBEW Local 292)
Kenneth Sullivan (IBEW Local 292)
Alex Peterson (IBEW Local 292)
Jerry Olson (IBEW Local 292)
Hu Weiss (IBEW Local 292)
Gregory Tofe (IBEW Local 292)
Jonah Hiatal (IBEW Local 292)
Chris Kohn (IBEW Local 292)
John Pye Hall (IBEW Local 292)
Tyler Simmers (IBEW Local 292)
John Taylor (IBEW Local 292)
Josh Sideler (IBEW Local 292)
Tom Tobias (IBEW Local 292)
Eric Christen (IBEW Local 292)
Shane Meier (IBEW Local 343)
Chad Katzung (IBEW Local 343)
Lane Halley (IBEW Local 110)

DLI Staff & Visitors continued:

Jaime McNamara (IBEW Local 110)

Brad Malm (IBEW Local 110)

Kyle Bukovich (IBEW Local 242)

Darik Carlson (IBEW Local 242)

Donald Smith (IBEW Local 242)

Dan Hendrickson (Local IBEW 294)

1. Call to Order

The meeting was called to order at 9:10 a.m. by Chair Westberg. Roll call was taken by Secretary Lindahl and a quorum was declared with 10 of 11 voting members present in person.

2. Approval of Meeting Agenda

A motion was made by Givens, seconded by Kurdi, to approve the agenda as presented. The vote was unanimous with 10 votes in favor of the motion; the motion carried.

3. Approval of Previous Meeting Minutes

A motion was made by Kurdi, seconded by Givens, to approve the Oct. 8, 2019, meeting minutes with a correction to page 4, last paragraph, as shown below (“would” was changed to “may”). The vote was unanimous with 10 votes in favor of the motion; the motion carried.

- “Lebowski said the Board of Electricity makes approval or disapproval of reciprocity agreements and, if approved, the DLI Commissioner **may** enter into an agreement with that state.”

4. Regular Business

- Expense Approval** – reviewed and approved the per diem and expenses.
- Enforcement & licensing update** – A handout was provided with the number of electrical enforcement actions/orders.
- Inspections update** – Williamson summarized a press release from Dec. 23, 2019, regarding iMS, the department’s new system that launched with electrical permitting in October. In a recent survey of iMS users, 95% of homeowners and 80% of contractors were satisfied. To date, 95% of all electrical permits are submitted electronically and there have been approximately 23,000 electrical permits issues since October 2019.

5. Special Business

- October 8, 2019 Reciprocity vote for Texas and Wisconsin – Motion to Rescind**
Lindahl stated that during the last Board of Electricity meeting, two states, Texas and Wisconsin, requested consideration to be included as reciprocating states to Minnesota. Clearly from the number of attendees today, it is clear the Board made a mistake. Since the meeting, the Board has received numerous calls and emails against reciprocity with both states. Reciprocating the journey worker license is truly not in Minnesota’s best interests.

A motion was made by Lindahl, seconded by Daniels, to rescind the previous recommendation made on October 8, 2019 to enter into a reciprocal electrical licensing agreement with the state of Texas. The majority vote ruled with 7 votes in favor, 2 votes against the motion, and one abstention (Williamson); the motion carried to rescind reciprocity with the State of Texas.

The following motion was made on October 8, 2019:

A motion was made by Kurdi, seconded by Hanson, to enter into a Reciprocal Agreement with Texas. The majority vote ruled with 7 votes in favor, 5 opposed, of the motion; the motion carried.

Hendricks, as an appointed member of the board, felt it was his obligation to act on the behalf of the best interests and safety of Minnesota. Reciprocity was brought up at the Board meeting in October but wasn't thoroughly reviewed. It is in the best interests of Minnesota to uphold safety. He received numerous letters that were against reciprocity; many people are concerned with reciprocity and reducing Minnesota's standards. He hasn't heard from anyone in Minnesota that wants or needs a reciprocal license with Texas. When comparing Minnesota to Texas, there are currently (and in the past) variances in licensing, codes, training, and continuing education. He asked that members vote to rescind the motion [made on October 8, 2019].

Kurdi asked for reasons why the motion should be rescinded and referred to Steve Dudley's handout from the previous Board meeting (**Attachment A**) that compared Minnesota, Texas and Wisconsin. He believes Minnesota is comparable with multiple other states, including Wisconsin and Texas and doesn't see any issues. He received communication from other members saying that reciprocity would benefit Minnesota workers. He said if there is a training issues, then the Board can request Texas to complete the 16 hours of required continuing education. In the letter Texas sent to the Board (**Attachment B**), it clearly shows Texas is comparable to Minnesota.

Lindahl responded and said he sees this as two pieces – one short term and one long term. The Board could ask Texas to make adjustments; however, as Hendricks stated earlier, that wouldn't mean Texas would keep the changes – Texas could change it 3 months from now and Minnesota wouldn't have any control over this. Long term – it doesn't matter because it is not in the best interest to the state of Minnesota to open the border. The Board is obligated to protect consumers in Minnesota to the highest standards of electrical installation. He said that individuals taking the exam in Texas and Wisconsin can bring in multiple pieces of information. Texas exams are not as easy as Wisconsin's from the standpoint of materials allowed during the exam; however, Texas exam takers can bring in tabbed and highlighted code books and anything else they want. Only 20% pass and this number would be much lower number if those taking the test couldn't bring materials to the exam for reference. When taking an exam in Minnesota, you can only bring a bottle of water and a bag of chips – nothing else – code book, pencils, and calculators are provided. Individuals can only bring their knowledge learned over the years through apprenticeship. As Hendrickson stated, no one from

Minnesota is begging Texas and Wisconsin to reciprocate. Not one person has ever mentioned reciprocity with Texas or Wisconsin to him. Making a decision to vote on reciprocity after only a ten-minute presentation was irresponsible of the Board. Reciprocity should have been tabled to allow the public to comment, which has since happened. Minnesota statutes do not state there must be a reason to rescind a motion. In addition, the DLI Commissioner, even if the Board agreed with reciprocity, is not compelled to sign the agreement.

Hanson said there is a lot of emotion surrounding reciprocity and he focused on facts to address Lindahl's comments. There was a lot of work that went into the decision [to approve reciprocity], not just ten minutes at a Board meeting. The Board charged department staff with determining whether Texas met Minnesota's standards and the response was that Texas did and reciprocity was recommended. It isn't accurate or fair to say that the Board made a decision in ten minutes. Now it has come to light that there may be a different standard when the exam is given. He then asked Texas, what level of information can someone bring to an exam – is a tabbed and highlighted code book and notes allowed? What Texas allows someone to bring to an exam makes a significant difference on whether Minnesota's standard would be met. The entire topic of reciprocity for a journey worker level for Texas and Wisconsin started before Hanson's service on the Board. When the Board met in October, the discussion was that the research had been completed. Is there a shortage of licensed, journey worker electricians in the state of Minnesota and is this why reciprocity would be issued? As a contractor that works across the entire state of Minnesota, Hanson periodically runs into a shortage of licensed electricians, but this has nothing to do with reciprocity, it is a geographical issue. Opening reciprocity to Texas and Wisconsin is not going to address this issue. Hanson doesn't believe reciprocity should have been pursued with any state.

Jerry Daniel, Chief Electrical Inspector, Texas Department of Licensing and Regulation, said the statement that anything is allowed in when taking an exam is not true. Only a current code book is allowed, and it can be highlighted. Electricians should use their code books as a tool and if code books aren't being highlighted in Minnesota then electricians aren't being taught correctly because the code book is a tool. It is not just a book. Those that can navigate the book will be very successful. The book is just the minimum standard and everyone is told they can do better but that they can only hold them to the minimum standard. Calculators, highlighters, and pens cannot be brought to an exam. No handwritten notes are allowed in code books – if found, the exam is over, and the book is confiscated. Texas's exam was developed by TSI subject matter experts – individuals that sit on the exam board are outstanding in the electrical community. Every 3 years through the code cycle there are new applications because they are the best in the industry. As far as the urban legends about their exams and electrician's, all of this is dispelled because it is simply not true. When you view Texas and Minnesota across the Board, the two states are equal – see **Attachment B**. If there were a disaster would the Minnesota Governor be told, sorry, there aren't any reciprocity agreements in place so we can't get workers here. This is one of the good things about reciprocity, in a time of need each state could help the other. The bottom

line, if you want to make electricians jump through hoops if they want to work in Texas, that's fine but he doesn't recommend it. There may be a day when an electrician needs to go to another state just to feed their family. They shouldn't have to repeat the exam process in another state.

Doug Jennings, Assistant General Counsel, Texas Department of Licensing and Regulation, said he agrees with Mr. Daniel's comments. The standards of Minnesota and Texas are virtually equivalent as evidenced by Steve Dudley's comparison (**Attachment A**). Texas has an industry leading examination that is psychometrically tested with the help of TSI experts, on-the-job experience is similar, and both states use the 2017 NEC. Texas will be moving to the 2020 code on September 1, 2020. It is a myth that the standards are not equivalent. From a licensing, examination, and safety standpoint, he believes Minnesota and Texas are on the same page. He also noted that Texas is part of the National Electrical Reciprocity Alliance and have journey worker reciprocity agreements in place with South Dakota and Iowa.

Hendricks thanked Texas for their comments. He understands Texas's interest in reciprocity; however, he hasn't heard any Minnesotans that want to be reciprocal with Texas. In the past, Texas didn't have the same standards as Minnesota and those grandfathered in would be allowed.

Lindahl said the Texas examination webpage says a code book that is tabbed, highlighted and has notes written in the book is allowed. In addition, independent pre-tests are allowed.

Jerry Daniel, Texas, said there can be minor, written notes in pen, not pencil, in a code book. You cannot take anything you want to an exam. It doesn't change the exam if someone knows how to use their code book. Those notes are usually highlighted, put in by that electrician that learned something on the job. He thinks every state has exam prep – this is done in all state. Texas updates their exam twice a year. He said their standards were not less in years prior – their standards have remained the same. They are using the current code. The Inspector's Association helps them educate electricians. If Minnesota wasn't happy with workers coming into Minnesota, then the agreement could be cancelled. Some of those grandfathered are high up because they had a city license. Journey worker electricians eligible for reciprocity with Minnesota would have met Minnesota statutory requirements. He said he was approached by Mr. Sampson (since retired from the department) about reciprocity when he was in Duluth, Minnesota, 3 years ago. Westberg asked if there were any exceptions to the NEC 2017 rule and Daniel replied no, their code is accepted as it is.

Wilson said in July he will have had his Minnesota journey worker license for 30 years. Every person he has worked with has asked why the Board approved reciprocity. He can't believe someone taking an exam can bring in their own code book, filled with any information they want. Everything he has completed in 30 years has been reviewed by a state of Minnesota inspector. There is accountability for everything he has done. The

State of Texas has only two electrical inspectors for the unincorporated areas. The cities have inspectors but there is a lot of Texas that doesn't have a city inspector; therefore, there are a lot of electrician's that don't have their work inspected. How do we know electricians are following the code when their work isn't being inspected? The Board did not ask to be reciprocal of any state to his knowledge. If there is a natural disaster and Minnesota needs to find workers, there would be plenty of time to institute something. He said the Board should vote to rescind the agreement.

Hendricks said there are plenty of licensing requirements that Texas has taken an exception to. In Minnesota, they don't take exceptions – all electrical systems must meet the standard.

Kurdi said safety starts with well-trained, qualified journey worker electricians, working for licensed, bonded, and insured electrical contractors and requiring 8,000 hours of on-the-job training.

Lindahl said there are no ratios in Texas. In Minnesota, we do not restrict anyone from becoming a journey worker – if 8,000 hours can be documented then the Minnesota exam is taken. It is a one-time test. The Board is not trying to prevent anyone from coming to Minnesota to work.

Alfreda Daniels said there wasn't public input when the Board voted on reciprocity at the October meeting and she has since received many emails and letters. The Board should reconsider their decision now that it is evident that Minnesota electricians do not want reciprocity.

Hendricks said there were 295 emails against reciprocity received by the department. Kurdi said he received at least two emails that were for reciprocity with Wisconsin.

Doug Jennings thanked Board members for their consideration.

Williamson said his role at Board meetings is as the Commissioner's Designee and he would be abstaining from any votes for, or against, reciprocity.

A motion was made by Lindahl, seconded by Daniels, to rescind the previous recommendation made on October 8, 2019, to enter into a reciprocal electrical licensing agreement with the state of Wisconsin. The majority vote ruled with 7 votes in favor, 2 votes against the motion, and one abstention (Williamson); the motion carried to rescind reciprocity with the State of Wisconsin.

The following motion was made on October 8, 2019:

A motion was made by Kurdi, seconded by Hanson, to approve entering into a Reciprocal Agreement with Wisconsin. The majority vote ruled with 7 votes in favor, 5 opposed, of the motion; the motion carried.

Hendricks said he has the same concerns with Wisconsin as he does with Texas.

Garry Krause, Bureau Director, Department of Safety and Professional Services, State of Wisconsin, introduced himself and Anthony Tadysak, electrical inspector for the state of Wisconsin. Krause said there is no private sector contractor pushing for reciprocity. There is a move nationally to move to one license nationwide and Wisconsin and Minnesota staff understand that this is to come. Krause then read aloud his talking points and referred to the State of Wisconsin letter written to the Board on December 20, 2019 – **Attachment C**, and referred to Steve Dudley's comparison chart – **Attachment A**.

Lindahl read Wisconsin's statute aloud *"a person who initially obtains his or her journeyman electrical license without having successfully passed the journeyman electrician examination and who's request to renew his or her license is denied because of the failure to fulfill the continuing education requirements of subdivision 1 shall be required to take and pass a journeyman electrician license examination in order to reacquire the journeyman electrical license."* Lindahl said he has had a fair amount of experience with contracts and this would suggest that someone with a license could only lose it if continuing education requirements weren't met.

Krause clarified Lindahl's statement and said none of those are reciprocal, they can't go to another state. A Wisconsin exam must be passed. The two reciprocal state agencies collaborate and share test scores to ensure exams are passed.

Anthony Tadysak, State of Wisconsin electrical inspector, said that if the 24-hour requirement for continuing education is not met before the defined expiration period (after a license expires), of a 4-year license, the exam must be retaken. There would be no reciprocity agreement – they would no longer be a licensed electrician in the state of Wisconsin.

Lindahl said the claim that Wisconsin has the highest fail rate in the country, and Krause interjected, one of [the highest fail rates], in a state that allows a person to walk in with a bound folder to take an exam – Krause interjected not in Wisconsin, you can take a code book in. Lindahl said you can take anything bound – it says this on Wisconsin's website. Krause replied that only a code book is allowed – they are the test administering authority.

Tadysak said he has been an IBEW electrical inspector for the past 16 years with the same curriculum that Minnesota instructors are using – a national book. Exam takers have 2.5 minutes per question, such as calculating a voltage drop; therefore, allowing code books during testing do not lower the integrity of the exam. Several individuals have commented that the Minnesota exam is far easier than Wisconsin's. The exam could be taken 15 times and the same questions won't appear twice. Test takers aren't allowed to have anything written in their code books.

Kurdi thanked Wisconsin for coming and said that although Wisconsin and Minnesota aren't 100% in sync, the two states are similar enough when compared to reciprocity with South and North Dakota and Iowa. Testing in Wisconsin is slightly different, but he doesn't believe their test is "watered down" in any way. Wisconsin electricians are just as qualified as electricians licensed in Minnesota. He believes that reciprocity would allow electricians to work across the border.

Hendricks said that electricians should have the right to work across the border and can currently work unlicensed or they can take the Wisconsin exam. This ensures that credentials are met for that state. He commends Wisconsin for upping their testing standards but believes there could be an issue policing and managing licenses that had lapsed. He believes electricians should take the exam in the state where they want to be licensed.

Hanson said there are already many Minnesota and Wisconsin individuals that have taken their neighboring state's exam. He doesn't think it should be a matter of convenience, it should be the Board's position to look out for the safety of Minnesota residents having electrical work completed. It appears Wisconsin has a high standard, but he might take an issue with someone being able to write calculations in their code book. The formula should be learned if a license is received. He doesn't want to discourage the qualifications of Wisconsin electricians because he employs them, and they are very good electricians. He still questions the need for reciprocity, he doesn't see a shortage of electricians in Minnesota. He works all over the country and when his employees want to work in another state, they either work unlicensed under a ratio or they take that state's exam. This is a decision made by a worker if they want to move around the country. What is the over-riding need for reciprocity?

Krause said reciprocity, as stated in Wisconsin and Minnesota's statutes, is to be pursued and explored – this is Step 1. Step 2 is that federal testing is coming. This is heard constantly at NERA conventions. Reciprocity helps each state's union and non-union workers.

Westberg said that most of the people that contacted him were against reciprocity. One thing that every person, for or against reciprocity, had in common was they felt that if they needed to work in Wisconsin then they could take the exam there.

Wilson said if it is for convenience, so workers don't have to take two different license exams, then why did the Board receive 295 emails against reciprocity. It isn't the case that Wisconsin has more continuing education requirements than Minnesota. Wisconsin has 24 hours over 4 years and Minnesota has 16 hours every two years which is a cumulative total of 32 hours every 4 years. Wisconsin's standards aren't higher than Minnesota as was previously stated. The federal test mentioned by Krause is the first time he's heard this. He isn't going to make any decisions based on the possibility that there might be a federal test when he hadn't heard this until today. If there is truly a

federal test coming, then the Board would review and work with neighboring states to combat it.

Kurdi asked why Minnesota is reciprocating with South and North Dakota and Iowa but not Wisconsin. He doesn't see any safety issues, both states have qualified electricians.

Krause thanked the Board and said that although there were 295 emails, this entailed only name changes and not independent thoughts.

Westberg asked Williamson if he would like to comment and Williamson repeated that he would be abstaining from any votes for or against reciprocity.

The Board took a ten-minute recess.

b. 2020 NEC Adoption Update

Lebowski said the rule draft is prepared and ready to be submitted to the Governor's office for review; however, the Board must first discuss costs. There are two elements that are necessary under the Administrative Procedure Act before the Board can adopt the rule and incorporate NEC 2020. First, the Board needs to discuss general costs regarding changes specifically related to GFCI and secondly, the Board must address whether the cost impact will be \$25,000 or more for small businesses or small cities. A small business is defined as 50 full-time employees or less and small cities are those with ten or less. The impact, whether it is there or not, needs to be determined by the Board. This will be placed in a Statement of Need and Reasonableness (SONAR), a legal requirement. The goal is to move as quickly as possible so that a July 1 effective date is met. We are hoping for a cushion between when the code is adopted and when the actual effective date would be. If there is no need for a hearing, then there will be a small cushion for training, although training has already started. The statutes state that there must be a 270-day cushion between when the code is adopted and when it is effective. There are exceptions which were discussed at the last Board meeting.

Lindahl asked if Lebowski recalled what transpired 3 years ago and whether there were any adverse effects. Lebowski said there are things that should be done differently this time – the Board needs to discuss costs. During current rulemaking, the Board reviewed the updated NEC thoroughly and five areas of concern were identified in the SONAR that would increase costs, all related to GFCI, emergency shutoff, and surge protection. A cost savings for agricultural buildings was also identified in the SONAR. The impact on agriculture was not addressed during previous rulemaking.

Williamson said his electrical staff identified five notable changes in the code and surveyed electrical contractors regarding cost impact but only two responded. They also completed their own research. If there were a dwelling unit affected by all five notable changes, then the cost of materials and labor would be approximately \$600 based on a median new home cost of \$417,000. There wasn't a monetary amount in the 2017 SONAR because there were so many pluses and minuses that resulted in a wash. The

department is well apprised of the changes in the 2020 code and some will result in cost reductions. The calculations for the lighting load were completely overhauled and reduces costs. To date, there have been 7,700 public input/comments/revisions in the 2020 code. For the most part costs will wash – some increases and some decreases. Cost impacts on material will be nominal and negligible on labor based on the department's analysis. There would be no cost impact to small business or small cities. The changes are part of the evolution of the code. Training materials incur a cost every three years but would not come close to \$25,000.

Kurdi said he has taught 16 hours of the new code and said the Board should review the GFCI range.

Williamson said that the emergency service disconnects were scaled back significantly. Dean Hunter said the cost analysis for type 1 costs would be minimal at \$40-\$60. Type 2 is a plug-in device and the cost analysis would also be minimal at \$60-\$70. Lindahl asked what residents would be affected and Kurdi replied that it is only for service entrances, such as for an apartment building.

6. Committee Reports

Construction Codes Advisory Council (CCAC)

Lebowski gave an update and said the reason the CCAC hasn't met yet because they were waiting for the Federal Department of Energy to issue findings on the Energy Code. This was completed last month so now they are moving forward with the Residential and Commercial Energy Codes. All Building Codes are in place and will be effective the end of March 2020, except for the Elevator Code and the Residential Energy Code. The Residential Energy Code will take longer due to federal requirements and there were issues with the Elevator Code. There will be an informational hearing for public input as to whether the existing Residential Energy Code should be opened for rulemaking and amendments or for adoption. Once the hearing is resolved, there will be a recommendation by the ALJ to the Commissioner. A final determination will then be made whether to open rulemaking.

7. Complaints

No complaints brought forth

8. Open Forum

Nothing

9. Board Discussion

Lindahl said that next time there is something brought to the Board with the same level of magnitude of reciprocity, the Board should table and take time to review.

10. Announcements

Next regularly scheduled meetings – 9:00 a.m. Minnesota Room, DLI

a. April 14, 2020

11. Adjournment

A motion was made by Lindahl, seconded by Givens, to adjourn the meeting at 11:09 a.m. The vote was unanimous with 10 votes in favor of the motion; the motion carried.

Respectfully Submitted,

Peter Lindahl

Peter Lindahl

Secretary

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

JOURNEYWORKER								
Sort	Subject	Reciprocity Similarities	Minnesota		Wisconsin		Texas	
				Citation		Citation		Citation
1	Statewide licensing	MN Statute 326B.33 Subd. 20	Yes	MN Statute 326B.33	Yes.	WI statute 101.862, with exceptions.	Yes	Texas Occupations Code 51.4041(c) allows reciprocity agreements (subject to approval by the governor)
2	Electrical inspections covered statewide	NERA	Yes. State and municipal	MN Statute 326B.36	Yes. State and municipal.	New one and two family dwellings in SPS 320.10. Farms, public buildings places of employment, etc. in SPS 316.012 and 316.013. Exception for existing industrial and manufacturing facilities in state statute 101.875(2).	Inspections are not mandatory by law, but are required by city and county ordinance.	
3	State administered exam	MN Rule 3800.3520, MN Statute 326B.33 Subd. 20, & NERA	Yes, Minnesota writes and proctors our own exams	MN Rule 3800.3520, MN Statute 326B.33 Subd. 18	Yes. Wisconsin writes and administers its own exams.	SPS 305.09	Yes, Texas creates its own exam, which is administered by a third-party vendor.	Texas Occupations Code 1305.162
4	Number of questions	MN Statute 326B.33 Subd. 20, & NERA	80	Policy	100	Set by policy and not an Administrative rule.	80	Candidate information bulletin located at https://urlz.com/UzdVt
5	Time allowed	MN Statute 326B.33 Subd. 20, & NERA	5.5 hours	Policy	4 hours	Set by policy and not an Administrative rule.	4 hours	Candidate information bulletin located at https://urlz.com/UzdVt
6	Open book/memory	MN Statute 326B.33 Subd. 20, & NERA	Open book	Policy	Open book	SPS 305.09(4)(b) Set by policy and not an Administrative rule.	Open book	Candidate information bulletin located at https://urlz.com/UzdVt
7	Minimum score	MN Statute 326B.33 Subd. 20, & NERA	70%	Policy	70%	SPS 305.09(6)(a)	70%	16 Texas Administrative Code 73.21 ("An individual applicant must achieve a passing score on an examination approved by the executive director of the Texas Department of Licensing and Regulation.")
8	Qualifying experience to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	All hours can be obtained in new installation of light, heat, power in any occupancy type	MN Rule 3800.3520, MN Statute 326B.33	Experience in installing, maintaining, or repairing electrical wiring. Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring	WI statute 101.87(1)	Hours may be gained if under the supervision of a master electrician; must be performing "electrical work" as defined by statute and rule	Texas Occupations Code 1305.002(11); Texas Occupations Code 1305.155(1); 16 Texas Administrative Code 73.10(21)
9	Qualifying experience to qualify to examine (years/hours)	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	8000/4 years OJT	MN Rule 3800.3520, MN Statute 326B.33	8000 hrs. and 4 years OJT or Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring that has a duration of at least 3 years and that is approved by the U.S. department of labor or by the department of workforce development	WI statute 101.87(1)	8,000 hours of on-the-job training under the supervision of a master electrician	Texas Occupations Code 1305.155

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

JOURNEYWORKER								
Sort	Subject	Reciprocity Similarities	Minnesota		Wisconsin		Texas	
				Citation		Citation		Citation
10	Hours granted for the successful completion of a 2 year technical college electrical course	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	2000	MN Rule 3800.3520, MN Statute 326B.33	2000	WI statute 101.87(2m)	n/a	n/a
11	Out of state experience accepted	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	Yes, as long as it is comparable to experience gained in Minnesota	MN Rule 3800.3520	Yes.	WI statute 101.87(1)	Yes, as long as it is comparable to experience gained in Texas	Texas Occupations Code 1305.164; Texas Occupations Code 51.4041(b)
12	Minimum education requirements to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	2 hours CE per year for Minnesota registered unlicensed electricians. No apprenticeship education required. No education requirements for individuals who gained experience in other states	MN Rule 3800.3520, MN Statute 326B.33	None.		No education or apprenticeship is required to take the examination; however, electrical apprentices are required to take 12 hours per year of CE.	16 Texas Administrative Code 73.25
13	Military experience accepted	MN Rule 3800.3520	Yes. Must provide DD214 and MOS must be for electrical	MN Rule 3800.3520	Yes, if the experience is in installing, maintaining, or repairing electrical wiring.	WI statute 101.87(1)	Yes. Must provide DD214 and MOS must be for electrical work.	Texas Occupations Code 1305.1645
14	Duration of journeyworker license	Policy	2 years	Policy	4 years	SPS 305.06	1 year	16 Texas Administrative Code 73.22
15	Continuing education content required to renew journeyworker license	MN Rule 3800.3602	12 hours code 4 hours statute, rules, technical	MN Rule 3800.3602	Content not specified, but has to relate to the skills and knowledge of the license category. Classes must be state approved.	SPS 305.08(1)(a) and (d)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
16	Continuing education hours required to renew journeyworker license	MN Rule 3800.3602	16 hours prior to renewal - 2 year cycle	MN Rule 3800.3602	24 hours. Classes must be state approved.	SPS 305.44(6)(b) and 305.08(1)(a)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
17	NERA Member		Yes		Yes		Yes	
18	Reciprocal States		Alaska, Arkansas, Colorado, Iowa, Montana, Nebraska, North Dakota, South Dakota, Wyoming		New Hampshire, Iowa		Alaska (pending), Arkansas, Idaho, Iowa (pending) Louisiana (master only), Montana, Nebraska, New Mexico, North Carolina, Oklahoma (pending), South Dakota, Wyoming	
19	Code Cycle	MN Rule 1315.0200	2017	MN Rule 1315.0200	1 and 2 family dwellings are on 2011 until January 1, 2020 when they go to 2017. Everything else is on 2017		2017	Texas Occupations Code 1305.101; 16 Texas Administrative Code 73.100

JOURNEYWORKER						
Sort	Subject	Reciprocity Similarities	Minnesota		Texas	
				Citation		Citation
1	Statewide licensing	MN Statute 326B.33 Subd. 20	Yes	MN Statute 326B.33	Yes	Texas Occupations Code 51.4041(c) allows reciprocity agreements (subject to approval by the governor)
2	Electrical inspections covered statewide	NERA	Yes. State and municipal	MN Statute 326B.36	Inspections are not mandatory by law, but are required by city and county ordinance.	
3	State administered exam	MN Rule 3800.3520, MN Statute 326B.33 Subd. 20, & NERA	Yes, Minnesota writes and proctors our own exams	MN Rule 3800.3520, MN Statute 326B.33 Subd. 18	Yes, Texas creates its own exam, which is administered by a third-party vendor.	Texas Occupations Code 1305.162
4	Number of questions	MN Statute 326B.33 Subd. 20, & NERA	80	Policy	80	Candidate information bulletin located at https://urlzs.com/UzdVt
5	Time allowed	MN Statute 326B.33 Subd. 20, & NERA	5.5 hours	Policy	4 hours	Candidate information bulletin located at https://urlzs.com/UzdVt
6	Open book/memory	MN Statute 326B.33 Subd. 20, & NERA	Open book	Policy	Open book	Candidate information bulletin located at https://urlzs.com/UzdVt
7	Minimum score	MN Statute 326B.33 Subd. 20, & NERA	70%	Policy	70%	16 Texas Administrative Code 73.21 ("An individual applicant must achieve a passing score on an examination approved by the executive director of the Texas Department of Licensing and Regulation.")
8	Qualifying experience to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, MN statute 326B.33 Subd. 2	All hours can be obtained in new installation of light, heat, power in any occupancy type	MN Rule 3800.3520, MN Statute 326B.33	Hours may be gained if under the supervision of a master electrician; must be performing "electrical work" as defined by statute and rule	Texas Occupations Code 1305.002(11); Texas Occupations Code 1305.155(1); 16 Texas Administrative Code 73.10(21)
9	Qualifying experience to qualify to examine (years/hours)	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, MN statute 326B.33 Subd. 2	8000/4 years OJT	MN Rule 3800.3520, MN Statute 326B.33	8,000 hours of on-the-job training under the supervision of a master electrician	Texas Occupations Code 1305.155
10	Hours granted for the successful completion of a 2 year technical college electrical course	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, MN statute 326B.33 Subd. 2	2000	MN Rule 3800.3520, MN Statute 326B.33	n/a	n/a
11	Out of state experience accepted	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	Yes, as long as it is comparable to experience gained in Minnesota	MN Rule 3800.3520	Yes, as long as it is comparable to experience gained in Texas	Texas Occupations Code 1305.164; Texas Occupations Code 51.4041(b)

JOURNEYWORKER						
Sort	Subject	Reciprocity Similarities	Minnesota		Texas	
				Citation		Citation
12	Minimum education requirements to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	2 hours CE per year for Minnesota registered unlicensed electricians. No apprenticeship education required. No education requirements for individuals who gained experience in other states	MN Rule 3800.3520, MN Statute 326B.33	No education or apprenticeship is required to take the examination; however, electrical apprentices are required to take 12 hours per year of CE.	16 Texas Administrative Code 73.25
13	Military experience accepted	MN Rule 3800.3520	Yes. Must provide DD214 and MOS must be for electrical	MN Rule 3800.3520	Yes. Must provide DD214 and MOS must be for electrical work.	Texas Occupations Code 1305.1645
14	Duration of journeyworker license	Policy	2 years	Policy	1 year	16 Texas Administrative Code 73.22
15	Continuing education content required to renew journeyworker license	MN Rule 3800.3602	12 hours code 4 hours statute, rules, technical	MN Rule 3800.3602	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
16	Continuing education hours required to renew journeyworker license	MN Rule 3800.3602	16 hours prior to renewal - 2 year cycle	MN Rule 3800.3602	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
17	NERA Member		Yes		Yes	
18	Reciprocal States		Alaska, Arkansas, Colorado, Iowa, Montana, Nebraska, North Dakota, South Dakota, Wyoming		Alaska, Arkansas, Idaho, Iowa, Louisiana (master only), Montana, Nebraska, New Mexico, North Carolina, Oklahoma, South Dakota, Wyoming	
19	Code Cycle	MN Rule 1315.0200	2017	MN Rule 1315.0200	2017	Texas Occupations Code 1305.101; 16 Texas Administrative Code 73.100
Submitted by Doug Jennings, Assistant General Counsel, Texas Department of Licensing and Regulation						



TEXAS DEPARTMENT OF LICENSING & REGULATION

Executive Office • PO Box 12157 • Austin, Texas 78711 • (512) 463-3173 • Fax (512) 475-2874

www.tdlr.texas.gov

January 7, 2020

Dan Westberg
Chair, Minnesota Board of Electricity
c/o Minnesota Department of Labor & Industry
443 Lafayette Road North
St Paul, MN 55155-4344

Re: Electrical Licensing Reciprocity with Minnesota

Dear Mr. Westberg:

Thank you for your notice of the Board's upcoming vote to rescind approval of a potential reciprocal journeyman/journeyworker electrician licensing agreement with Texas. I appreciate the Board's consideration of this important matter, and urge the members not to rescind approval of the agreement. A reciprocal agreement will help remove unnecessary barriers to licensure for skilled and experienced tradespeople in both states.

Just as Minnesota does, Texas requires that electrical work performed within the state is performed safely, and only by licensed persons under the supervision of experienced electricians. Apprentices performing non-exempt electrical work are required to be licensed, and must be provided on-site supervision by a licensed master electrician, journeyman electrician, or residential wireman. Electrical work in Texas is currently subject to the 2017 National Electrical Code (NEC), and the 2020 NEC will become the statewide code on September 1 of this year.

The standards for licensure in Minnesota and Texas are similar, ensuring that in the event a reciprocity agreement is approved, only highly qualified electricians will be eligible under the agreement. In order to become licensed as a journeyman electrician in Texas, a person must accrue 8,000 hours of on-the-job experience under the supervision of a master electrician. This is identical to Minnesota's requirement for journeyworker electricians. The attached spreadsheet, prepared by staff of both states, shows the other many ways in which our states' licensing requirements align.

I will add that both of our states are active in the National Electrical Reciprocal Alliance (NERA). Texas has journeyman electrician reciprocity agreements in place with several NERA members, including Montana, Nebraska, South Dakota, and most recently, Alaska and Iowa. I applaud NERA's efforts to create consistency in licensing requirements across the member states while maintaining high standards for licensure.

A reciprocal licensing agreement between our states would be mutually beneficial, helping tradespeople and local economies alike. I appreciate your time, and respectfully request approval of a potential agreement.

Sincerely,

Brian Francis
Executive Director
Texas Department of Licensing and Regulation

- Wisconsin is rapidly advancing to have some of the most stringent electrical licensing and work requirements in the nation.
- Both Minnesota and Wisconsin are active members of the National Electrical Reciprocal Alliance (NERA).
- Minnesota and Wisconsin staff have worked cooperatively together on this project. They analyzed and determined the two states' electrical licensing requirements align well.
- We are only discussing reciprocity with Electrical Journey Worker licensing, not master electrician or contractor licensing.
- I would like to clarify that only licensed electricians who have passed a state license exam can gain reciprocity. There is no grandfathering of licenses.
- A recent analysis reflects Wisconsin has 646 Minnesota residents licensed as Wisconsin Journeyman Electricians, and Minnesota has 469 Wisconsin residents licensed as Minnesota Class A Journeyworker Electricians.
- Both states have comprehensive statewide electrical licensing, permitting, and inspection, in both the residential and commercial setting.
- Like Minnesota, Wisconsin accomplishes electrical inspection through state employee inspectors, delegated municipality or delegated county authority, and contracted agent inspection.
- To take a Wisconsin Electrical Journeyman exam, one must demonstrate 8000 hours of work experience and four years on the job training, or the completion of a construction electrician apprenticeship.
- Both Minnesota and Wisconsin have open book tests. Minnesota has 80 test questions and allows 5.5 hours to complete. Wisconsin has 100 test questions and allows four hours to complete. In effect, Wisconsin's exam has more test questions and allows less time to complete. Both tests are conducted under secure monitored conditions. Wisconsin's exam has been professionally reviewed for reliability and validity.
- Wisconsin's exam uses up to date compliant test questions based solely on the 2017 National Electrical Code.
- The Wisconsin exam is rigorous. When viewing all test takers, there is an approximate pass rate of 25%.
- Wisconsin requires all Electrical Journeymen to take a Minimum of 24 hours of state approved classes in order to renew their license. Wisconsin's classes are required to be in a related skill and knowledge area. Minnesota requires 16 hours of renewal classes, with a minimum of 12 hours being code related and up to four hours being non-code related.
- Wisconsin ensures electrical workers must have direct supervision. A person enrolled as a registered electrician shall perform electrical wiring activities under the direct supervision of a person who holds a license either as a licensed master electrician or a licensed journeyman electrician or holds a registration as a master electrician.
- A person who is enrolled as a registered electrician may perform electrical wiring activities under the direct supervision of a person who holds a license as a licensed residential master electrician, or licensed residential journeyman electrician, provided the wiring is associated with dwellings, dwelling units, detached accessory buildings, and structures serving the dwellings or the dwelling units, such as garages, carports, gazebos, and swimming pools.
- A person who is enrolled as a registered electrician may perform electrical wiring activities under the direct supervision of a person who holds a license as a licensed industrial journeyman electrician provided the wiring is within the facilities or properties of the business establishment where the industrial journeyman electrician is employed.

Appreciatively,

Garry Krause, Ed.D., MBA

Bureau Director

Division of Industry Services

Bureau of Technical Services

4822 Madison Yards Way

Madison, Wisconsin 53705

Wisconsin Department of Safety and Professional Services
Office of the Secretary
4822 Madison Yards Way
PO Box 8363
Madison WI 53708-8368



Phone: 608-266-1352
Web: <http://dsps.wi.gov>
Email: dsps@wisconsin.gov

Tony Evers, Governor
Dawn B. Crim, Secretary

December 20, 2019

Minnesota Board of Electricity
c/o Minnesota Department of Labor & Industry
443 Lafayette Road North
St Paul, MN 55155-4344

Re: Electrical Licensing Reciprocity with Minnesota

Dear Board Members:

I am pleased that on October 8, 2019, you voted to approve entering into an Electrical Journeyman/Journeyworker License reciprocity agreement with the State of Wisconsin. Wisconsin and Minnesota have a long history of collaboration to the benefit of the residents of our states. With last year's election of Governor Tony Evers, we are recommitted to working collaboratively with our sister states.

Wisconsin currently has 646 Minnesota residents licensed as Wisconsin Journeymen Electricians and 439 Minnesota residents licensed as Wisconsin Master Electricians.

Minnesota currently has 469 Wisconsin residents licensed as Minnesota Class A Journeyworker Electricians, and 248 Wisconsin residents licensed as Minnesota Class A Master Electricians. With our shared borders, there are many opportunities for contractors, electricians, and residents to work in their neighboring community just across the border. Bordering communities and craftworkers appreciate this important proactive initiative.

Both states are progressively active in the **National Electrical Reciprocal Alliance (NERA)**. Minnesota and Wisconsin department staff have worked cooperatively together to analyze, compare, and determine that the two states electrical requirements align well. It is through their expert analysis and recommendations that we clearly see the two state's electrical licensing requirement statutes align.

Both Minnesota and Wisconsin have comprehensive statewide electrical licensing, permitting, and commercial/residential inspection. Wisconsin, like Minnesota, accomplishes inspection with state employee inspection, delegated municipality authority inspection, and contracted agent inspection.

To take the Wisconsin Electrical Journeyman exam, one must demonstrate 8,000 hours of work experience and four (4) years on the job training, or the completion of a construction electrician apprenticeship that has a duration of at least three (3) years and is approved by the US Department of Labor or the Department of Workforce Development.

Both Minnesota and Wisconsin have open book tests. Minnesota has 80 test questions and allows 5.5 hours to complete the test. Wisconsin has 100 questions and allows four (4) hours to complete the test. Wisconsin's exam has more test questions and less test taker time to complete the exam than Minnesota. Both tests are conducted under secure monitored conditions. Wisconsin's electrical exams have been professionally reviewed for reliability and validity. Wisconsin's exams use up to date compliant questions based solely on the 2017 National Electrical Code. The Wisconsin Journeyman electrical exam has rigor and there is an approximate pass rate of 25% when viewing all Journeyman test-takers.

Wisconsin believes in public safety and a trained and educated workforce. The state requires all its Electrical Journeymen to take a minimum of 24 hours of state approved classes in order to renew their license. The licensing renewal classes are required to be in related skill and knowledge areas.

Wisconsin ensures that electrical workers have direct supervision through SPS 305.40(4)(d) and 305.40(5). State language provides that a person who is enrolled as a registered electrician shall perform electrical wiring activities under the direct supervision of a person who holds a license either as a licensed master electrician or a licensed journeyman electrician or holds a registration as a registered master electrician.

A person who is enrolled as a registered electrician may perform electrical wiring activities under the direct supervision of a person who holds a license as a licensed residential master electrician or licensed residential journeyman electrician provided the wiring is associated with dwellings, dwelling units and detached accessory buildings and structures serving the dwellings or the dwelling units, such as garages, carports, gazebos, and swimming pools.

A person who is enrolled as a registered electrician may perform electrical wiring activities under the direct supervision of a person who holds a license as a licensed industrial journeyman electrician provided the wiring is within the facilities or properties of the business establishment where the industrial journeyman electrician is employed.

At any time, for any electrical wiring project, the total number of registered beginning electricians at an installation site may not exceed twice the total number of licensed or registered master electricians and journeyman electricians at the installation site plus two.

Wisconsin believes in providing safety to residents. Minnesota and Wisconsin share a lengthy border with many close-proximity communities. It is advantageous to the residents, the contractors, and the craft workers to allow licensure reciprocity. This proactive opportunity removes the requirements for licensed individuals to have to study for two separate exams and attend separate license renewal classes. It also makes it possible for both states' residents to reach a contractor nearby them to do their needed work.

We share your commitment to the proactive protection of the public and the betterment of the lives of our citizens. A reciprocity agreement between our two states only enhances this commitment. If approved by your board, a reciprocity agreement will foster greater collaboration between our states as we work to grow an educated, safety conscience and licensed workforce.

Sincerely,



Dawn B. Crim
Secretary-designee

Exhibit B: Housing First Minnesota Builder Member Attestations on SONAR, Cost of Complying for A Small Business



The Honorable Barbara J. Case
Administrative Law Judge
Office of Administrative Hearings
600 Robert Street North
Saint Paul, Minnesota 55164-0620

September 4, 2020

Re: OAH Docket No. 82-9001-36673

VIA ELECTRONIC DELIVERY

To the Honorable Judge Barbara Case:

In the Statement of Need and Reasonableness (SONAR) for the Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-4632 (Proposed Electrical Code), the Minnesota Board of Electricity stated the following:

"In development of this rule and at its January 14, 2020 board meeting, the Board discussed compliance costs and determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city."

As a homebuilder, I can confirm that the Proposed Electrical Code will directly increase the cost of each new home by roughly \$800 or more, depending on home type, size and configuration, before indirect costs, such as builder overhead and sales commissions from real estate agents. With the \$25,000 threshold established in Minn. State Statutes 14.127, Subdivision I, and the minimum \$800 cost increase from the Proposed Electrical Code, any homebuilder building 32 or more units annually will exceed the aforementioned threshold.

I attest the following:

- That Capstone Homes employs fewer than 50 full-time employees, meeting the requirements of Minn. State Statutes 14.127, Subdivision I.
- The cost of the Proposed Code will add \$800 or more to the cost of each new home.
- That Capstone Homes builds more than 32 homes per year, resulting in more than \$25,000 in direct expenses to the company as a result of the residential provisions of the Proposed Electrical Code.

In total, Capstone Homes will be affected during this year and each subsequent year that the provisions of the Proposed Electrical Code are in place. As such, I respectfully request you act under Minn. State Statutes 14.127, Subdivisions 2 and 5, disproving the agency determination and sever the residential provisions of the Proposed Electrical Code.

Respectfully,

Jon Peterson
VP of Purchasing | Product Development
Capstone Homes

The Honorable Barbara J. Case
Administrative Law Judge
Office of Administrative Hearings
600 Robert Street North
Saint Paul, Minnesota 55164-0620

September 3, 2020

Re: OAH Docket No. 82-9001-36673

VIA ELECTRONIC DELIVERY

To the Honorable Judge Barbara Case:

In the Statement of Need and Reasonableness (SONAR) for the Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-4632 (Proposed Electrical Code), the Minnesota Board of Electricity stated the following:

"In development of this rule and at its January 14, 2020 board meeting, the Board discussed compliance costs and determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city."

As a homebuilder, I can confirm that the Proposed Electrical Code will directly increase the cost of each new home by roughly \$800 or more, depending on home type, size and configuration, before indirect costs, such as builder overhead and sales commissions from real estate agents. With the \$25,000 threshold established in Minn. State Statutes 14.127, Subdivision I, and the minimum \$800 cost increase from the Proposed Electrical Code, any homebuilder building 32 or more units annually will exceed the aforementioned threshold.

I attest the following:

- That Youngfield Homes, Inc. employs fewer than 50 full-time employees, meeting the requirements of Minn. State Statutes 14.127, Subdivision I.
- The cost of the Proposed Code will add \$800 or more to the cost of each new home.
- That Youngfield Homes, Inc. *builds more than 32 homes per year, resulting in more than \$25,000 in direct expenses to the company as a result of the residential provisions of the Proposed Electrical Code.*

In total, Youngfield Homes, Inc. will be affected during this year and each subsequent year that the provisions of the Proposed Electrical Code are in place. As such, I respectfully request you act under Minn. State Statutes 14.127, Subdivisions 2 and 5, disproving the agency determination and sever the residential provisions of the Proposed Electrical Code.

Respectfully,

Steve Sauber
Vice-President
Youngfield Homes, Inc.



The Honorable Barbara J. Case
Administrative Law Judge
Office of Administrative Hearings
600 Robert Street North
Saint Paul, Minnesota 55164-0620

September 3, 2020

Re: OAH Docket No. 82-9001-36673

VIA ELECTRONIC DELIVERY

To the Honorable Judge Barbara Case:

In the Statement of Need and Reasonableness (SONAR) for the Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-4632 (Proposed Electrical Code), the Minnesota Board of Electricity stated the following:

"In development of this rule and at its January 14, 2020 board meeting, the Board discussed compliance costs and determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city."

As a homebuilder, I can confirm that the Proposed Electrical Code will directly increase the cost of each new home by roughly \$800 or more, depending on home type, size and configuration, before indirect costs, such as builder overhead and sales commissions from real estate agents. With the \$25,000 threshold established in Minn. State Statutes 14.127, Subdivision I, and the minimum \$800 cost increase from the Proposed Electrical Code, any homebuilder building 32 or more units annually will exceed the aforementioned threshold.

I attest the following:

- That OneTenTen Homes employs fewer than 50 full-time employees, meeting the requirements of Minn. State Statutes 14.127, Subdivision I.
- The cost of the Proposed Code will add \$800 or more to the cost of each new home.
- That OneTenTen Homes *builds more than 32 homes per year, resulting in more than \$25,000 in direct expenses to the company as a result of the residential provisions of the Proposed Electrical Code.*

In total, OneTenTen Homes will be affected during this year and each subsequent year that the provisions of the Proposed Electrical Code are in place. As such, I respectfully request you act under Minn. State Statutes 14.127, Subdivisions 2 and 5, disproving the agency determination and sever the residential provisions of the Proposed Electrical Code.

Respectfully,

Trace Mills
President

The Honorable Barbara J. Case
Administrative Law Judge
Office of Administrative Hearings
600 Robert Street North
Saint Paul, Minnesota 55164-0620

September 2, 2020

Re: OAH Docket No. 82-9001-36673

VIA ELECTRONIC DELIVERY

To the Honorable Judge Barbara Case:

In the Statement of Need and Reasonableness (SONAR) for the Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-4632 (Proposed Electrical Code), the Minnesota Board of Electricity stated the following:

"In development of this rule and at its January 14, 2020 board meeting, the Board discussed compliance costs and determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city."

As a homebuilder, I can confirm that the Proposed Electrical Code will directly increase the cost of each new home by roughly \$800 or more, depending on home type, size and configuration, before indirect costs, such as builder overhead and sales commissions from real estate agents. With the \$25,000 threshold established in Minn. State Statutes 14.127, Subdivision I, and the minimum \$800 cost increase from the Proposed Electrical Code, any homebuilder building 32 or more units annually will exceed the aforementioned threshold.

I attest the following:

- *That Sharper Homes, Inc employs fewer than 50 full-time employees, meeting the requirements of Minn. State Statutes 14.127, Subdivision I.*
- *The cost of the Proposed Code will add \$800 or more to the cost of each new home.*
- *That Sharper Homes, Inc. builds more than 32 homes per year, resulting in more than \$25,000 in direct expenses to the company as a result of the residential provisions of the Proposed Electrical Code.*

In total, *Sharper Homes, Inc* will be affected during this year and each subsequent year that the provisions of the Proposed Electrical Code are in place. As such, I respectfully request you act under Minn. State Statutes 14.127, Subdivisions 2 and 5, disproving the agency determination and sever the residential provisions of the Proposed Electrical Code.

Respectfully,

Kari Clark
President
Sharper Homes, Inc



The Honorable Barbara J. Case
Administrative Law Judge
Office of Administrative Hearings
600 Robert Street North
Saint Paul, Minnesota 55164-0620

September 2, 2020

Re: OAH Docket No. 82-9001-36673

VIA ELECTRONIC DELIVERY

To the Honorable Judge Barbara Case:

In the Statement of Need and Reasonableness (SONAR) for the Proposed Amendment to Rules Governing Adoption of the 2020 National Electrical Code, *Minnesota Rules*, Part 1315.0200; Revisor's ID Number R-4632 (Proposed Electrical Code), the Minnesota Board of Electricity stated the following:

"In development of this rule and at its January 14, 2020 board meeting, the Board discussed compliance costs and determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city."

As a homebuilder, I can confirm that the Proposed Electrical Code will directly increase the cost of each new home by roughly \$800 or more, depending on home type, size and configuration, before indirect costs, such as builder overhead and sales commissions from real estate agents. With the \$25,000 threshold established in Minn. State Statutes 14.127, Subdivision I, and the minimum \$800 cost increase from the Proposed Electrical Code, any homebuilder building 32 or more units annually will exceed the aforementioned threshold.

I attest the following:

- That Donnay Homes, Inc. employs fewer than 50 full-time employees, meeting the requirements of Minn. State Statutes 14.127, Subdivision I.
- The cost of the Proposed Code will add \$800 or more to the cost of each new home. (Our Electrician estimates it would add more than \$2,000 per unit.)
- That Donnay Homes, Inc. builds more than 32 homes per year, resulting in more than \$25,000 in direct expenses to the company as a result of the residential provisions of the Proposed Electrical Code.

In total, Donnay Homes, Inc. will be affected during this year and each subsequent year that the provisions of the Proposed Electrical Code are in place. As such, I respectfully request you act under Minn. State Statutes 14.127, Subdivisions 2 and 5, disproving the agency determination and sever the residential provisions of the Proposed Electrical Code.

Respectfully,

Steven K Behnke
Senior Project and Production Manager
Donnay Homes, Inc.

Exhibit C: *More Places To Call Home*, Report of the 2018
Minnesota Task Force on Housing



More Places to Call Home: Investing in Minnesota's Future

Report of The Governor's Task Force on Housing
August 2018



Governor's Task Force on Housing

CORE MEMBERS

Jeanne Crain, Chief Executive Officer,
Bremer Financial Corp. (Co-Chair)

Acooa Ellis, Senior Vice President,
Community Impact, Greater Twin Cities
United Way (Co-Chair)

Hukun Abdullahi, Executive Director,
Afro American Development Association

Jane Barrett, Executive Director,
Red Lake Reservation Housing Authority

Skip Duchesneau, President, D.W. Jones Inc.

Devean George, President, George Group North

Rick Goodemann, Chief Executive Officer,
Southwest Minnesota Housing Partnership

MayKao Hang, President,
Amherst H. Wilder Foundation

Sheila Kiscaden, Commissioner,
Olmsted County Board

Emily Larson, Mayor, City of Duluth

Mike Paradise, President, Bigelow Homes

Lael Robertson, Staff Attorney,
Housing Justice Center

Diane Sprague, Director, Lifetime Home Project

Richelle Taylor, Realtor, RE/MAX Metro Realty

Mar Valdecantos, Chair,
Northfield Human Rights Commission

EX-OFFICIO MEMBERS

Senator Rich Draheim

Senator Nick Frentz

Representative Bob Gunther

Representative Alice Hausman

Brad Hewitt, Chief Executive Officer,
Thrivent Financial, representing the Itasca Project

Matt Kramer, Vice President for University and
Government Relations, University of Minnesota

Neal Loidolt, President, Minnesota Assistance
Council for Veterans

Mike Maguire, Mayor, City of Eagan,
representing the Urban Land Institute Regional
Council of Mayors

Harry Melander, President, Minnesota State
Building and Construction Trades Council,
Vice Chair of the Metropolitan Council,
representing the Minnesota State Building and
Construction Trades Council

Mary Rippe, President, Minnesota Multi Housing
Association; and Cecil Smith, Board Chair
2017–18, Minnesota Multi Housing Association
(alternate to Mary Rippe, March–July 2018)

Deidre Schmidt, President, CommonBond
Communities, representing the Minnesota
Housing Partnership

Terri Thao, Program Director, Nexus Community
Partners, representing the Minnesota Housing
Finance Agency

Paul Williams, President, Project for Pride in
Living, representing the Metropolitan
Consortium of Community Developers

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Our Vision: Every Minnesotan has a place to live in a thriving community and livability remains a hallmark and competitive advantage for our state. Through collaboration, creativity, and effective investments, we will build Minnesota's future together and share in its prosperity.

— *The Governor's Task Force on Housing*

Letter from the Task Force Co-Chairs

It has been an honor to lead a Task Force of engaged community leaders committed to strengthening Minnesota's quality of life and thriving economy. This team came to the table ready to work on bolstering the well-being of all Minnesotans. We know that as Minnesotans, we have the tools and the talent to invest in the systems that make us strong and competitive—our workforce, our education, our natural resources, our communities, and our homes.

Over the last six months, we talked with people all over the state—employers, educators, builders, local officials, property owners, renters, and homeowners. Hundreds of neighbors shared their experiences and their solutions to help us understand what they regarded as the most pressing issues and promising solutions. We met with people who had experienced housing instability, and we heard how transformative it was for them and their children when they were able to find a decent and safe place to live. We talked with employers interested in expanding their workforce in Minnesota communities, but were limited by the lack of available or adequate housing. We heard stories of suffering—and we heard stories of hope.

We went around the state, to Austin, Little Falls, Sleepy Eye and Duluth, to Crookston, Minneapolis, Golden Valley and Saint Paul. Task Force members engaged in candid dialogue with concerned community members in forums designed for shared learning and exploration of solutions. We heard what people value about their communities and the significance of living in and contributing to the places they call home. We gained a better understanding of the uniqueness of each community and the commitment of community leaders to provide options and flexibility to meet their distinct needs.

The Task Force spent hours considering public input gathered through online idea submissions and surveys, public forums, as well as testimony from industry experts and concerned advocates. Much of the Task Force work was accomplished in three work groups which met monthly from January to May 2018. The work groups focused each meeting on specific topics related to their respective work group theme – Rental Housing, Homeownership, and Housing Stability and Opportunity. They heard from housing developers, operators, tenants, service providers, funders and counselors. They invited public input at each meeting, and they spent time discussing the issues and potential strategies. The work groups worked hard to mine a wealth of information to develop the recommendations in this report, and thoughtfully documented numerous and notable ideas reflected in the report's appendix.

At the conclusion of the work, members of the Task Force collectively agreed that accessible, affordable, and attainable housing must persevere as one of Minnesota's key competitive advantages. And so the work continues – Task Force members are committed to contributing to public, private, non-profit, and neighborhood efforts to ensure that homes and communities remain the cornerstone of a prosperous Minnesota.

The pages that follow reflect an extensive investment of time, talent, and treasure. A huge THANK YOU goes to all who shared concerns, insights and support—it was an honor to learn from and discover with each of you. It's been our privilege to work with the task force and staff teams, culminating in this report. We are proud to share this work with all Minnesotans and welcome your engagement to carry it forward.

Jeanne Crain and Acooa Ellis

Executive Summary

Where we live matters; it is connected with every aspect of our lives.

Success in life starts at home for all ages and all people. When we have safe, secure places to live, parents earn more, kids learn better, health and well-being improve, communities prosper, and we all thrive.

- We all thrive when families have a decent place to lay their heads at night—whether they are renters or homeowners. A stable home anchors the ladder for future success.
- We all thrive when we can live near our place of work, reducing the time and expense of commuting and leaving more time for community, health and family.
- We all thrive when our children have a secure home. Research indicates that kids are more likely to succeed in school and have better job prospects in the future when they don't suffer the stress of wondering where they will sleep.
- We all thrive when those of us who need health care resources can be supported where we live. People with secure homes can more consistently access the care they need.
- We all thrive when Minnesotans have strong pathways to building wealth through homeownership. Homeowners can build and pass on wealth, which can help break a cycle of poverty and generate resources to invest throughout the community.
- We all thrive when we ensure our seniors are integrated into our local communities and can choose a place to live that meets their physical, cognitive and social needs.

The smartest investment we can make in our state's future is securing a foundation of strong communities and stable homes for all Minnesotans.

In Minnesota, we enjoy vibrant communities and a dynamic economy—built on livability and affordability—that give us a strong competitive advantage, nationally and internationally. Our local businesses attract dedicated employees, our colleges and universities recruit high-caliber talent, and our towns and neighborhoods boast strong and welcoming communities.

Our homes are the foundation of our flourishing communities; they fuel the engine of our economy. No one thrives if we price out young adults who have the talent and skills to strengthen our businesses. No one thrives if businesses leave the state because they can't attract and retain a workforce. No one thrives if families struggle to put a roof over their heads. The more Minnesotans who succeed, the more Minnesota will thrive—and we have proven that we have the will, the creativity, and the solutions to do so.

We need to act now. Times have changed, and we must adapt to sustain our momentum. The affordability of homes in Minnesota, relative to our ability to pay for them, has been declining for years as rising costs for homes, transportation, health care, education and other basic goods, outpace the increase in average incomes. We haven't built enough to keep up with demand over the last decade, which means we have more families trying to secure the same number of homes. This unmet demand drives up home prices for everyone, renters and buyers. We need to be intentional and proactive in how we respond to a changing economic landscape.

PRINCIPLES OF A RESILIENT HOUSING SYSTEM



The task force began by identifying six overarching “Principles of a Resilient Housing System”, which it used in evaluating all input and potential recommendations.

- **Fair and equitable access to safe, quality, stable housing** for all families and individuals is critical for success in education, health and economic stability, and disparities resulting from differences in race, ethnicity, income and location must be addressed.
- **A full range of housing choices** is a fundamental characteristic of strong and healthy communities and an economically prosperous Minnesota.
- **Effective partnerships** between public, private and non-profit sectors are essential for healthy housing markets.
- **Focus limited public resources** on those segments of the housing market not well-served by the private market alone.
- **Housing stability** for some families and individuals may require supports, like access to job training, education, child care, transportation and health care, which are connected to housing that is affordable.
- **Solutions must have the flexibility** to meet the market realities of communities with varying needs.

Housing Task Force goals and recommendations: A road map for Minnesota to succeed.

Ensuring a strong Minnesota for years to come requires action on a number of fronts. The Task Force recommends 30 ways to sustain and improve Minnesota's housing, organized under six goals. The goals identify where to go and the recommendations show how to get there. Some of the recommendations can be acted on quickly and others will take more time. Some require many partners to advance and others can be done with a few key stakeholders. They range from statewide efforts to local solutions based on need, and provide a suite of actions to address our varied housing needs that can be used to provide stable homes for all Minnesotans.

Here is an overview of the goals and recommendations, which the report describes in detail.



Goal #1: Commit to Homes as a Priority

Create a broader and stronger public commitment to the urgent need for more homes that are more affordable to more Minnesotans.

Like roads and bridges, homes are building blocks—assets that will be around for decades. By investing in our homes, we improve outcomes in education, health, and economic opportunity. Homes are our starting place.

- 1.1 Launch a public-private partnership to forecast demand, set goals and measure progress.
- 1.2 Create dedicated, permanent funding sources for affordable homes in addition to current funding sources.
- 1.3 Invite all Minnesotans to recognize homes as a central and critical part of the economic and social well-being of all residents and communities in Minnesota.



Goal #2: Preserve the Homes We Have

Keep the homes we already have, especially those that are most affordable.

Let's begin by securing our existing assets. The most cost-effective way to provide homes that are affordable for Minnesotans is to maintain and preserve the homes and apartments we already have.

- 2.1 Expand and streamline existing rental rehabilitation programs to preserve critical rental assets.
- 2.2 Incentivize private-market owners to keep rental units affordable to low-wage families by using targeted support from local and state government.
- 2.3 Support and expand existing home-rehabilitation tools and programs at the state and local levels to serve more homeowners who need to make improvements.
- 2.4 Substantially increase support for rehabilitation of public housing, much of which is experiencing notable deterioration.

**Goal #3: Build More Homes**

Build 300,000 new homes by 2030, across all types, prices, and locations to stabilize prices and meet demand.

Minnesota has built a reputation of livability and opportunity, with homes people can afford as a key ingredient. To ensure our neighborhoods and communities remain strong and healthy, we need to use all the tools and innovation at our disposal to enable the private sector to build to meet the demand.

- 3.1 Position Minnesota as a national leader in the advancement of housing innovation and technology.
- 3.2 Grow the pool of talent in Minnesota's building trades to enable the sector to meet current and future demand.
- 3.3 Increase the capacity of local leaders to implement tools and solutions to address the home-affordability needs of their communities.
- 3.4 Expand the range of housing types across Minnesota communities.
- 3.5 Create a statewide review panel to evaluate regulations related to building standards, land use, and environmental stewardship for their impact on housing affordability.

**Goal #4: Increase Home Stability**

Assist twice as many people at risk of losing their homes because of rent increases, evictions, and heavy cost burdens.

When you lose your home, you lose your community—and the consequences of this major life disruption can last for decades. By doubling our investment in rental assistance, promoting voucher acceptance, preventing displacement, and improving protections for renters, we can reverse this trend, so kids learn, parents earn, and communities grow stronger.

- 4.1 Enhance and expand state and local rental assistance programs to complement federal programs that are too small to meet the need.
- 4.2 Define and crack down on predatory rental practices, including excessive evictions and poor condition of rental units.
- 4.3 Strengthen protections for renters in the private market.
- 4.4 Increase the speed and flexibility of emergency resources to prevent people from losing their homes.
- 4.5 Expand and enhance programs that help people navigate the systems to find homes and vital housing resources.
- 4.6 Incentivize the acceptance of rental assistance vouchers by the private market.
- 4.7 Prioritize investments needed to achieve the goals in Heading Home Together: Minnesota's Action Plan to Prevent and End Homelessness.



Goal #5: Link Homes and Services

Build stronger links between where we live and the services we may need to live stable lives.

At some point in our lives, most of us will need a helping hand. Many of us will be seniors who require assistance to stay in the place we've long called home. Other Minnesotans have experienced trauma or need health services. We can achieve better outcomes in a more cost-effective way when we coordinate services to meet people where they live.

- 5.1 Provide a dependable stream of funding for social services that help households maintain stable homes.
- 5.2 Provide access to a full range of services for families and individuals transitioning into stable homes before, during, and after the transition.
- 5.3 Improve health outcomes and reduce costs for tenants by developing better partnerships between health care and housing providers.
- 5.4 Advance the Housing Supports program for residents with disabilities by identifying gaps and potential program enhancements to ensure statewide coverage.
- 5.5 Expand programs and providers who assist individuals in finding, securing, and retaining affordable rental homes.



Goal #6: Support and Strengthen Homeownership

Create pathways to sustainable homeownership, with a focus on removing barriers for households of color.

Our wealth and our retirement savings are concentrated in our homes. Most Minnesotans want to own a home, and everyone who can sustain homeownership should be offered the tools, coaching, and access to financing they need to make this investment in their own future and in our communities.

- 6.1 Focus on increasing access to homeownership resources for the large number of income-ready households of color who want to buy.
- 6.2 Promote alternative models of building wealth through homeownership, such as community land trusts, cooperatively owned housing and manufactured home parks.
- 6.3 Encourage employers and foundations to support home purchases.
- 6.4 Increase funding for financial education and counseling programs that expand the capacity of households to pursue homeownership.
- 6.5 Expand mortgage products and provide extra support to local community banks to expand financing options.
- 6.6 Expand available down-payment assistance programs.

The goals and recommendations of the Task Force are detailed in the following pages of this report. Each of the six chapters focuses on a goal and its associated recommendations, describing the context of the situation, what's working and what needs attention. Following the goal and recommendation chapters are a set of appendices that describe the Task Force and its processes. The appendices include an inventory of ideas gathered from the Call for Ideas hosted online in March, show the proposed recommendations that emerged from each work group prior to the Task Force settling on a refined list of 30 recommendations, and explain some of the housing goals highlighted in this report.



Where we live matters in every way.

Our homes are our foundation and our future. Every challenge we face—as individuals, as families, as communities—will be easier to meet when we all have a secure place to lay our head at night. When we make that fundamental goal a reality for all Minnesotans, we will all thrive.



Goal #1: Commit to Homes as a Priority

Create a broader and stronger public commitment to the urgent need for more homes that are more affordable to more Minnesotans.

Where you live matters because it forms the foundation for economic mobility, academic success, and healthy living. We all thrive when we come together with the conviction that success in life starts at home. We need a partnership among government, business, builders, lenders, nonprofits, philanthropy, and community leaders to make additional affordable homes a reality.

Minnesota's future depends on our ability to adapt to a changing economy, plan for the workforce we need, and make smart investments. There is no smarter or stronger investment we can make than in planning for Minnesotans to have good homes in thriving communities across this state. Stable homes correlate to positive outcomes in health and education. Affordable homes enable workers to relocate for jobs, invest in their individual futures, and put more income back into the state's retail and commercial businesses. Homes are essential infrastructure for economic prosperity, just like roads and schools, and we can't have vibrant communities and a thriving economy without them.

Minnesota has a strong history of investing in affordable homes, but current conditions make this an important time to invest more.

Minnesota has a well-earned reputation for collaborative and efficient investments in homes. In a typical year, around 20 percent of all new

rental units built in the state receive some sort of assistance to make them affordable. We also have a long track record of preserving existing homes and keeping them affordable.

We need to maintain these crucial investments, but they fall short of addressing the demand for homes in today's Minnesota. Other states have moved faster than we have in recent years. In March 2018, the Massachusetts Senate unanimously passed a \$1.8 billion Housing Bond Bill that expanded tax-credit opportunities and injected a much-needed infusion of capital into existing homes. The Massachusetts legislation will restore publicly owned units, preserve nearly 10,000 affordable private units, and increase the production of new homes across the state.¹ North Dakota passed a trailblazing new tax-credit program, the Housing Incentive Fund, which enables employers and citizens to contribute directly to developments of affordable homes in their state—to developments in their own communities—and receive a dollar-for-dollar credit in return.² Leveraging private investment in this way has been popular and effective for North Dakota, and it was quickly utilized. These are just two examples of how other states are rising to the challenges of the current market in bigger ways.

Recommendations

This Task Force was convened with a charge

to investigate and understand the affordability of homes around the state and develop innovative solutions for our families, individuals, and communities. This report highlights recommendations connected to six overarching goals set out by the Task Force. Each set of recommendations provides substantive tools for forward progress. Here are three that set the stage for what Minnesota needs to do to get ahead—and stay ahead—of the demand for more homes.

1.1 Launch a public-private partnership to forecast demand, set goals, and measure progress.

Currently, individual organizations—such as state agencies, cities, nonprofits, and developers—set plans and goals for housing production and preservation based on their individual resources and opportunities. We should look to flip the system and enable a comprehensive and future-oriented approach to setting goals based on demand and real need. Greater transparency and access to good forecasting data would equip those same organizations to make informed and efficient decisions and to more effectively target public resources.

Too often, we've taken a reactive approach to this critical engine of our state, and we've fallen short as a result. Right now, more than 25 percent of all Minnesotans and more than 45 percent of renters are burdened by housing costs. For these Minnesotans, paying more than 30 percent of their household income toward housing costs has been the reality for the past decade.³ Furthermore, the state's lowest-income households and households of color are the renters most proportionally burdened by housing costs. We are investing, but we aren't tackling the full challenge. The Task Force recommends shifting our thinking: it's time to set goals based on need, rather than just on current resources.

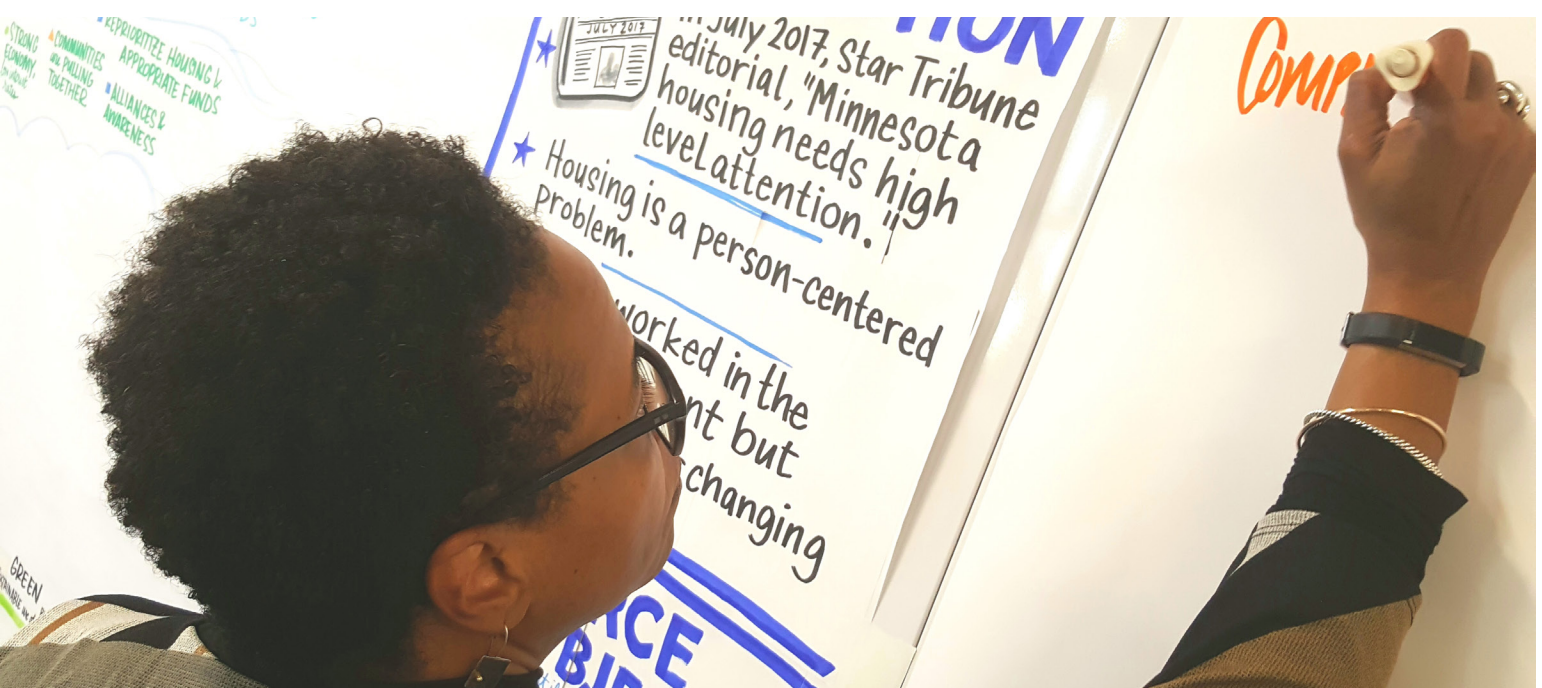
Going forward, using the best information at our disposal, we need to work proactively to set, track, and achieve clear goals that will enable success for our state. Minnesota will thrive with a strong foundation of homes that are affordable for households with a wide range of incomes.

Based on extensive community input, the Task Force recommends that a nonpartisan, cross-sector group take the lead in forecasting demand, setting goals, and measuring progress for the state by regularly establishing targets aligned with each of the six goals discussed in this report. This nonpartisan group should assess which measurements are appropriate for goal setting, reconcile measurements or methods that vary across agencies, and agree on a data-sharing strategy. To best position Minnesota for success, the metrics should assess data within and across regions and markets so we can target our investments where they will have the most impact.

1.2 Create dedicated, permanent funding sources for affordable homes in addition to current funding sources.

As we set goals, we need to equip ourselves to meet them. Homes are essential infrastructure. Public investment will always be critical to enabling all Minnesotans to have safe, affordable homes from which they can pursue opportunities and succeed. Ensuring that Minnesota's residents—including its workforce and school kids—have stable homes is directly linked to the state's economic vitality and competitiveness.

The importance of housing parallels the importance of our state's other infrastructure. Just as everyone needs our roads and bridges, which we understand as central to our economy, so it is with our homes. In the first half of 2018, the Task Force heard strongly from private, nonprofit, and public stakeholders that we need



to maintain the level of funding we currently have for investing in homes AND add new, stable funding sources. The Task Force believes it's time to create dedicated and permanent streams of funding for affordable homes, just as we do for other critical infrastructure, and they should exceed current levels of funding.

The Task Force did not review all the options for a new, dedicated source of permanent funding; however, examples exist. At a state level, we could pursue a tax-credit program or other incentives for companies and individuals who make investments in homes their communities need. North Dakota provides one such model—and a similar bill was under consideration in Minnesota's 2018 legislative session. Massachusetts offers another example, as do successful existing models in our state and elsewhere that drive funding to transportation, education, and other critical functions. We need the same kind of predictable and sustainable investment source for investing in homes.

The state government should also authorize local governments to do more. Specifically, local

governments should be empowered to expand the use of tax increment financing (TIF) dollars to invest in specific affordable homes, mixed-income developments, or other infrastructure needed to support these developments. They should be able to pool funding as needed to more efficiently and effectively target these resources. This may also require modifying the low-income requirements to establish TIF districts for homes, and enabling local governments to reduce taxes in exchange for reduced rents. Our local governments should have the latitude to implement the agile, creative approaches they need, and their successes can serve as examples across the state.

These approaches outline a strong start. We need to understand the demand we face and get to a more appropriate level of investment in our housing infrastructure. Through greater efficiency, true innovation, and public-private partnerships, we can better leverage the resources we have—but we need to be honest about the resources required. If we falter when it comes to making the strategic, up-front investments required, then the cost to all

Minnesotans could be a floundering economy, rising home prices across the board, and lost opportunity.

1.3 Invite all Minnesotans to recognize homes as a central and critical part of the economic and social well-being of all residents and communities in Minnesota.

Where we live is not an ancillary issue, and it shouldn't wait for the creation of a task force to bring it to the forefront. Homes are a current, critical, and constant community issue. We should engage in regular community conversations and education to equip people across the state to act in our shared interest.

Elected leaders, nonprofits, business leaders, and individuals should have the opportunity to offer ideas and solutions around the necessity of homes. Community forums to explore solutions, such as the ones hosted by the Task Force, should be a regular feature in our cities, towns, and neighborhoods.

As a Task Force, we commit to standing at the forefront of this movement. You can expect members of the Task Force to form the core of public, private, nonprofit, and individual efforts to build on the idea of homes as a key resource for a prosperous Minnesota. Accessible, affordable, attainable homes are our competitive advantage as a state. Homes are the bedrock of our communities; they're at the root of our success. We invite all Minnesotans to join us.



Goal #2:

Preserve the Homes We Have

Keep the homes we already have, especially those that are most affordable.

The most cost-effective way to provide homes that are affordable to most Minnesotans is to preserve our existing stock of homes. This is particularly true as the growing demand outpaces new supply and the tight market drives home prices higher. To keep and improve the homes we have, we can provide financial resources for current owners to make repairs and improve the quality of living for themselves or their tenants while maintaining affordability.

Older homes are more affordable to own and maintain than the cost of equivalent new homes.

Minnesota has a strong supply of homes that families and individuals can afford in our existing owned and rented homes. Three quarters of the owner-occupied homes in the state are valued at under \$250,000—a level generally considered affordable in today's market—and 38 percent are valued at \$150,000 or less. Generally, as houses age their value decreases, making older homes a good value in many communities. While these houses and apartments vary in condition and quality, investing in them provides a way to preserve homes at a range of prices.

Maintaining older homes often requires rehabilitation or modernization, but these updates are almost always less expensive than building new and are frequently less than half the cost.⁴ Home rehabilitation helps homeowners remain in

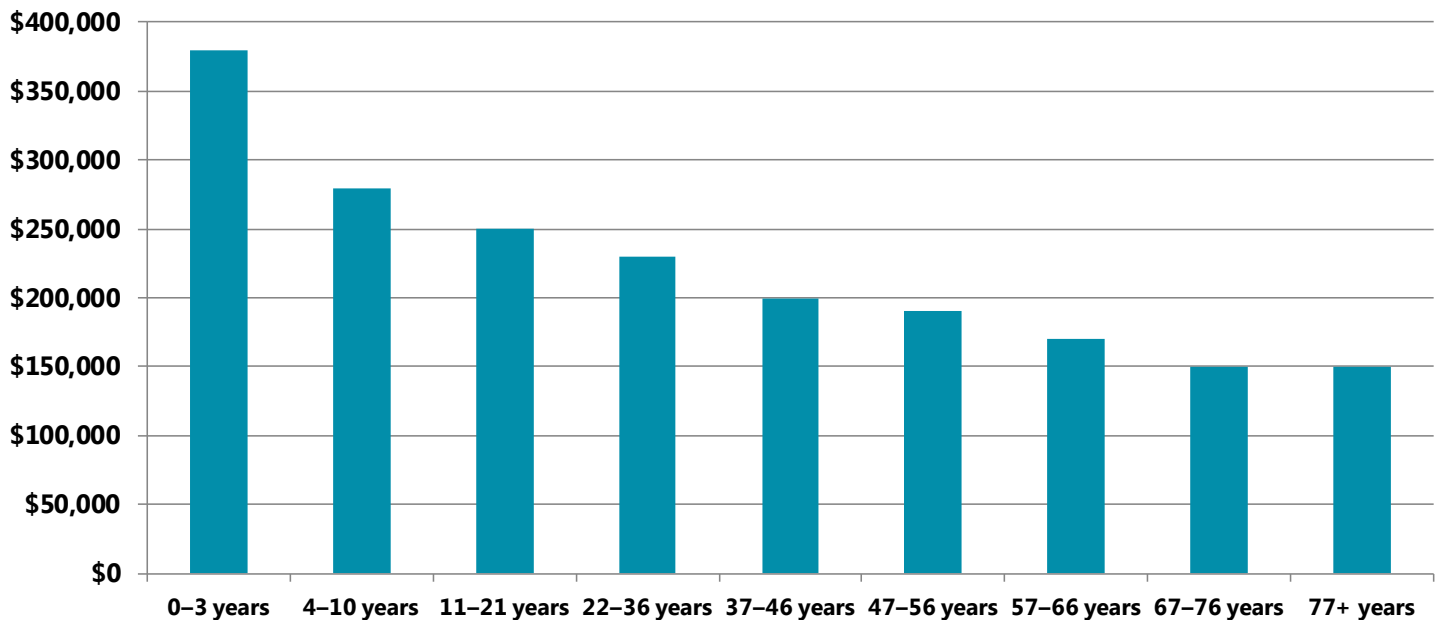
their homes for less cost than buying and moving to a comparable property.

This is particularly true for senior homeowners. A recent study by Wilder Research found that 16,400 extremely low-income senior households (households at or below 30 percent of their area's median income) have home-rehabilitation needs, including both habitability repairs and accessibility improvements.⁵ For an estimated cost of just \$16,000 per home, these seniors would be able to stay in their own rehabilitated homes and their communities for another five years. Compared to the cost of assisted-living alternatives, this cost is minimal, and studies show that most seniors prefer to age in place.

AGING IN PLACE WITH REHAB LOANS

Casper is an elderly gentleman that lives out in the country by himself. He ended up in the hospital from carbon monoxide poisoning so his furnace was replaced but his levels still stayed high. The county investigated and found his septic system was bad and they ended up condemning his home until his system was replaced. Casper was able to get his system replaced with a loan through Minnesota Housing and Rural Development. Casper was very happy to be able to go back home because his home is where he was born and lived his whole life. If this program wasn't available, Casper would not have been able to return home.

MEDIAN HOME VALUE BY AGE OF PROPERTY



Source: Minnesota Housing analysis of data from the U.S. Census Bureau's American Community Survey (2016 one-year sample, microdata, IPUMS.org)

In a 2010 survey, Minnesota Baby Boomers were asked what type of home they might choose the next time they move, and only seven percent expressed an interest in moving to a seniors-only apartment complex.⁶ Even when the costs of home health services are included, it is cheaper to keep someone in their home than in a nursing facility—when staying in their home is desired and possible for them.

The Wilder study estimated that assisting the 16,400 senior Minnesota households with their home-rehabilitation needs could be achieved with a total budget of \$250 million, or \$50 million annually over five years. Unfortunately, the need among senior households alone greatly exceeds the existing available rehabilitation resources. For example, annual funding for Minnesota Housing's Rehabilitation Loan program is only \$9.5 million, with seniors accounting for a third of the clients.⁷

Keeping homes in good repair requires ongoing investment.

Rehabilitation can address properties' basic living conditions to improve the health and safety of

residents. Rehab projects can include modifications to reduce utility costs, reconfigure the space for growing or shrinking families, or improve accessibility for aging seniors or people with special needs.

We can lose both owned and rented homes if they deteriorate too far. Many older rental properties haven't had significant capital investment since their construction and require major reinvestment in the years ahead. Conditions may have deteriorated to the extent that the health and safety of residents is compromised.

In addition to improvement expenses, property owners often face increased operating costs that reduce affordability—escalating property taxes, utilities, and insurance. For rental properties, these costs are passed on to tenants and may mean the difference between maintaining stable homes and having to move. Stabilizing or reducing operating costs will help maintain affordability for property owners and renters.

Since its founding in the early 1970s, Minnesota Housing has provided a range of financing programs

that can help both homeowners and rental property owners improve their properties. Communities around the state often use these resources in combination with local support to encourage whole neighborhoods to fix up their older properties. The results are good for both the property owners and the entire community because neighborhoods look better and property values increase.

When improving older rental properties, it's important to keep rents affordable.

Preserving existing affordable homes must focus on both quality and affordability. Minnesota has around 366,000 apartments priced at a level that families who earn half the local median income can afford to rent.⁸ (As an example, for a family of three in the Mankato area, that would mean a household income of \$33,750 per year.) Two primary types of existing affordable rental homes are available in Minnesota, and preserving each is essential and cost effective. The two types are:

- *Naturally occurring:* Rental homes on the private market that are relatively low in price because of condition, location, lack of amenities, or other market factors
- *Government-assisted:* Homes with rents capped at an affordable level for a certain amount of time in exchange for public funding

Naturally occurring affordable rental units account for over 200,000 of the 366,000 total affordable rental units in Minnesota. Unfortunately, we estimate that Minnesota is losing roughly 2,000 naturally occurring affordable rental units per year as low-priced properties are sold and improved, which leads to rent increases.⁹

Some property owners in the state are willing to buy naturally occurring affordable properties, make improvements, and then continue to maintain and manage them at affordable rent levels. These buyers often require a modest level of financial support from

local governments and community-based lenders to make bids on the properties that are competitive with those of other potential buyers who can make more money on properties by increasing rents. We can limit the level of costlier new construction for affordable units by finding ways to keep the rents for these existing units affordable.

The loss of these naturally occurring affordable apartments has accelerated recently as investors, in some cases investors from out of state, are targeting low-value properties in prime markets across Minnesota. They're buying them, making modest improvements, and raising rents significantly. This phenomenon emerged as housing prices plummeted following the housing crisis in 2008 and has escalated the scale and pace of rent increases experienced in many communities. These rising rents are felt even more acutely in areas with a low supply of available homes.

Government-assisted rental homes come with affordability limits tied to public resource investments from a variety of programs. As of 2018, there were 114,000 of these homes statewide, funded through a few key programs.¹⁰ Although these rental units account for about five percent of the homes in Minnesota, they play a vital role in serving the lowest-income households. Of the households living in project-based Section 8 housing in Minnesota, the median annual income is \$12,177; 45 percent are elderly, and 31 percent are disabled.¹¹

RENTAL UNITS WITH A PUBLIC INVESTMENT¹²

	Number of Units
Project-Based Section 8	30,350
Public Housing	20,750
USDA Rural Development	975
Other Rent Limits (primarily Low-Income Housing Tax Credit)	52,925
Total	114,000

These affordable properties provide a secure place to live for many low-wage workers in Minnesota

POTENTIAL LOSS OF AFFORDABLE HOUSING



Of Minnesota's roughly 30,000 project-based Section 8 units, over 15,000 are in projects with a contract that will expire in the next 10 years.



Of Minnesota's roughly 10,000 USDA RD units, about 1,900 are in properties with a mortgage that will mature in the next 10 years and lose its rent assistance.

and are essential to attracting and maintaining a stable workforce. However, most limits on rents expire after a set time period, at which point the apartments are at risk of significant rent increases. Minnesota Housing has a long history of working with owners of these properties to invest the dollars needed to make critical repairs in exchange for the owners' agreement to maintain the affordability requirements, often for an additional 30 years.

Our strategy to preserve the homes we have must include the preservation of manufactured home parks, especially their critical infrastructure including water, sewer and roads. These communities provide affordable housing options and several large parks have closed for redevelopment in recent years, displacing families and leaving communities with fewer affordable homes.

We have several successful programs that can be expanded to preserve homes.

The good news is that Minnesota has a wide array of programs for maintenance and rehabilitation that, if expanded, could provide needed resources to more owners of moderate- to low-cost homes statewide. Through a network of community lenders, Minnesota Housing provides financing to help preserve 3,000 to

5,000 owned and rented homes annually through a mix of public and private resources.¹³

Many local governments also have programs that use federal, state, and local funding to offer grants or loans to rehabilitate housing (e.g., federal Community Development Block Grants). While these programs are effective, they can't extend to all the houses in need of rehabilitation and preservation. For example, the Small Cities Community Development Block Grant program is available annually on a competitive basis, so a community may have funding one year but not the next.

Some local, state, and utility-company programs support property owners in making urgent and/or energy-efficient repairs, but they don't cover more general repairs. Additionally, several nonprofit organizations provide home repairs for Minnesotans. For example, Rebuilding Together uses volunteers to make livability and accessibility repairs for low-income homeowners. Similarly, Twin Cities Habitat for Humanity's A Brush with Kindness program uses volunteers and contractors to make mechanical, carpentry, safety, and accessibility repairs for low-income homeowners.

Recommendations

Maintaining existing homes and apartments is a critical strategy for providing homes in Minnesota. The Task Force makes the following recommendations for how we can build on already successful strategies to preserve even more affordable homes and apartments in the future.

2.1 Expand and streamline existing rental rehabilitation programs to preserve critical rental assets.

The State of Minnesota and other partners have built a network of programs to provide some of the needed funding that property owners can use to rehabilitate existing rental properties in exchange for not increasing rents, but only a few

owners of small rental properties are using them. The Task Force recommends that successful rental rehabilitation programs from around the state (e.g., Saint Paul, Mankato and Northfield) be examined to determine how current programs can be improved and expanded to serve more property owners.

2.2 Incentivize private-market owners to keep rental units affordable to low-wage families by using targeted support from local and state government.

The Task Force recommends that Minnesota Housing work with local governments to develop a set of financing and regulatory incentives designed to encourage ownership of naturally occurring affordable rental properties by owners who are interested in keeping rents affordable over the long term. This effort should include exploration of potential changes and expansion of the 4(d) property tax classification.

2.3 Support and expand existing home-rehabilitation tools and programs at the state and local levels to serve more homeowners who need to make improvements.

Homeowners of lower-cost homes, like rental

property owners, are often challenged to pay for home improvements. Yet remaining in an existing home, even with the cost of rehabilitation, is usually less expensive than buying an equivalent home elsewhere—due to moving costs, financing, and the increasing price of for-sale housing. The Task Force recommends expanding existing programs to serve more people and communities throughout the state, while fine-tuning programs to serve special markets, such as manufactured-home parks. Program guidelines should be reviewed to determine if they provide enough flexibility to meet local circumstances and needs.

2.4 Substantially increase support for rehabilitation of public housing, much of which is experiencing notable deterioration.

The Task Force recommends continuing and increasing funding for the rehabilitation of public housing. Public housing accounts for 5 percent of the 366,000 affordable units and many of these units suffer from significant deterioration. One estimate suggests that an additional \$20 million could preserve 2,891 public housing units, improving the living situations of thousands of families.¹⁴

HOME REHABILITATION PROGRAMS FOR VERY LOW-INCOME HOUSEHOLDS

Minnesota Housing offers the **Rehabilitation Loan Program (RLP) and Emergency Loan Program (ELP)** for very low-income households. RLP and ELP provide 0 percent deferred loans to homeowners earning 30 percent or less of area median income (AMI) to make emergency repairs, increase accessibility, or address basic upgrades. Minnesota Housing also offers the Fix Up Loan Program, which provides interest-bearing loans for rehabilitation to low- to moderate-income homeowners.

The United States Department of Agriculture Office of Rural Development offers the **Section 504 Home Repair program**, which provides rehabilitation loans and grants to very low-income homeowners. It offers loans to households to repair, improve, or modernize their homes, and grants to the elderly to remove health and safety hazards.

The Minnesota Department of Commerce offers the federal **Weatherization Assistance Program**, which provides free home-energy upgrades to income-eligible homeowners and renters. Examples of eligible upgrades include attic insulation, air-leakage reduction, and furnace replacement.



Goal #3: Build More Homes

Build 300,000 new homes by 2030, across all types, prices, and locations to stabilize prices and meet demand.

Minnesota has built a reputation of livability and opportunity, and homes people can afford are a key ingredient. The wealth of natural, human, and economic resources across our state has attracted new businesses and workers and built a thriving economic base. In today's market, rising home prices and the shortage of homes make it difficult for employers to keep the workforce they need and endanger the stability of many communities across the state. We need to take action to retain Minnesota's competitive advantage in livability.

We can use the ingenuity and know-how in our state to create the homes our residents require. We need to accelerate our current pace of building and explore incentives to enable the private market to build 300,000 homes and apartments by 2030. Across the state, roughly 20,000 new homes were built last year. Addressing the full need and the current backlog in a timely way requires a short-term ramp up to build an additional 50,000 homes—or at least 10,000 per year above current production for the next five years.

By building well-designed homes and pursuing strategies to lower the cost of construction, we can actively plan for future needs and simultaneously invest in our skilled trades. This is a win-win for everybody—enabling Minnesotans to live in the communities where they work and offering a range of housing types and prices to meet today's needs.

Our unusually low supply of homes has consequences for everyone.

The affordability of homes has been a competitive advantage for Minnesota and our employers, but a growing shortage of homes is pushing prices beyond the reach of many individuals and families. New housing construction has not kept pace with household growth since the Great Recession, as evidenced in the short supply of homes for rent or sale.

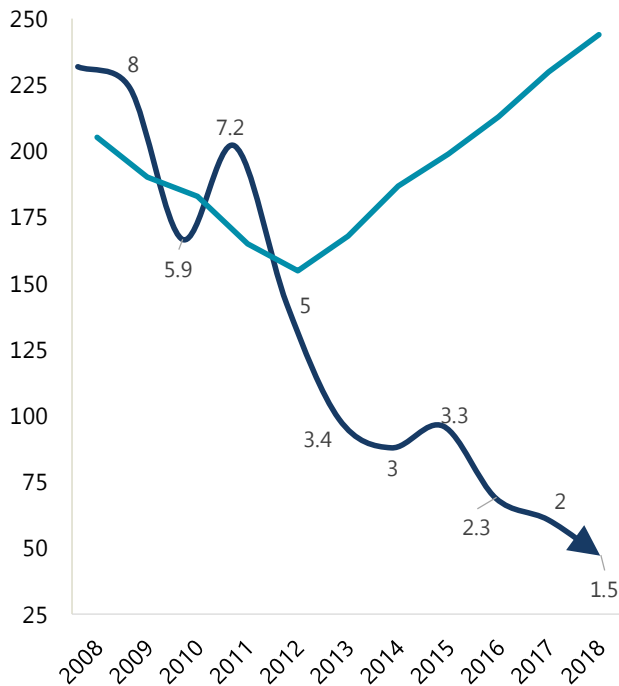
A healthy housing market has a four- to six-month supply of homes for sale. In the Twin Cities metro area today, there is just over a two-month supply.¹⁵ In the rental market, a healthy vacancy rate is 5 percent. In Minnesota today, the statewide rental vacancy rate is about 4 percent and as low as 2.2 percent in the metro area.¹⁶ Healthy vacancy rates give families options in the marketplace and the ability to move to a different location or size of home as their needs change. When vacancy rates are too tight or the supply of homes is too low, prices rise across the board and families may be stuck in homes that don't work well for them. The consequences of a limited supply are illustrated by recent trends in the Twin Cities area.

This market dynamic affects everyone. Renters are rushed to apply for the first available place, even if they can't afford it, reducing their disposable income for other critical needs,

TIGHT HOUSING MARKET CONDITIONS LEAD TO INCREASES IN HOME PRICES AND MONTHLY RENTS, AS SEEN IN THE MINNEAPOLIS MARKET

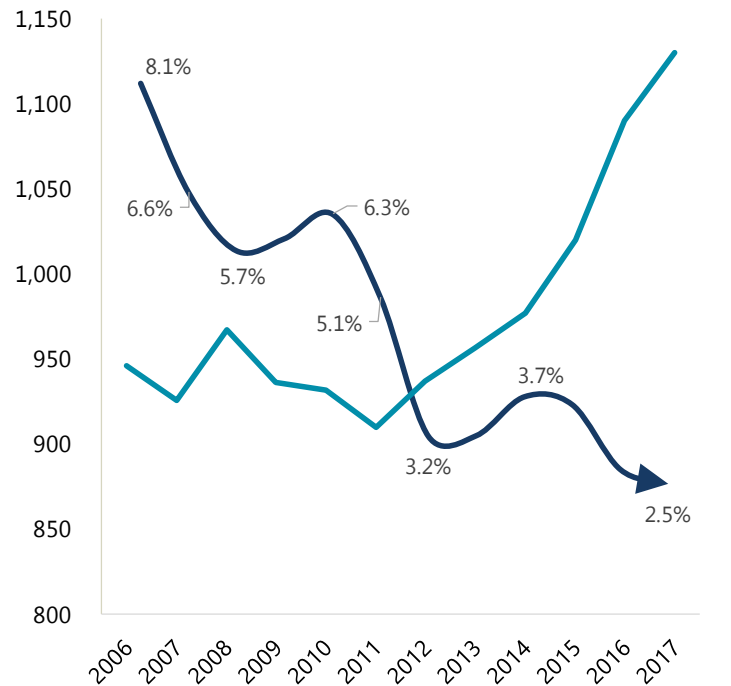
Median home prices and available inventory

Purchase price (\$000s) and inventory (months of stock)



Average rent and rental vacancy rates

Monthly rent (\$) and unoccupied rental units



SOURCE: Minneapolis Area Association of Realtors Monthly Indicators (Jan 2018); Northstar MLS; US Census Bureau; Zillow

such as food, transportation, and education. Young families face difficulties finding and buying a first home because starter homes remain occupied by families who can't afford to move up into second and third homes. Senior citizens may also lack the option to downsize or move to a home more appropriate to their current needs. Millennials and Baby Boomers are competing for homes in the moderate price range, particularly in walkable, transit-connected communities where home prices are rising fast.

These price increases are notable. Across Minnesota, home prices have increased 8.9 percent in the last year alone.¹⁷ Homes in Minnesota are now 26 percent more expensive on average than in neighboring states.¹⁸ Meanwhile, rents have increased 4.1 percent.¹⁹ As home prices rise, more and more families lack regular and secure access

to a home and are at risk of homelessness. In some cases, new Minnesotans coming here for work are moving into temporary accommodations, hotels, or crowded and unsafe housing because decent places to live are fully occupied. These challenges can impact families, individuals, and newcomers across the state and in communities of all sizes.

We get \$3.2 billion in new investments and 30,000 jobs for every 10,000 new homes we build.

Over the next twelve years, Minnesota will need to enable the private sector to build 300,000 new homes to stabilize prices in the market and keep up with demand. This starts with addressing the current shortage of homes. Although the pace has increased in recent years, we have yet to make up for precipitous decline in home construction during

the Great Recession. Current building rates are unable to close the gap, and without a significant increase in production, Minnesota will remain behind the curve. We need around 50,000 new homes just to address the current backlog.

If we want to close the gap in available homes, as the Task Force recommends, we must increase current construction levels for the next five years to build at least 30,000 homes annually, which is 10,000 more homes than current production levels. The shortage of homes comes with a short-term cost, but we have an opportunity to create long-term benefits for the state. Increased construction brings good jobs, produces additional revenue, and can stabilize home prices on the open market so we can further target public resources to areas where the private market doesn't work effectively. As a state, we will realize an estimated \$3.2 billion in investments and support more than 30,000 jobs for each 10,000 additional homes we build.²⁰

After addressing the backlog, we need to continue to build at a steady pace of nearly 20,000 homes annually going forward. While we built at this clip at 2017, that level was a ten-year high. Such a significant increase will be difficult to achieve without policy changes that allow and encourage increased production, such as regulatory reform, widespread implementation of best practices, and economic incentives.

Left to its own devices, the market will not effectively solve the shortage of homes.

The increased cost of building intensifies our shortage of homes, making it harder for developers and builders to construct a new apartment or house at a cost that most Minnesotans can afford. Constructing a basic rental home—a two-bedroom apartment—now costs roughly \$200,000, which requires rents that are too expensive for the average Minnesota renter.²¹ The story is the same for homeownership.

With the costs of land and construction high, the market naturally trends toward building more-expensive homes. As we increase production levels, we need to create a healthy supply of homes at all income levels and in all communities. That's how we can better meet today's needs.

More skilled workers, regulatory relief, and new building technologies can help reduce construction costs.

Increased construction costs are driven by a shortage of skilled labor, more regulations, higher fees, and a fragmented construction industry, which hasn't seen the productivity gains and technological advancements of other fields. These challenges are solvable. We can do more in our state's building and construction industries to bring down new-home prices. Even small savings can open up homeownership for many people. For every \$1,000 we can shave off the price of a new home, 2,800 additional families become able to afford to live there.²²

When building stalled during the recession, construction employment in Minnesota fell by more than half.²³ Many construction workers found new careers, and fewer young people entered construction trades. The result is a significant skilled labor shortage; the Task Force heard this echoed loudly in every regional forum around the state.

Fortunately, we can reinvigorate the construction trades by ramping up successful programs that already exist. Project Build Minnesota is a partnership of development and construction-industry professionals that encourages individuals to enter building trades. It provides outreach and resources to educate people about learning opportunities, from hands-on trade experience to programs that award Associate and Bachelor degrees. There are also apprenticeship and training programs—such as YouthBuild, a program that provides hands-on training in the construction and

building trades to at-risk sixteen- to twenty-four-year-olds, and the Institution Community Work Crews Affordable Homes Program, a vocational training program for minimum-security inmates that focuses on building affordable homes.

On the regulatory front, building-code requirements and development fees often drive up the final selling price or monthly rent of a property. A 2014 paper on housing costs in the Twin Cities estimated that regulatory reform at the local level has the potential to reduce development costs by 5–25 percent. It cited two sources to examine for potential regulatory reform—the Metropolitan Council’s “Tools and Incentives to Promote Affordable Housing in the Twin Cities” (March 2013) and “A Vision for the Next Decade, Planning for Affordable Housing in the Twin Cities Metro” (Spring 2009).²⁴

Some local governments are already making progress toward reducing costs. For example, Richfield has reduced building permit fees for affordable projects, and Minneapolis waives park dedication fees for affordable housing and offers density bonuses and financial incentives for the inclusion of affordable housing units. Reduced parking requirements and higher-density zoning are two other ways to reduce the cost of housing. Alternative approaches to building codes, such as performance-based standards, offer further flexibility without lowering safety expectations. These and other local governments are being thoughtful about their policies, examining the costs and benefits these policies and standards have on the upfront cost of the development.

At an industry level, new construction technologies offer opportunities to significantly increase productivity, reduce construction costs, and spur economic growth.²⁵ In Minnesota, some builders and developers are pushing the envelope of innovation by exploring modular and panelized construction. Alternatives to traditionally built homes offer opportunities to lower costs, but logistical,

INNOVATION THROUGH MODULAR HOMES

Modular and panelized housing are innovative alternatives to creating lower costs and more affordable homes. Project for Pride in Living is using modular construction for the development of 11 single family homes in the City of Minneapolis and has seen a 10% reduction in project costs. Carponentry, LLC is seeking to develop micro-factories across the state to build energy-efficient, affordable homes using panelizing technology. It is planning to operate a micro-factory in the City of Duluth as an example of how to implement this strategy and demonstrate the types of homes that can be developed through this process.

technological, and regulatory barriers currently stand in the way of full adoption. We can learn from other places that are embracing new technology and apply Minnesotan ingenuity to produce and market these innovative techniques here.

Recommendations

The Task Force identified five recommendations to expand our home production. These recommendations, implemented to their full potential, can make Minnesota a model of opportunity and innovation.

3.1 Position Minnesota as a national leader in the advancement of housing innovation and technology.

The housing industry is poised for a breakthrough, and Minnesota should be at its forefront. The Task Force recommends that business, labor, education, and government partners come together to form a Center for Residential Construction Innovation. Promising models emerging in the United States and abroad could quickly reshape Minnesota’s home-building landscape to better meet our needs.

For example, our Scandinavian peers have set a global precedent—84 percent of Swedish homes incorporate factory-built elements, saving time and money.²⁶

The state government should consider creating financial incentives to help secure early private investment dollars for research and development in home-building technology and to build state-of-the-art manufacturing capacity for modular, panelized housing components. We can attract and partner with leaders in education, design, construction, and distribution to develop an integrated pipeline to advance construction innovation and position Minnesota to become a leader and exporter in this emerging market.

We should encourage developers to use innovation and technology to bring down the cost of homes using new materials and breakthrough designs and techniques to transform the market. Building trades and construction-industry professionals should be engaged as partners to transform our regulations and building code to encourage innovation without sacrificing safety and quality standards.

3.2 Grow the pool of talent in Minnesota's building trades to enable the sector to meet current and future demand.

Several programs are underway to grow our skilled construction workforce, and we can do more. The Task Force recommends that the Minnesota Department of Employment and Economic Development and the Minnesota Department of Labor and Industry partner with and expand on industry initiatives, such as Project Build Minnesota, to encourage more people to enter the construction trade.

We should focus on training and mentorship programs to attract young people—the next generation of our workforce. We should update and expand programs and curricula for

construction training, including programs on rehabilitation and remodeling. The programs should be marketed to a broad audience so parents, teachers, and school counselors can be informed about opportunities in the field. Construction is an essential trade for our future, and we should make a concerted effort to renew the vibrancy and attractiveness of this sector for young workers—and build agility and innovation into the industry.

3.3 Increase the capacity of local leaders to implement tools and solutions to address the home-affordability needs of their communities.

We learned from developers and builders that local regulations and land-use policies are often a barrier to building more homes in many communities. We also learned that local

ST. LOUIS PARK: FULL SPECTRUM HOUSING

Achieving a full spectrum of housing takes dedication over decades. St. Louis Park has long supported strong plans for station areas in anticipation of the Southwest Light Rail Transit project (METRO Green Line Extension), ensuring that mixed-use, high density multifamily developments are built to support walkable, transit-oriented neighborhoods in support of the huge transit infrastructure investment.

While protecting and maintaining its traditional single-family neighborhoods, St. Louis Park has also been an innovator, creating life-cycle housing and a successful urban/suburban blend of density in communities such as Excelsior on Grand and the West End. More recently, St. Louis Park has become a leader in policies that support affordable housing, and is one of the first cities in the region to adopt a comprehensive mixed-income housing policy as well as a tenants' rights policy that supports residents of Naturally Occurring Affordable Housing (NOAH).

communities often don't have all the tools they need to effectively evaluate and update local plans, zoning, and land-use policies to expand housing options in their communities.

The Task Force recommends that Minnesota Housing, the Metropolitan Council, and other state and regional agencies join with the League of Minnesota Cities, Metro Cities, and the Regional Council of Mayors to compile and promote implementation of best practices for local governments on strategies to encourage the development of homes and increase diversity in the types of homes available. This includes providing information to local governments on options to incentivize affordable homes through tax abatements, density bonuses, inclusionary zoning, housing trust funds, alternative or modular housing, and other policies.

Many of these tools come at no or little cost to local governments. Communities' comprehensive and long-range plans should identify areas that may require rezoning to support new multifamily and infill housing development. No one-size-fits-all solution will solve the complex challenges

of Minnesota's shortfall of homes, and local governments should be given the resources, coaching, and support to implement the best tools for their particular context.

3.4 Expand the range of housing types across Minnesota communities.

Flexible design and zoning policies can facilitate decisions to build innovative housing types better suited to the diverse and varied needs of Minnesotans today. As a Task Force, we recommend local governments encourage and enable modern building strategies, and we invite local developers and builders to explore the full range of possibilities. Minnesota has more single-person households than ever before, but we're still home to large, multigenerational families. We should build to accommodate both, and for other models—cooperatively owned homes, co-housing projects, accessory dwelling units, and community land trust homes.

By taking advantage of new building options, including modular and manufactured homes, we can find new ways to reduce construction costs. By making more efficient use of land, we



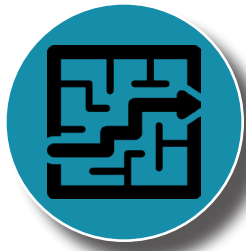
can make the most of transit-connected areas and reduce the per-unit cost of property. These goals require exploring new building types and returning to models that served us well in the past—triplexes, twin homes, row homes, and condos. When rules and policies block communities and developers from building options that respond to changing demands, those rules and policies should be reevaluated. We recommend strong partnerships between the public and private sectors to proactively encourage a wider range of housing types and remove barriers to sensible and market-responsive development.

agencies. In reviewing the policies, the panel should also consider the potential benefits of these policies.

3.5 Create a statewide review panel to evaluate regulations related to building standards, land use, and environmental stewardship for their impact on housing affordability.

Builders and developers told the Task Force that the combined impact of several state regulations has had a negative impact on the affordability of homes. In some cases, the benefits of these policies outweigh the additional increase in construction costs. In other instances, these policies increase upfront construction costs, but decrease on-going operating costs or help address other policy goals. The Task Force also heard that some elected officials and policymakers are reconsidering existing or proposed policies to determine their effect on affordable housing costs.

As a Task Force, we recommend the establishment of a nonpartisan panel to review and identify alternatives to regulations and policies that impact housing development costs—paying particular attention to how the state regulations and policies are administered at the local level. The proposed panel should include experts in building science, home builders, associated tradespeople, local policymakers, and representatives from relevant



Goal #4: Increase Home Stability

Assist twice as many people at risk of losing their homes because of rent increases, evictions, and heavy cost burdens.

Stable homes are essential for families to thrive, be healthy, and fully participate in the community. When you lose your home, you lose your community—and the consequences of this major life disruption can last for decades. In Minnesota today, well over half of the lowest-income families in the state spend more than 50 percent of their income on their home costs.²⁷ Doubling our investment in state rental assistance vouchers, promoting voucher acceptance, preventing displacement, and drafting strong protections for renters can reverse this trend so that kids learn, parents earn, and communities grow stronger.

Increase help to families at risk of losing their homes.

As the cost of a home increases across our state, we lose an estimated 2,000 affordably priced rental homes in the private market every year when they become more expensive through sales, rehabilitation, and rent increases. As discussed in the Goal #2, when an apartment building sells, new owners may increase rents or change the criteria by which they evaluate incoming and even existing residents. Tenants may be abruptly notified that their lease isn't being renewed and they're facing possible eviction, leaving them little time to find a new home. Renters with month-to-month leases are particularly vulnerable.

This situation is happening more often under our current shortage of homes, with families frequently moving from apartment to apartment, frantically looking for a home within their budget, filing new applications and paying new fees for each apartment. Modest rent increases, particularly to cover building improvements, are understandable and easier for tenants to absorb. Dramatic rent increases indicate a market response to tightened supply. In the past few years in Minnesota, rents in some apartments have risen hundreds of dollars a month—even doubled—putting almost all residents on the search for a new home. The Crossroads at Penn apartment complex in Richfield is a prime example: more than 1,000 residents were displaced from 700 apartments in 2015 following the sale and upgrade of the property.²⁸

This can be a natural cycle for rental properties, but it removes much-needed affordable units from the market and puts displaced households in a precarious situation. Until and unless they can find similarly priced places to live, these households may be forced to double up with family or friends, seek temporary shelters, live in cars, or be on the streets. As a result, jobs are interrupted, schooling is disturbed, and health can be compromised. Senior citizens may need to leave neighborhoods they've called home for decades.

Displacement doesn't hit every community equally. Neighborhoods with low-priced homes



are being targeted for investment, improvement, and resale or rental at higher prices. The predominantly low-income residents living there are disproportionately households of color who can't afford to stay. Between 2010 and 2014, 90 percent of the demographic growth of renters in the Twin Cities was households with incomes greater than \$50,000. Sales of multifamily and rental units in the Twin Cities have also risen 147 percent between 2010 and 2015, with the average unit price rising 54 percent in the same period. These two factors—a high rate of exchange in the rental market and renters with higher incomes—contribute to rising rents and additional vulnerability for displacement in lower-income households and households of color.²⁹

We can't stop rents from rising in a fluid and undersupplied market, but we can provide better options for renters. A straightforward solution is extending required notification periods, giving tenants more time to find new homes. Actions can also be taken to reduce the financial burden on displaced households. In a 2018 ordinance passed by the City of St. Louis Park, landlords are required to pay moving expenses of low-income tenants if, within the first three months of owning a rental property, they raise rents above a certain amount, do not renew leases, or rescreen tenants. This policy resulted from thoughtful collaboration between local renters, advocates, the city, and property

owners to address the impacts of rising rents. This sort of ordinance and other tenant protections passed around the state offer concrete models for us to follow and build on.

In Minnesota, we've made great strides in preventing families and individuals from losing their homes—and, if they do lose their homes, our goal has been to quickly reconnect people to stable homes. A statewide plan, launched in 2014, to prevent and end homelessness has shown remarkable results, including a 20 percent reduction in families experiencing homelessness and the near elimination of veteran homelessness. Building on this success, the recently updated Heading Home Together plan is Minnesota's multisector action plan focused on preventing homelessness whenever possible and ensuring rapid access to homes and services so all Minnesotans have the stable foundation of a home.

Heading Home Together includes strategies to most effectively use existing programs—such as the state-funded Family Homeless Prevention and Assistance Program, which is designed to help families get through short-term housing crises. Last year more than 6,900 households across the state received one-time housing assistance from a variety of sources; unfortunately, funds weren't available for all who needed help.³⁰ In addition to leveraging existing programs, Heading Home Together calls for the

creation of new housing opportunities to support access to homes for the more than 7,500 people experiencing homelessness in the state on any given night.

Confront the cycle of exploitation by predatory landlords that traps families in substandard homes.

Most landlords are similar to their tenants—they're hardworking people trying to do their job fairly and make a decent income. They're a critical and valuable part of the ecosystem and infrastructure of housing in Minnesota. Conscientious landlords may benefit from additional tools to manage and maintain properties effectively and stay informed of their rights and responsibilities.

Unfortunately, a small minority of landlords doesn't have the interests of their tenants in mind, and they exploit the system for personal gain. Some predatory landlords engage in practices such as filing eviction actions to retaliate against tenants who seek to secure or enforce their legal rights, utilizing leasing practices they know to be illegal, or refusing to make required building repairs for tenants whose backgrounds make it difficult to secure rental homes elsewhere. In the most egregious cases, the Task Force heard from tenants who reported landlords requesting sexual favors in exchange for repairs or rents not being increased. This type of behavior hurts tenants, and it harms the reputations of our state's reputable landlords. Responsible landlords, tenants, and Task Force members agree that action needs to be taken to end exploitation of tenants by such predatory landlords. Landlord rating systems, such as the one in place in Minneapolis, offer a mechanism for identifying and defining positive or problematic rental practices and enable municipalities to provide incentives to good landlords. These systems need further refinement to be fully effective, but they're a solid start.

Existing laws intended to protect tenants are an

excellent start, but we can do more. Renters can be better informed of their rights and avenues for recourse, and additional resources should be available to help those who are trapped in a bad situation. Organizations such as Mid-Minnesota Legal Aid and HOME Line provide hope and support. HOME Line offers the first and only statewide housing hotline in the country, and they average over 1,000 calls every month. HOME Line estimates that since 1992 they've helped prevent more than 13,400 evictions. We should support and expand on this work.

The consequences of losing homes, particularly through eviction, may last for decades. In 2016, an average of nine Minnesota families per day were formally evicted from their homes.³¹ These evictions are strikingly concentrated. In just two Minneapolis zip codes, nearly half of renters experienced an eviction filing in the past three years.³² In addition to formal evictions are "informal evictions"—lease terminations or nonrenewal of leases—which may occur about twice as often as formal evictions.³³ Evictions disproportionately affect households of color, and families in low-income areas are more likely to be evicted when their neighborhood becomes more desirable and commands higher rents than they can pay. The two zip codes in Minneapolis with remarkably high eviction rates are areas of poverty in which people of color comprise more than half the population.

We can learn from best practices here. CommonBond Communities, which serves more than 9,725 renters across the state, has implemented an effective eviction-prevention program. From a business standpoint, they've found that eviction prevention costs much less than evictions, factoring in lost rent, vacancy and turnover costs, and legal fees. For every \$1 invested in CommonBond's eviction-prevention services, the community realizes a return of \$4.³⁴ These savings include decreased use of homeless shelters, improved educational outcomes, and lower healthcare costs.

Tenant-screening criteria can have an unintentionally discriminatory impact.

Almost all landlords use tenant-screening criteria to help determine if a prospective tenant will be able to afford the proposed rent. Under state and federal fair housing laws, landlords can't adopt screening criteria that are openly discriminatory. However, even responsible, community-oriented landlords can sometimes adopt screening criteria that unfairly, or even unintentionally, eliminate certain prospective tenants. For example, the Task Force heard testimony about screening criteria that eliminate anyone who has ever been convicted or pled guilty to any crime or misdemeanor. Since this would technically include anyone who pled guilty to a speeding ticket, it would eliminate much of the population. Minnesota Housing has provided detailed information to landlords who manage government-assisted housing to identify actions that may result in unintended screening out of tenants.³⁵

We can build on proven solutions.

Federal housing vouchers are an effective and powerful tool for enabling families to find homes. The vouchers help cover the difference between the fair price of a modest home or apartment and a reasonable share of a family's income, typically around 30 percent. Minnesota simply doesn't have enough vouchers to cover the families who qualify for them. Only one in four qualified families actually receive this federal assistance, and waiting lists for the program are very long, sometimes as much as ten years.³⁶

Right now, less than two percent of all Minnesota households receive rental assistance, but the number of qualified families is far greater. We have taken initial steps to address the limits of federal resources, by offering some targeted rental assistance through the Bridges program (for people with persistent mental illness) and state Housing Trust Fund program (for people and families who

have experienced or are at risk of homelessness) offered by Minnesota Housing and local service providers. These excellent programs are worth expanding, and we'll need them and other programs that offer rental assistance to meet the full need for real, sustainable options for families.

We know rental assistance works. The Family Options Study, conducted by the U.S. Department of Housing and Urban Development (HUD), found that access to long-term rental assistance reduces the likelihood of losing your home by half, and results in increases in child and adult well-being and food security. In Minnesota, the Rental Assistance Pilot for Homeless and Highly Mobile Families with School-Age Children (now known as Homework Starts with Home) demonstrated several educational benefits for children whose families received rental assistance and other support services. These benefits included stable attendance for school-age children. A remarkable 90 percent of the families who received this support still had a stable home two years later, and they also experienced increased incomes.³⁷ Results like these demonstrate that rental assistance should be an investment priority for our state.

Recommendations

Losing a home can be a crucial blow, and many families never fully recover. These recommendations build on strategies that are already working in some communities to make the loss of a home less likely.

4.1 Enhance and expand state and local rental assistance programs to complement federal programs that are too small to meet the need.

We need to be able to harness the rental market on behalf of low-income families. Our most powerful tool to accomplish that is rental assistance, which helps low-income families compete in the private housing market. We should expand assistance options at the state and local levels to meet the full need of qualified families. Opportunities to enhance the efficiency of these

programs should be identified, explored, and prioritized. Wherever possible, we should reduce the administrative barriers and costs of running these programs so the full value of the investment can go to rental assistance for families.

4.2 Define and crack down on predatory rental practices, including excessive evictions and poor condition of rental units.

Our regulatory and inspection systems should be improved and fully staffed to protect individuals and families. The Task Force recommends studying existing landlord rating systems that are used by some communities to track predatory landlords and developing best practices that can be adopted by more communities. Best practices should include transparency to allow renters to readily access information they need to know about a landlord's track record regarding citations and eviction frequency.

4.3 Strengthen protections for renters in the private market.

At state and local levels, Minnesota has good examples for providing improved protections for individuals and families who rent their homes. The Task Force particularly encourages further exploration of these specific approaches:

- **Examine current tenant-screening standards to analyze impact and effectiveness.** Tenant-screening practices are a critical component for landlords, who need validated means to understand and mitigate the risk they assume with an applicant. Screening practices are also an essential concern for renters, whose ability to find a home can be determined by a single application question. We need to identify and promote a set of screening tools that are validated by data and avoid unintentionally discriminatory questions or arbitrary standards. We recommend conducting a

thorough assessment of screening criteria with the goal of identifying an improved, data-driven approach that will meet the needs of both renters and landlords. Input from local landlords and property owners should be part of the assessment process.

- **Limit eviction reporting until a court judgment is rendered.** Explore the viability of maintaining the confidentiality of Housing Court eviction filings until cases are determined on their merits. Alternatively, pass legislation that requires tenant-screening companies to report the final resolution of eviction filings, rather than just the filing information alone.
- **Improve required communication between property owners and tenants regarding ownership and tenancy changes prior to sale.** The Task Force supports the creation of tenant-protection ordinances similar to the one adopted by St. Louis Park in April 2018. That measure requires landlords to pay the moving expenses of low-income tenants if, within the first three months of owning the rental property, they decide to raise rents, not renew leases, or rescreen tenants.

4.4 Increase the speed and flexibility of emergency resources to prevent people from losing their homes.

The emergency resources discussed above, which are largely administered by counties, are powerful options to protect families. Increasing the pace and flexibility of emergency resources could cut off evictions before they occur. In cases where an emergency temporarily keeps a family from paying rent on time, short-term assistance could be very effective in preventing evictions. The Task Force recommends evaluating current programs to determine if changes are needed to increase the speed and flexibility with which these resources can be used.

We can also do more once someone is in the court system. In both Hennepin and Ramsey Counties, efforts are underway to take a problem-solving approach to evictions in the same way that drug courts, veterans courts, and homeless courts have recognized that connecting people to resources will do much more to address these problems than fines or jail time. These efforts are worth expanding and replicating. At a county level, supported by sharing best practices, we can begin to ensure the ongoing presence of county, nonprofit, and social-service providers during eviction court proceedings to facilitate access to necessary wraparound services (e.g., emergency assistance and mental health resources).

4.5 Expand and enhance programs that help people navigate the systems to find homes and vital housing resources.

The Task Force heard about several successful programs that help people to find homes they can afford. This is especially important for those with higher barriers to finding a home, including people with disabilities and people using rental assistance vouchers. The Task Force recommends the evaluation of programs that currently provide funding for housing navigators—implementing advisable changes to improve effectiveness and increasing the current levels of available funding for navigators.

4.6 Incentivize the acceptance of rental assistance vouchers by the private market.

While rental assistance vouchers that provide rental assistance are a powerful tool, they can't be fully utilized under current market conditions. Accepting vouchers is an opt-in program that comes with administrative requirements, such as annual inspections and rent restrictions. At a state and local level, we should reduce the administrative burdens, mitigate the perception of risk, and actively pursue incentive

opportunities to increase the number of landlords who accept rental assistance vouchers.

4.7 Prioritize investments needed to achieve the goals in Heading Home Together: Minnesota's Action Plan to Prevent and End Homelessness.

Homelessness is a solvable issue. Ending homelessness means that we prevent homelessness whenever possible, and when that's not possible, the experience of homelessness is rare, brief, and nonrecurring. At its core, the solution to homelessness is access to homes that are affordable and, when necessary, linked to the services people want or need to remain stably housed. Heading Home Together is a blueprint for collective, multi-sector action to address the housing instability of families and individuals throughout the state. Understanding that the success of this effort hinges on the availability of and access to homes that are affordable, the Task Force strongly recommends prioritizing our investments in homes to meet the needs identified in the Heading Home Together plan.



Goal #5: Link Homes and Services

Build stronger links between where we live and the services we may need to live stable lives.

Most Minnesotans will need services in their homes at some point during their lives. An estimated 70 percent of people age 65 or older will need long-term care related to daily living at some point.³⁸ People with disabilities and individuals who have experienced trauma also benefit when healthcare and support services are available to them in their homes, and research shows that people do better when needed services and stable homes are coordinated. The broader community benefits too, through reductions in expensive public systems, such as emergency room visits or police time. We can achieve better outcomes and save money for communities by building on our record of success in coordinating healthcare and services with safe and affordable homes.

People live more stable lives when they have stable homes linked to services.

Some individuals and families need extra support to maintain and live safely in their homes. The types and level of service vary widely, depending on the situation.

Minnesota seniors facing cognitive or physical limitations may need services to remain in their homes or within their community. Of the 16,400 senior homeowner households in the state with annual incomes at or below \$22,700 who need home rehabilitation to stay in their homes another five years, 12,100 (74

percent) report they also need in-home services, including assistance with bathing, dressing, using the toilet, shopping, managing money or medications, and doing laundry.³⁹

These services, if available at all, are even harder to access for seniors on fixed incomes and in rural communities. Nevertheless, providing these services, which allow people to age in place, is one of the most cost-effective ways to meet the needs of seniors who need housing with services. People with disabilities, including many seniors, may need accessible design modifications or home-care services to secure and maintain homes in their community and for their lifestyle.

Some families and individuals who have experienced homelessness may need services to successfully transition into a home and achieve

STABLE HOUSING AND RECIDIVISM RATES

According to recent study from Ohio on criminal recidivism and stable housing:

- Each housing move in the year after a release from a correctional facility increases the probability of being re-arrested by 3.28 times.
- In the year after release, ex-offenders who:
 - Experience homelessness are 4.48 times more likely to be re-arrested
 - Live in a residential program are 21 percent less likely to be re-arrested⁴⁰

BENEFITS OF HOUSING STABILITY: HENNEPIN HEALTH CASE STUDY

Hennepin Health, an accountable care organization serving Medicaid enrollees, created a program that directs medically complex or frequently hospitalized members who are experiencing homelessness or housing instability to social-service navigators (including housing). With housing stability, the program participants experienced dramatic reductions in healthcare costs. Because these enrollees have challenging medical conditions or are frequently hospitalized, the benefits of housing are more pronounced than a typical person experiencing housing stability would receive. Nevertheless, these Hennepin Health statistics highlight the cost benefits of housing stability.⁴¹

	Pre-Housing	Post-Housing	% Improvement
Emergency Department Visits— Average Monthly Costs per Person	\$89	\$43	52%
Inpatient Admissions— Average Monthly Costs per Person	\$1,768	\$496	72%

stability. These services may include intensive case management, medical care, and support services related to employment, childcare, and education.

Another group whose housing stability is greatly enhanced with services is people exiting incarceration. Research shows that a stable, secure home is a major contributor to successful rehabilitation and reduced likelihood of reoffense—especially coupled with workforce and education programs and access to transportation. This combination of a home and services improves outcomes for individuals and for the communities in which they live.

Supportive services for stable living may be temporary or ongoing. Temporary services most commonly focus on transitioning people out of other systems, such as military service, foster care, incarceration, supportive housing, or homelessness. Each type of transition has a unique set of services for successful adjustment. Ongoing services provide long-term support to people with mental or physical limitations who need some level of assistance for living. As Minnesota's population of seniors grows, the demand for ongoing services with housing will rise. Up to a certain level of care, services delivered

to people at home will be more affordable than moving them to supportive-living residences.

Minnesota's existing network of services tied to homes has proven successful and can be expanded.

Minnesota has made significant investments in connecting homes and services for people with disabilities. Approximately 25,000 households are currently served through various supportive housing programs that provide on-going rental assistance, including Housing Supports (formerly Group Residential Housing), permanent supportive housing, Bridges rental assistance and services for those living with mental illness, and Section 811 for people with disabilities. Previously, many of these same people would have lived in large, segregated facilities located far from their families and communities or remained on waiting lists.

Several proven models combine homes and services, and we should learn from them and build on their demonstrated success across Minnesota. One example is Center City Housing Corp., which has developed several supportive housing developments in Duluth and recently expanded into

Rochester and Bemidji. One of their developments, San Marco Apartments in Duluth, offers two levels of housing for people with chronic alcohol or substance abuse issues and provides services on site to assist tenants with their addictions. Solace Apartments in Saint Peter assists women exiting incarceration and their families, offering services for transportation, workforce training, and other case management to help them achieve stability.

The goal of Minnesota's Olmstead Plan is to ensure that Minnesotans with disabilities are living, learning, and enjoying life in the most integrated setting possible. A major feature of the Olmstead Plan asks counties to work one-on-one with people with disabilities to develop a person-centered plan that maps out how they and their families hope to live their lives while accessing the services they need. This leads to better outcomes for the people with disabilities and provides counties with the opportunity to increase efficiencies in the way they coordinate resources for both housing and services. According to the revision of the plan adopted in March 2018:

"Under Minnesota's Olmstead Plan, by June 30, 2019, there is projected to be an increase of 5,547 people with disabilities moved from segregated settings to integrated housing of their choice. These individuals will have a signed lease and receive public financial support to pay the cost of the housing. This projected increase will represent a 92 percent increase over the baseline."

Achieving the goals of the Olmstead Plan will require access to affordable homes and services.

Many programs work well, like those described above, but serve a small number people and exist in limited locations. Funding for such programs is disparate and can be undependable. Some providers have had to terminate services when funding ran out, leaving residents without promised care.

Recommendations

The current system of linking services with homes is working well for many individuals in Minnesota who are eligible for funding under certain state and federal programs, but it doesn't work for everyone. These recommendations can begin to address some of the challenges.

5.1 Provide a dependable stream of funding for social services that help households maintain stable homes.

The Task Force heard from numerous service providers that know how to help people access stable living situations and stay there. Each set of clients—seniors, people coming out of prison, or people who experience homelessness—have specific needs, and professionals have worked for years to understand what works and how to help them achieve success. The Task Force recommends sticking with what works for service delivery and providing a consistent and stable source of funding and resources to serve those in need. Any interruption in services due to inconsistent funding can put people on the streets or into crisis, driving up costs in other sectors to manage the associated problems.

5.2 Provide access to a full range of services for families and individuals transitioning into stable homes before, during, and after the transition.

The effort and expense of finding and securing a place to live makes moving one of the biggest stressors for anyone. This stress compounds existing difficulties and instability for people with underlying challenges. When programs and services are put to work to help these at-risk individuals move into a stable home, it's important to make sure it's a lasting solution. The Task Force recognizes that some people may need ongoing support to maintain stability

even after the move. This can be true for seniors, people with disabilities, or individuals adjusting to independent living. The Task Force recommends this approach because the cost of services needed to keep someone living securely are usually small relative to the alternatives of displacement, unmanaged issues, and health risks.

5.3 Improve health outcomes and reduce costs for tenants by developing better partnerships between health care and housing providers.

Providing housing services and providing healthcare are significantly different tasks that engage different professionals. However, many individuals experience their health and their daily living situation as closely intertwined. Problems with one lead to problems with the other. The Task Force recognizes that communication between housing and healthcare providers about individuals will improve outcomes on both sides by anticipating problems and responding rapidly where it's most effective. The Task Force recommends building the capacity of supportive housing providers to make effective partnerships with healthcare systems a working reality.

5.4 Advance the Housing Supports program for residents with disabilities by identifying gaps and potential program enhancements to ensure statewide coverage.

The state-funded Housing Support program—formerly known as Group Residential Housing and administered by the Department of Human Services—has proven to be one of the most effective tools for providing people with disabilities the homes and service supports they need. The state legislature approved certain requested changes to the program in 2017 that has enhanced the effectiveness of the program. The Task Force recommends that

the program be evaluated to identify gaps and potential enhancements and to ensure statewide availability.

5.5 Expand programs and providers who assist individuals in finding, securing, and retaining affordable rental homes.

People who need either short-term or long-term services to live stable lives have been shown to do better when they also have stable homes. To improve the effectiveness of services, the task force recommends a multipronged approach for using existing resources more effectively to help people also find and keep stable housing:

- Pursue policy changes to allow use of Medicaid funds for housing-related services.
- Implement alternative case-management strategies to take a right-sized, person-centered approach.
- Fund housing navigators to assist Minnesotans facing barriers who need additional support in securing homes.
- Develop and/or use existing resources to expand funding for rapid rehousing (short-term rental support) or similar programs.



Goal #6: Support and Strengthen Homeownership

Create pathways to sustainable homeownership, with a focus on removing barriers for households of color.

We know homeownership builds equity and is the primary driver for building wealth.⁴² Each year of successful homeownership adds nearly \$10,000 in household wealth. It also creates stability for families and stronger connections within our communities.

We can encourage and support broader homeownership by expanding our successful strategies of financial coaching and home-buyer education and counseling and by providing a range of home-mortgage products.

More than 64,000 Minnesotan renter households of color have the income to potentially become successful homeowners.

Currently, over 64,000 renter households of color in Minnesota have the income they need to potentially buy a home and are within the prime home-buying age range. This represents a significant opportunity to build economic stability and wealth through homeownership. Many first-generation home buyers are motivated to buy, but they're unfamiliar with the pathway to homeownership and often face barriers in the marketplace. With coaching to learn about the home-buying process and access to products and services that meet their needs, many of these households could begin a successful path to homeownership.

Households with good credit, sufficient income, and resources for a down payment can usually obtain financing to purchase a home. However, many Minnesotans who can afford to buy and own a home are unable to access conventional and government-insured mortgage products due to credit history issues and lack money for a down payment. We can help more potential home buyers by providing additional down-payment resources and financial and home-buyer education and counseling programs.

The generally high rate of homeownership in Minnesota isn't experienced equally across all groups. Minnesota has one of the highest homeownership disparity rates in the country. As an example, 76 percent of white households own a home, while less than 23 percent of African American households do.

A low inventory of affordable homes is one of greatest barriers to homeownership.

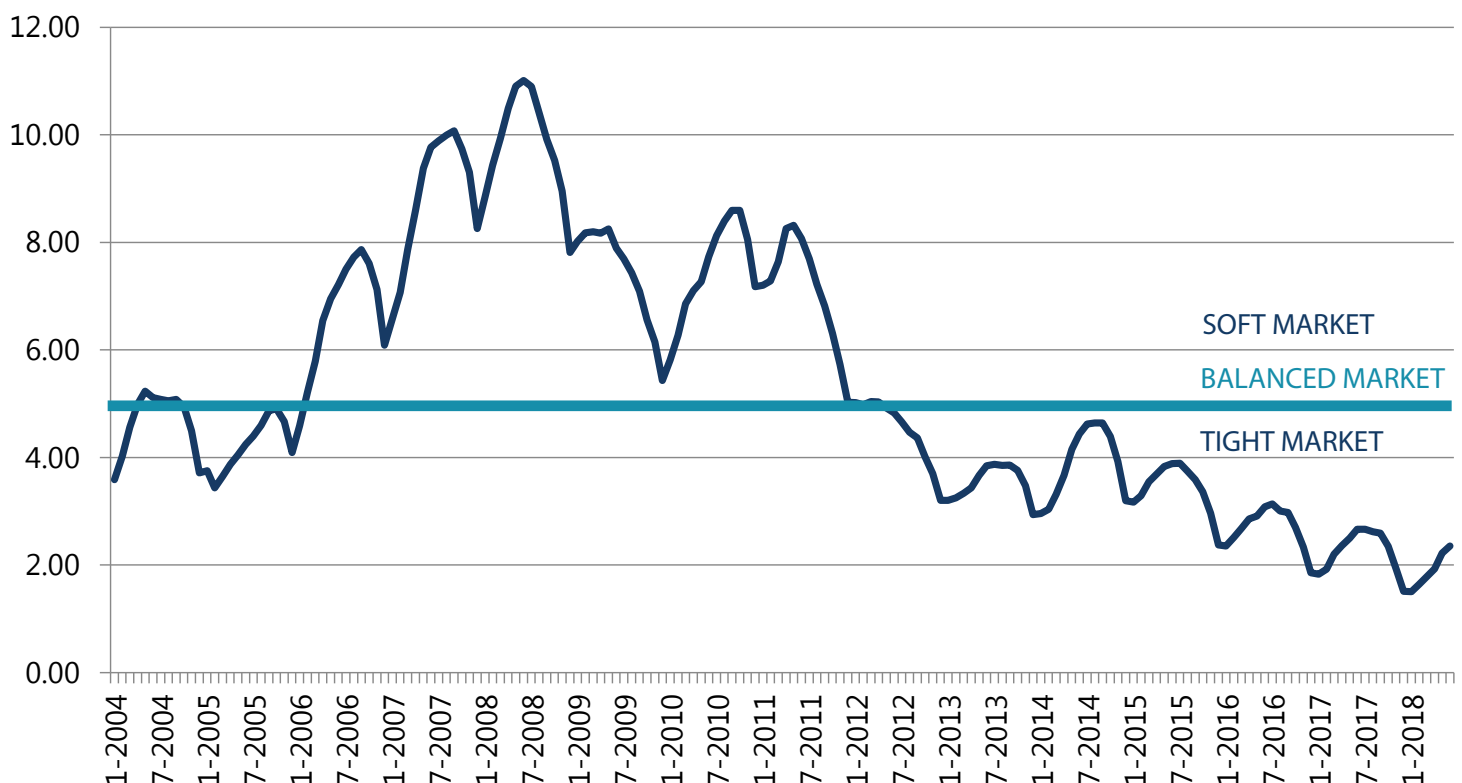
Access to homeownership requires available homes that fit income and household needs. While Minnesota is still an affordable market relative to the East and West Coasts, and interest rates remain near historic lows (though they're starting to rise), growing demand, limited inventory, and high personal debt (including student loan debt) are reducing home affordability.

The shortage is occurring in part because current homeowners are staying in their homes longer. This is happening for various reasons, including a shortage of housing at the next level that current homeowners might move into (homes within the \$250,000 to \$400,000 range). Some current homeowners may still have negative- or low-equity positions in their homes or may simply be more cautious as a result of the 2008 mortgage crisis, while others may have decided to age in place in their current homes. In addition, cash buyers and investors are still purchasing single-family homes to use as rental properties and pricing out individual buyers. Simultaneously, new construction is increasingly unaffordable with material costs and labor shortage, as well as regulations and land-use issues, as discussed in the Goal #3.

Financial coaching and home-buyer education programs are successfully moving people into homeownership and reducing disparities.

Minnesota has existing financial coaching and home-buyer education programs that work well and have shown results in moving more individuals and families into homeownership. These programs must be expanded to serve more households and reach communities where programs are limited or nonexistent. Nonprofit counseling agencies provide in-person classroom and one-on-one counseling across the state. Online home-buyer education is also available as an alternative to in-person counseling and education. These programs would benefit from increased visibility, since some communities and professionals don't know they're available.

MONTHS SUPPLY OF HOMES FOR SALE, TWIN CITIES METRO



Programs that reach out to the large market of income-ready households of color have the potential to reduce the homeownership disparity. Minnesota Housing's Enhanced Financial Homeownership Capacity (Homeownership Capacity) program provides funding to organizations primarily serving households of color to enable them to offer long-term financial coaching and home-buyer education. The organizations prepare people by helping them achieve financial stability and teaching them skills for sustainable homeownership. Similar programs serve other parts of the state, and we have the opportunity to expand their reach to many more communities.

Industry collaborations, such as the Homeownership Opportunity Alliance (HOA), are working to increase homeownership rates for households of color. The HOA is a coalition of industry leaders in banking, real estate, nonprofits, and government who are dedicated to fostering equitable access to homeownership by developing cross-sector programming and outreach, and addressing systemic barriers to homeownership. HOA recently kicked off its "Get Ready. Be Ready!" campaign with the goals of building awareness that homeownership is possible and connecting households of color to home-buyer education services and mortgage programs. In a tight market, preparing people for homeownership will allow them to respond quickly when they find that perfect home they can afford.

A wider array of mortgage and lending products can expand homeownership by addressing the individual needs of prospective buyers.

A number of home mortgage, down-payment assistance, savings, and credit-builder programs are available through both the private and public sectors. For example, Sunrise Banks has an

Individual Taxpayer Identification Number program for people who don't have a social security number. Twin Cities Habitat for Humanity offers alternative underwriting that allows less rigid consideration of work history and broader parameters for interpreting credit scores. Many of these programs work well and can reach more people across the state with additional resources.

Businesses and philanthropic leaders are investing in housing to boost their local economies.

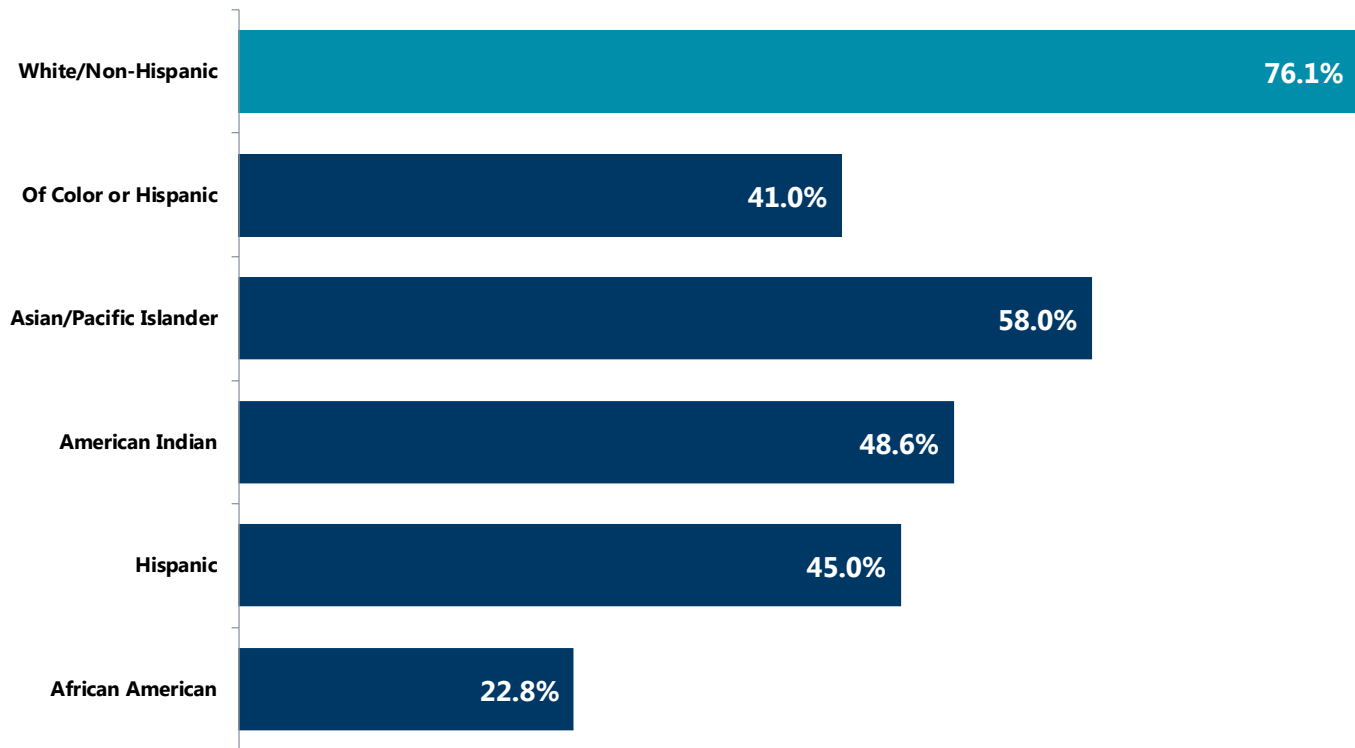
Encouraging and expanding homeownership opportunities in urban, suburban, and Greater Minnesota communities requires strong partnerships and leveraging additional local resources. In addition to local units of government, investments by business and philanthropic leaders enable communities to expand their homeownership programs and to provide rental homes that people can afford.

Throughout Minnesota, philanthropic resources can also provide critical leverage for affordable housing developments and initiatives. Over the years, philanthropic resources have often come from organizations with a specific local focus, such as the Rochester Area Foundation. Other initiatives have had a regional or statewide scope, including efforts supported by the McKnight Foundation and the Blandin Foundation.

Providing a wider variety of homes and ownership models gives more people an opportunity to own.

There are encouraging opportunities to expand homeownership and wealth creation beyond traditional single-family homes. Other models can reach more buyers and provide solutions that are a better fit for some families. While many people prefer purchasing detached single-family homes, there is a growing need for other options like

MINNESOTA HOMEOWNERSHIP RATES BY RACE



Source: Census Bureau, 2016 American Community Survey

townhomes, condos, manufactured and modular homes, community land trusts, and cooperative housing. Many of these alternative forms of homeownership provide more affordable options for lower-income households. These models can put ownership within reach of thousands of people across Minnesota.

Community land trusts, such as City of Lakes Community Land Trust and One Roof's Community Land Trust programs, ensure long-term affordability by purchasing land and entering into a long-term land lease with the homeowner. This keeps homes affordable in areas of high land cost by removing the land cost from the purchase price. When the homeowner sells, they earn a portion of the increased property value. The remainder is kept by the trust, preserving the affordability for future low- to moderate-income families.

Manufactured homes are less expensive to build than traditional construction and are home to more than 56,000 Minnesota households. Most of manufactured homes in our state are owner occupied, and they have a median value of \$30,000.⁴³ New manufactured homes generally sell for between \$45,000 and \$90,000, depending on size.⁴⁴

Recommendations

Minnesota has the opportunity to build on proven models to help renters become home buyers. We must increase capacity and expand programs that work to meet varying needs and in all parts of the state. These recommendations will help increase the availability of safe and affordable homes for Minnesotans who are ready to become homeowners.

6.1 Focus on increasing access to homeownership resources for the large number of income-ready households of color who want to buy.

We can expand homeownership and grow personal assets for thousands of Minnesotans by building pathways to homeownership for households of color. This means ensuring programs, products, and services are available to learn about and prepare for successful homeownership. The Task Force recognizes that this historically overlooked market segment needs focused attention and services to help them move from renting to ownership. We also heard clearly that housing developers, lenders and Realtors are eager to serve this market. Providing the education and services to support a successful transition comes at a small price with a big payoff for the individuals and families served, home sellers, lenders, and communities.

6.2 Promote alternative models of building wealth through homeownership, such as community land trusts, cooperatively owned housing and manufactured home parks.

What people seek in an ideal home is changing and expanding. Many Minnesotans are looking beyond the traditional single-family homes or apartments to alternative and more affordable forms of housing that match their lifestyle and financial means. Providing more options at prices people can afford requires us to expand our approaches to what we build and how we buy it. Minnesota already has good examples of community land trusts, housing cooperatives, and resident-owned manufactured home parks. These can and should be replicated and expanded.

6.3 Encourage employers and foundations to support home purchases.

The need for more resources to encourage

LEVERAGING LOCAL EMPLOYERS

In Austin and Perham, local employers have provided critical financial leverage and helped build community support for new, affordable homeownership activities. In Austin, support from the business community has come primarily from Hormel. In Perham, a cross-section of local employers has been involved. Though the business-support models were somewhat different, both resulted in new, affordable home-ownership opportunities for both existing homes and new construction.

homeownership is acutely felt in places struggling to attract and maintain a stable workforce. Quality housing that workers can afford and secure has been and can remain a competitive advantage in recruitment and job growth in Minnesota. Unfortunately, traditional banks and public resources can't meet and keep pace with the growing need for homeownership assistance, particularly as housing costs rise.

The Task Force strongly believes employers and foundations have a vital role to play in supporting homeownership in their communities. In the regional forums held around the state, the Task Force heard again and again from business and community leaders who are struggling to house their workforce and are deeply concerned about the negative impact on their local and regional economies. A handful of businesses in Minnesota, including Digi-Key Electronics and Hormel, are investing in creative programs to find and expand housing options for their employees—and they're seeing their investments pay dividends on their bottom line. These leaders can be an example for others, showing how and why private and philanthropic support for housing is essential to a healthy state economy.

6.4 Increase funding for financial education and counseling programs that expand the capacity of households to pursue homeownership.

Homeownership is a major life decision—and home-buyer education, counseling, and coaching can help set up individuals and families for successful, sustainable homeownership. Trusted advisors from nonprofit housing counseling organizations across the state provide home buyers with information about buying and maintaining a home, personalized credit and financial planning, and foreclosure avoidance. This model works well in Minnesota, but the established programs don't come close to meeting demand.

6.5 Expand mortgage products and provide extra support to local community banks to expand financing options.

Since the Great Recession, access to credit has been difficult. Building homeownership in Minnesota means moving new people into homeownership—people who can afford it but haven't yet built their financial resume to meet conservative lending standards or don't realize homeownership is possible for them. The Task Force recognizes the importance of reaching

these prospective homeowners with a wider array of lending, mortgage, and down-payment products; more flexible underwriting; interest-free lending; and loans for property on tribal lands. It is also critical to expand these options to more places around the state, particularly local community banks that may need access, information, and support to utilize them.

6.6 Expand available down-payment assistance programs.

Down-payment and closing-costs assistance programs have been instrumental in helping people who are ready to buy but lack the savings for a down payment and closing costs. Existing down-payment assistance programs from public, private, and nonprofit partners are effectively getting people into homeownership today, but available resources fall far short of the current need. Minnesota has 188,000 renter households between the ages of twenty-five and forty-four who earn enough money to afford a mortgage but remain in the rental market.⁴⁵ Current programs to assist with down payments, a common hurdle for potential buyers can serve only 5,000 households annually.⁴⁶ Increasing the size and reach of these programs is an effective way to increase homeownership across Minnesota.

EDUCATION AND COUNSELING PROGRAMS

The **Homebuyer Education, Counseling and Training Fund (HECAT)** and the **Homeownership Capacity program** are two examples of initiatives that work well and should be considered for additional funding to expand their reach and impact.

The City of Worthington has seen a large population increase of Karen and Burmese refugees. With the help of education, down payment assistance, and counseling guidance, these refugees have hope that they can make a permanent home in Worthington. Stability is what they are looking for and more than two dozen Karen/Burmese households have taken Homestretch courses. Five of those families have been able to purchase a home. Along with the education they receive, the classes also bring a sense of belonging to the students and staff from the Southwest Minnesota Housing Partnership have been thanked numerous times for making our financial system a less daunting maze.

Conclusion

This Task Force came together to understand the dynamics around housing in Minnesota—more specifically, to identify our strengths and to then look for creative solutions and areas of opportunity. This exploration went far beyond the individuals on the Task Force; community members and leaders across Minnesota stepped up to offer resources, ideas, and strategies.

This report centered on six goals to serve as the road map for securing a prosperous future for Minnesota.

- Create a broader and stronger public commitment to the urgent need for more homes that are more affordable to more Minnesotans.
- Keep the homes we already have, especially those that are most affordable.
- Build 300,000 new homes by 2030, across all types, prices, and locations.
- Assist twice as many families at risk of losing their homes because of rent increases, evictions, and heavy cost burdens.
- Build stronger links between where we live and the services we may need to live stable lives.
- Create stronger pathways to sustainable homeownership, with a focus on removing barriers for households of color.

Underpinning these goals are a wealth of ideas, case studies, and opportunities, but without statewide partnership and investment, and the hard, ongoing work of implementation, they will remain as words on a page. The work of the Governor's Task Force on Housing is a starting point. We challenge you to take the ideas in this report and push Minnesota toward more safe, decent, and affordable homes—to ensure economic stability and prosperity. Tailor these solutions to meet the particular context of your community, and together we'll build a stronger Minnesota.

Where we live matters in every way. Our homes are our foundation and our future. Every challenge we face—as individuals, as families, as communities—will be easier to meet when we all have a secure place to lay our head at night. When we make that fundamental goal a reality for all Minnesotans, we will all thrive.

We're in a moment of opportunity to expand an alliance of partners across all sectors and from around the state to accomplish these goals. Now is the time take action to build Minnesota's future.

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Appendix A:

Task Force Meetings and Public Engagement

Timeline

- December 20, 2017 – Governor Dayton signs Executive Order
- December 21, 2017 - Task Force Launched by Governor Mark Dayton

Task Force Meetings

- January 12, 2018
- February 21, 2018
- April 20, 2018
- May 29, 2018
- June 25, 2018
- July 26, 2018

Housing Stability and Opportunity Work Group Meetings

- January 23, 2018
- February 12, 2018
- March 12, 2018 (Joint meeting with Rental Housing Work Group)
- April 12, 2018
- May 7, 2018
- June 4, 2018

Homeownership Work Group Meetings

- February 14, 2018
- March 15, 2018
- April 9, 2018
- May 9, 2018
- June 11, 2018

Rental Housing Work Group Meetings

- January 25, 2018
- February 20, 2018
- March 12, 2018 (Joint meeting with Housing Stability Work Group)
- April 9, 2018
- May 7, 2018
- June 4, 2018

Regional Forums

The Task Force hosted a series of Regional Housing Forums to hear from people around the State about housing strategies for their region based on local housing needs. These forums engaged hundreds of community members and local leaders in identifying housing needs and potential solutions for their areas.

- Austin – March 14, 2018
- Little Falls – April 5, 2018
- Duluth – April 24, 2018
- Golden Valley – April 26, 2018
- Crookston – May 3, 2018
- Saint Paul – May 10, 2018
- Sleepy Eye – May 15, 2018

The Task Force traveled throughout Minnesota to listen and learn about what was happening in communities large and small. From cities like Saint Paul and Duluth to small towns like Sleepy Eye and Little Falls, over 500 people from all walks of life came to share their ideas about how the state of Minnesota can do a better job of

ensuring that people have a place to call home that they can afford in a thriving community. We found that every region and every community is unique and communities grapple with market dynamics, demographic changes, and distinct local economies.

For example, in Saint Paul and Golden Valley, we heard about the loss of unsubsidized affordable housing due to ownership changes and rent increase, and the overall increase in rents and purchase prices blocking low income families from accessing both rental and homeownership opportunities. While there is rapid development across the Twin Cities, people were concerned that it was not affordable or accessible for people who needed a place to call home.

In Greater Minnesota communities, the loss of unsubsidized housing to market pressures was less of a concern than an overall lack of any available housing. In Sleepy Eye participants were focused on a lack of overall supply for anyone who needs a place to call home – newer arrivals to the community were unable to find any houses on the market that were livable and builders are still hesitant to build in small towns where land costs are reasonable but the perceived risk is high. There are also demographic changes occurring in communities around the state that create differences in the type of opportunities that we need to create.

In Austin, we heard about the need for large family rental homes as people from around the world come to fill jobs at large employers like Hormel. Similarly we heard about the lack of workers to fill jobs in Central Minnesota employers like CentraCare. We also heard firsthand about the anxiety that longtime residents of central Minnesota are feeling as communities change – what does it mean for people who grew up in small towns across the state as people from around the country and around the world become part of the local workforce? We also heard about the unique problems that rural communities face as an aging population

leads to different housing needs that are not currently being met by the market – single story living for people who are not ready for assisted living but want to downsize and create new opportunities for younger families to own homes.

Every region and every community has things in common and everywhere we went we heard about the acute shortage of places for people to rental and homeownership opportunities. In every community we also heard about the high cost of new construction and rehab. From Crookston to Duluth we also heard about a shortage of builders, contractors, and skilled trades people. This has increased costs, slowed down construction and rehab projects, and increased barriers for smaller scale projects. Every community conversation also included discussions about the role regulation was placing in the cost of building new homes and the way that regulation can prevent the type of development that is needed to ensure both supply and affordability.

While communities are changing in different ways at different speeds, every community was trying to figure out how to adapt to changing community needs. This includes building more large family housing opportunities, more housing opportunities for seniors who are downsizing, and connecting housing development to amenities like daycare and transportation. Great things are happening on a local level and communities strive to create solutions. Communities are not taking a passive approach to solving housing challenges. Some communities like Red Wing have created dedicated resources to build and preserve affordable housing. Other places, like Thief River Falls, have taken a hard look at their local land use regulations, and made it easier for developers to create homes on smaller lots. They have also developed a creative approach to assessment for infrastructure so that the cost can be spread out over time, keeping home sale prices affordable to the local workforce. Communities and organizations have also taken different approaches

to coordinating resources to make sure that families can access the programs that they need. A great example of this is Headwaters Regional Deployment Commission which helps homeowners access a wide range of home improvement programs with a one-stop-shop approach. Other communities like Saint Louis Park have started to adopt policy changes to protect tenants who are displaced when ownership changes lead to rent increases and changes in tenant screening criteria. They have been working with both advocates and landlords to understand the needs and potential consequences of local policy changes. Communities across the state have also worked to build partnership across sectors. In communities like Austin and Thief River Falls employer engagement has been an important strategy for encouraging housing.

Other Events and Activities

April 19, 2018 | Create the Future of Housing community event, Minneapolis

On the evening of April 19, the Task Force hosted a community conversation about housing needs and ideas for change. The Task Force wanted to learn from the housing experiences of individuals and hear their thoughts on the following:

- Experiences trying to find housing that fit their personal needs and well-being;
- Whether they have found it hard to get housing that is safe and affordable in an area where they want to live; and
- Ideas to improve housing choices and affordability.

The meeting was a success and generated many great ideas to address a wide range of housing issues identified by the participants. The Task Force members attending the event were grateful for the opportunity to hear from people and shared many of the ideas with the rest of the Task Force the next day. A number of the key ideas were incorporated into the priorities of the Task Force

work and are included in the recommendations.

The event, held at the Center for Changing Lives in Minneapolis, was free and open to the public and included a free taco bar dinner and child care.

A Summary of Key Solution Ideas and the full list of issues and ideas identified during the evening can be found at www.mnhousingtaskforce.com.

Call for Ideas

The Task Force asked people across the Minnesota to share their best ideas about how we can better provide affordable rental options, how we can improve stability for individuals and families in transition, and how we can help more people achieve homeownership.

Nearly 70 ideas were submitted, reviewed and cataloged on the following pages for a quick review of idea topics, categorized by rental, homeownership, or stability.

Members of the Task Force reviewed ideas and incorporated into work group meetings in April, laying the foundation for later work on final goals and recommendations.

Summary – Call for Ideas

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
1	Price-level-adjusted-mortgages	Financing Establish a state sponsored enterprise like Fannie Mae or Freddie Mac to create a market for real mortgages. Real mortgages would be issued in real (constant) dollars, while mortgage payments would be adjusted for inflation. (Real mortgage appear to have a reduced initial monthly payment (principal and interest) that increases with inflation, rather than a fixed payment over the life of the loan.)
2	Co-location of housing & services	Service Infrastructure Co-locate housing and supportive services in the same building or site. Integrating service with housing helps ensure stability, particularly for people experiencing homelessness.
3	Mixed-income neighborhoods	Financing and Code/Zoning Communities plan for subdivisions and other development that could accommodate housing for a range of income levels. HRAs and state resources would loan funding for the development.
4	Economic and racial disparities	Social Increase the minimum wage, cut investments to prisons, and end mass incarceration. These social changes will help reduce discrimination and ensure marginalized communities can obtain, afford, and stay in their homes.
5	Cost of construction and financing	Cost and Code/Regulatory The submission lists four ideas, which focus on (1) reviewing building codes that make Minnesota housing more expensive, especially in comparison to other states, and (2) considering impacts of code on ability to redevelop housing stock in rural areas. These ideas, along with subsidizing the financing and construction of housing, can help reduce the cost of housing for tenants/owners.
6	Transitional housing for homeless households	Service Infrastructure and Social and Regulatory In partnership with service providers, allow private homeowners/landlords to house transitioning homeless households. Allow the private homeowners to declare any incurred expenses as a charitable gift would help incentivize participation.
7	Co-op housing	Cost and Ownership Structure Initially funded by the government, cooperative rental and ownership housing could replace other forms of subsidized housing. With a rent-to-own program, where rents are set at no more than 15% of income, the government would not have to subsidize the house indefinitely.
8	Protect public housing	Policy and Funding Prohibit the sale, lease, or use of public housing land to private investors or developers. Use and increase existing public funding streams to maintain, preserve, and build existing public housing. Public funding should go towards permanent public housing rather than subsidizing temporary affordable rental by private developers.
9	Require 25% affordable in all developments	Regulatory Mandate that 25 percent of all units in new multifamily buildings be set aside as truly affordable based on working Minnesota's minimum wage.
10	Community land trusts for ownership	Policy/ Financing Promoting the Community Land Trust way of homeownership. This mechanism facilitates the initial investment made in the home by public and private subsidy sources remaining with the home to make it affordable to subsequent, income-qualified buyers. There are already over 1,250 Community Land Trust homes across Minnesota. The state has also seen close to 500 resales.

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
11	Community land trusts - regeneration	Financing This proposal would use the CLT model to retain ownership for those struggling to stay in their mortgages. City of Lakes Community Land Trust (CLCLT) has made investments that assist in restructuring or satisfying the existing liens and then rehabilitating homes with the understanding that the homes would then become permanently affordable through CLCLT.
12	Increase supply of affordable rental units	Cost Build more affordable housing and public housing to support low income tenants. The proposal suggests spending \$500 million over the next three years. He would like to see 10,000 more low income units in the next six to eight years.
13	Aging in place pilot for low-income homeowners	Cost and Service Infrastructure The goal is to allow those over age of 65 to live safely and healthily within their home (seniors wish to age in place, the #1 Reason a person leaves their home is due to a fall). It requires a partnership between a healthcare agency and a construction/ remodel/ development agency: An occupational therapist (OT) does a home safety assessment for an older, low-income, homeowner who has received medical care and is being discharged & a handyman then makes the safety modifications recommended for the home. There is an estimated \$3,000-\$4,000 in costs per homeowner (this includes: handyman expenses, materials, subcontractors, and data collection). This is based on the CAPABLE model, which has been successful in Baltimore.
14	Affordable units for 30% AMI	Financing State and local housing agencies would be required to provide operating or rental subsidies at an on-going basis for new affordable housing for people below 30% of the AMI. Non-profits or other agencies would be given the right of first refusal to purchase naturally occurring affordable housing that is for sale to avoid loss to less affordable development.
15	Funding for affordable units and tenant protections	Regulatory and Policy/Financing (1) Require density near transit stations. (2) Allow a percentage of TIF to be used outside of the district and for affordable housing. (3) Create a 90-day tenant protection requirement upon the sale of multifamily rental properties
16	Establish 3-yr Housing First pilot project	Policy/Financing There is a bill at the MN Legislature to establish a 3-year Housing First pilot project in the ""Greater St. Cloud"" area. Housing First is effective in reducing chronic homelessness, in increasing positive outcomes of services, has been implemented in many places (cities and states). Costs are estimated at \$2 million per year for three years.
17	Workforce ownership housing	Financing Increase funding for workforce ownership by capturing the growth in mortgage registry and deed transfer taxes. Funds could be used for single-family development and renovation, manufactured housing infrastructure, and launching new ownership models.
18	"Good Neighbor" homelessness campaign	Social In partnership with mission driven organizations and the government, provide homeless safe houses within residential neighborhoods. Residents of these blocks must be willing to be "Good Neighbors" and will provide a supportive community for homeless individuals and families.
19	Reduce energy use	Cost Use Passive House performance standards when building new multifamily units to increase the energy efficiency of the building and lower utility costs. A reduced utility allowance would allow for higher rents, increasing operating income and improves the financing arrangements to support the development of more housing units.
20	Preservation of public housing	<i>Repeat of Idea 8 - Defend Glendale</i>

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
21		<i>Missing number in table</i>
22	Housing for chemically dependent mothers	Service Infrastructure Create a pilot program between the Department of Human Services and Minnesota Housing to develop and support housing for mothers with chemical dependency issues and their babies that would keep them together. The proposal suggests specifics for what the housing and programs should include.
23	Broad approach to increase the supply of deeply affordable units	Financing Strategies to increase the supply of deeply affordable units: 1) Create regional market innovation grants to housing providers for planning, tenant supports , and capital investment. (\$530 million over 5 years) 2) Create comprehensive housing legislation that funds the preservation and production of affordable housing (e.g. Massachusetts Affordable Housing Bill, which authorizes a \$1.7 billion investment) 3) Change bond strategy to reflect options reflected in item #2. 4) Shallow rent voucher for households at 40-80% of AMI 5) Municipalities zone for ""starter housing districts"", which can be incentivized by the state.
24	Addressing evictions and stability	Infrastructure and Regulatory Address evictions and stability by: 1) removing blanket criminal screening guidelines, 2) create landlord risk mitigation funds, 3) require eviction notices prior to taking action, 4) increase funding for emergency assistance, 5) provide temporary location assistance, 6) fund innovation grants, 7) promote existing tenant rights resources, and 8) require mandatory lease language related to rent, tenant and landlord obligations, and termination.
25	Solutions to High Cost of Housing	Regulatory and Infrastructure The submission outlines two ideas to address regulatory costs. (1) Require State agencies to report the cost of their housing-related rules and regulations to the Minnesota Legislature. (2) Developer should partner with local and regional governments to finds ways to reduce the cost of local and regional housing regulations for affordable housing projects. Policy Address MN's labor shortage and support Project Build Minnesota's Workforce efforts to promote construction as a life- long career.
26-28	Preservation of public housing	<i>Repeat of Idea 8 - Defend Glendale</i>
29	Section 108	Financing This proposal recommends the use of an often underutilized funding stream through the HUD CDBG program, called Section 108. This is a loan guarantee which provides States and local governments access to low cost, private financing for economic development, housing rehabilitation, public facilities/improvements, and large-scale real property development projects. The proposal points that the state of Minnesota and entitlement communities combined have \$231,589,435 in available borrowing capacity.
30	515 Preservation	Financing/Tax To preserve Section 515 Rural Housing Loans Program, MN should set aside a portion of LIHTC, prioritize projects that leverage local housing trust funds or other local resources, and increase funding for state programs such as the Rental Rehab program to help preserve 515 properties. MN should also provide assistance to help communities identify 515 properties with maturing mortgages, and provide tax incentives to property owners who agree to maintain the housing as affordable.

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
31	Dedicated Revenue	Financing The state of MN should identify and secure a dedicated revenue source for funding affordable housing that is significant in scale, dedicated to investing in housing, and targeted to helping extremely low-income housing. Similar examples: Local Housing Trust Funds.
32	Rental Subsidies	Financing Create a sustainable state funding source that is dedicated to providing rental assistance, or rental subsidies, prioritizing extremely-low-income renter households who are severely cost burdened. Submission references \$700 million annually to support 90,000 households
33	State Funding to Match and Leverage Local Housing Trust Funds	Financing The state should support Local Housing Trust Funds (LHTF) by creating a sustainable state funding source that matches and leverage local funding dedicated to affordable housing, and provide technical assistance to help local communities set up their trust funds.
34	State Housing Tax Credit Program	Financing/Tax Create a state housing tax credit program that is capitalized by contributions from tax payers with Minnesota tax liabilities (similar but slightly different than the federal program). Investments may be made for specific development or a general pool, the full tax credit is taken in the year of the investment (with excess credits carrying forward to the next year), and there is no syndication.
35	State and Local Grant Program	Financing Create state grant program that requires matching funds from the local unit of government to support affordable housing development and preservation. The match from local funds could come in the form of fee waivers, pooled tax increment, approval of 4d Low Income Rental Classification, property tax levy, general fund, or other local investments.
36	Water and energy efficiency	Policy, Financing, Tax, and Regulator A compilation of seven ideas that promote water and energy efficiency. (1) Expand successful conservation improvement programs (e.g. Home Energy Squad) and ensure they are accessible across the state. (2) Grant the 4d Low Income Rental Classification tax status to multifamily properties that implement energy efficiency and commit to keeping rents affordable for a set time period. (3) Make energy efficiency improvements and eligible use of state bonding funds. (4) Incorporate energy efficiency improvements into Opportunity Zones investments. (5) Create a large scale program to replace boilers in aging rental properties. (6) Incentivize cities to open zoning to promote more density and encourage energy efficiency. (7) Create an interest rate buydown program for commercial Property Assessed Clean Energy (PACE) financing.
37	Right-size project reserves	Financing This is a proposal to aggregate risk to allow for cost savings without increasing the risk to individual projects. In lieu of having large project reserves, the proposal suggests providing the limited partner with a guarantee for some portion of the reserve amounts. The guaranteed proportion would be sized based on the calculated risk of each project. The risk of this would need to be borne by the guarantor.
38	Opportunity Zones	Tax and Financing Use the new Opportunity Zone program from the federal Tax Cuts and Jobs Act to raise patient, private capital for affordable housing and economic development initiatives. LISC plans to utilize their tax credit investment platforms to develop and manage national, regional, and local Opportunity Funds.

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
39	Modern manufactured homes	Cost Construct modern, manufactured homes to create a single-family homes at cheaper construction costs. New manufactured homes would be high quality, energy efficient, and would be funded with debt financing and equity from LIHTC. The project would operate as rental housing for the mandatory 15- year LIHTC and then convert to a homeownership community.
40	Preserving mobile home parks	Policy Currently, residents of manufactured homes typically own their homes but not the land beneath them. MN non-profits and other organizations should promote resident ownership as a means of community development. Key priorities would be: (1) provide funding to repair/replace their privately owned infrastructure, (2) give park residents the option of buying the park before it is offered to a third party.
41	Reduce harm of court evictions	Regulatory A pilot project in Ramsey County is proposed in which eviction records will be sealed from public access unless and until a judgement is entered against the defendant (the tenant loses the case). Currently, evictions notices are public records, even before the case is decided. This pilot would run two years. The goal is to reduce potential for discriminatory tenant screening practices.
42	Reduce discrimination to vouchers	Regulatory A state law prohibiting the discrimination of tenants holding Section 8 housing choice vouchers is proposed.
43	Rental options for people with criminal records	Tax Create a tax credit program for landlords who rent to people with criminal histories. The proposal suggests modeling this after the Work Opportunity Tax Credit (WOTC) which has been successful at reducing the stigma of employing people with criminal backgrounds.
44	Convert vacant housing to affordable	Tax The idea proposes a tax incentive for property owners who acquire vacant properties. Property owners would enter into a 30-year restrictive covenant on the land that will commit them to providing affordable housing on the properties for 30 years in exchange for property tax credits and other favorable treatment from local and state authorities.
45	Enacting Just-Cause Eviction	Regulatory Enact just-cause eviction to prevent landlords from terminating leases for the sole purpose of raising rents. This provides tenants protection to stay in their unit as long as they pay their rent and are good tenants. The proposal explains specific components of the policy including strong enforcement mechanisms and recourse opportunities for tenants.
46	Job readiness training for high schoolers	Political and Social Create curriculum for high school students to obtain job skills (with a focus on entrepreneurship and the gig/freelance economy) that will help ensure living wage incomes and reduced demand for affordable housing.
47	Sales tax for affordable housing	Tax Increase the statewide tax increase of .25%. This increase would support new rental housing subsidies in Greater MN-- where LIHTC is not as efficient as it is in MN metro areas.
48	Shared housing	Social and Service Infrastructure A shared housing matching service could pair homeowners with renters, allowing seniors to age in place and providing housing options for disadvantaged renters. A housing counselor would pair owners and renters and provide support to the owner-renter relationship.

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
49	Increased funding for 30% AMI housing units	<p>Financing</p> <p>This proposal makes several recommendations to address housing affordability for households at or below 30% of AMI (the largest affordable housing need) by providing rent and operating subsidies on a substantial scale. Funding operating or rent subsidies is as critical as funding capital subsidies. Specific approaches include: 1) devoting a portion of annual appropriations for affordable housing production to operating subsidies, 2) amending the tax increment statute to permit new market rate developments to be designated as a housing TIF district - generating TIF for deeply affordable housing for up to 25 years, 3) adopting a state wide sales tax increase to generate housing funds for extremely low income households, and 4) getting funding from other sources including health, education, etc.</p>
50	Tenant rights and support	<p>Infrastructure</p> <p>Many ideas that fall into three buckets:</p> <ol style="list-style-type: none"> 1) Church and other faith-based and funded efforts 2) Tenant, renter, owner, and advocacy oriented strategies 3) People and businesses in the building trades
51	Tenant rights and support	<p>Regulatory</p> <p>Change Minnesota laws to address the impact of evictions and criminal records, habitability, high rents, and other issues. Suggested changes include record expungement, landlord liability and responsibility, eviction notice requirement, restrictions on crime-free provisions, minimum wage, rent control, and prohibition on rent subsidy discrimination.</p>
52	Preserving rent subsidies in Greater MN	<p>Financing and Service Infrastructure</p> <p>The USDA Rural Development Section 515 program includes rental assistance in many affordable properties in rural Minnesota. The mortgages on these properties are reaching maturity, which leaves the long term affordability of these units in question. The proposal suggests that Minnesota Housing contacts all of the RD owners to persuade them to pursue preservation options rather than letting the mortgage mature. Offer some financial incentives and or technical assistance be provided to these property owners.</p>
53	Common application for rental housing	<p>Regulatory</p> <p>A common rental application and a single fee would reduce the burden on low-income renters and populations who are searching for housing. The state would administer the common application and incentivize landlords to utilize it.</p>
54	Residents as decision makers	<p>Political and Social</p> <p>People who are impacted by the housing crisis need to be at the decision making table to provide their experiences and insight on recommendations. In additionally create a training program for people impacted by the housing crisis, who can work as peer mentors, homemakers, PCAs and ILS workers to be paid through Medicaid to increase employment opportunities.</p>
55	Manufactured homes	<p>Financing and Regulatory</p> <p>This proposal contains a number of program and policy changes to support manufactured homes across the state. These include: (1) using bonding, CDBG, MN Housing Trust Fund to pay for infrastructure improvements; (2) supporting cooperative ownership model through creation of land trusts; (3) replacing older units with newer energy efficient units; and (4) strengthening current law when a park becomes available sale from: (a) providing residents the right of first refusal to (b) allowing them a year to develop their own ownership.</p>
56	Homeownership	<p>Policy</p> <p>Private reverse mortgage (elderly homeowners matched with a family who would provide live-in services and make payments to own the home) and "Share-A-Home" Program (match elderly homeowners with people at risk of/experiencing homelessness). A growing number of elderly wish to stay in their home, have vacant rooms, have limited income, and need assistance.</p>

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
57	Tax Credit to Incentivize Landlords to Rent to Low Income Households	Tax This proposal would create a tax credit of \$1,000/month/unit (adjusted based on family size) that would be offered to landlords that rent to qualified low income households and meet local licensing and inspection requirements. A bonus credit up to \$3,000 per unit per year would be offered to landlords who accept tenants with poor rental/credit/criminal issues.
58	Long Term Preservation of NOAH units	Cost and Service Infrastructure If owners are selling their property to an entity that is willing to maintain its affordability and keep the current residents, then they would pay no capital gains tax on the sale. The new owners would be required to maintain current residents, and rents could increase no more than 3%/per year for 30 years. The owners would be able to get a dollar for dollar tax credit for improvements on units up to \$15,000. They would also be classified as a 4d property.
59	Preserve NOAH and Reduce Barriers	<i>List of policies and strategies to preserve and expand affordable housing.</i>
60	Intergenerational Village	Service Infrastructure and Social Intergenerational villages provide diverse housing options (multi-bedroom single family homes, one-bedroom cottages for seniors) to create community building opportunities for foster and adoptive families, youth in foster care, and seniors, who act as 'honorary grandparents'. The diverse generations work together to meet each other's needs.
61	Increase density to allow more housing	Regulatory Focus on increasing density using: (1) underutilized, small, infill land or opportunities for mixed use development; and (2) allowing development of mother-in-law buildings, granny flats, or accessory dwellings. Incentivize requirements that promotes environmental sustainability in affordable housing projects (similar to those in MN's B3 guidelines) to reduce operating costs.
62	Housing subsidy pool for people living with HIV	Funding Create a fund to leverage public and private resources for an HIV Housing Subsidy Pool to provide rent subsidies for extremely-low-income individuals living with HIV.
63	Ordinances for no net loss	Regulatory Develop a template for an ordinance that would require any development (commercial, industrial, or residential) of a certain size to not result in the net loss of affordable rental units in order to receive the necessary building permit and zoning approvals. The template should be developed by the state, and cities are encouraged to pass the "no net loss" ordinance.
64	Common application / one fee	Service Infrastructure Create a single common application system that allows prospective tenants to complete one application and pay one fee to be used for multiple properties. The proposal suggests a pilot that can then be expanded statewide.
65	Rental relocation assistance	Regulatory Declare a state of public economic emergency that would allow local units of government to enact rental relocation benefits, which would be paid by the landlord. The benefit would be triggered if rents increased by more than 8% in one year and would cover first and last month's rent and a security deposit.

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
66	Systems approach to market-based affordable	<p>Regulatory/Policy Multifaceted approach: 1) government should identify land parcels for affordable rental projects, 2) local governments should accelerate the approval process for these projects (including density bonuses), 3) exemptions/waivers should be provided on local charges, fees and Deed taxes, and 4) new projects should follow modern energy code to reduce operating costs (with affordable units qualifying for 4(d)/LIRC).</p> <p>Policy Provide investment incentives for creating modular multi- housing capacity in Minnesota.</p>
67	Alternative financing options for people who cannot pay interest for religious/cultural reasons	<p>Financing, Infrastructure, and Social The proposal identifies a three pronged strategy: 1) public education campaign to share information on pathways to homeownership for those requiring alternative financing, 2) increased capacity of homeownership trainings by Home Stretch, and 3) collaborative relationships with qualified alternative finance providers to ensure access to non-interest products.</p>
68	Supporting Emerging Minority and Women Developers	<p>Financing and Social Support emerging minority and women developers by: (1) providing technical assistance and social/ financial capital, including grants and favorable financing for predevelopment costs and mezzanine financing, and (2) pairing these emerging developers with more experienced developers.</p>
69	Local City Practices	<p>Regulatory This proposal recommends looking at ordinances and practices in cities that are leading on this issue and bring them together to talk about what is working and what might useful for cities.</p>
70	Increase production goals and funding	<p>Financing and Cost This proposal seeks to set a production goal of 10,000 units per year: 4,000 units of preservation and 6,000 units of new production and to increase funding to meet this goal. Funding levels included in the proposal include \$275,000,000/year from the state, \$200,000,000 from local governments, and \$100,000,000 in rental assistance from the state. The proposal also recommends that 95% of state capital aid be targeted to greater Minnesota.</p>
71	Central rental housing registry	<p>Service Infrastructure This proposal suggests creating a centralized online registry/database for all the rental housing units across the state. The database would capture all rental housing units in Minnesota and could be developed by HousingLink. It could be used for searching and to streamline communications and allow for easier communication of new programs and reminders to property managers and owners.</p>
72	Transitions for victims of abuse	<p>Service Infrastructure This proposal seeks to expand the Aftercare Program that Women's Advocates currently operates. Advocates with the Aftercare Program establish long term relationships with the household and continues to provide skills, advocacy, and supports as they move from shelter into the community.</p>
73	Expand the Homestead Market Value Exclusion	<p>Tax This proposal calls for expanding the Homestead Market Value Exclusion to provide residential property tax relief by reducing the taxable market value of a home. The goal is to adjust for the federal tax law changes and to incentivize homeownership.</p>
74	MN First-Time Homebuyer Savings Account	<p>Tax This proposals call for changing the MN First-Time Homebuyer Savings Account legislation passed in 2017 from a deduction of the interest eared to a credit for down payment savings. First time homebuyers would be able to save money for a downpayment in an account exclusively set up for home buying expenses and a set amount of that could be taken as a tax credit when they file income taxes.</p>

#	GENERAL TOPIC	IDEA DESCRIPTION - WHAT AND HOW
75	Homestead Credit Refund Program/Circuit Breaker Program	<p>Tax</p> <p>The proposal calls for increasing the income eligibility of the current Homestead Credit Refund program, through which households qualify for a property tax refund if the taxes exceed a percentage of their household income. Currently households making above \$105,500 cannot qualify for the refund. The goal is to adjust for the federal tax law changes and to incentivize homeownership.</p>
76	Moving Tax Credit and/or Closing Cost Credit	<p>Tax</p> <p>This proposal suggests creating a tax credit for moving and/or closing costs that a buyer or seller could file on their income tax returns. The goal of this proposal would be to motivate people to buy and sell and increase the inventory of homes for sale.</p>
77	Interest Rate Buy-Downs for Home Purchases for First-Time Homebuyers	<p>Financing</p> <p>This proposal suggests offering interest rate buy-downs for home mortgages for first-time homebuyers and increasing income limits for the program to all for the purchase of a median value home. Suggest that this could be offered through Minnesota Housing similar to the current fix-up interest rate buy-down program.</p>
78	Affordable Single Family Mortgages	<p>Financing</p> <p>Proposes offering lower cost loans statewide to lower income homebuyers through Minnesota Housing in a program similar to loans offered through Twin Cities Habitat for Humanity with sliding scale interest rates based on income. This proposal also suggests incentivizing private lenders to provide affordable interest rates and more accessible down payment assistance.</p>
79	Modular home ownership	<p>Cost and Code/Regulatory</p> <p>This proposal suggests repurposing shipping containers into single family homes. The proposal highlights the lower building costs, flexibility, and constructability to this type of modular housing.</p>
80	Partnership between Public Housing Authorities and Counseling Services to create pathways to homeownership	<p>Service Infrastructure</p> <p>Proposal to work with current public housing residents that have sufficient income (>60% AMI) to afford homeownership. HECAT awardees and PHA's provide financial capability and homeownership advising services to the targeted households. This creates pathways to homeownership and frees up units for the neediest households at a lower cost than building new units.</p>

Appendix B:

Recommendations from Work Groups

The information below details the proposed recommendations each work group put forward to consider for the final report. While they were not all able to be incorporated into the 30 recommendations contained in the report, the following pages reflect much work and thoughtful discussion by task force members and community and industry leaders. We are grateful to all who participated in the work groups by sharing personal experiences and ideas to help shape this important work.

Recommendations from Homeownership Work Group

CHANGE SYSTEMS

- H1. Engage local community members to support new housing opportunities.*
 - A. Address community responses to recognize the housing needs of more diverse communities (e.g., seniors, race and ethnicity, household composition, millennials) and create a broader range of housing opportunities.*
 - B. Assess current and future housing needs and incorporate them into local planning and economic development strategies.*
- H2. Encourage broad participation in homeownership housing opportunities by engaging a cross-sector of stakeholders in education, economic development, jobs, and housing.
 - A. Encourage open dialogue about the relationship between housing, jobs, education, and economic development.
 - B. Encourage private sector volunteerism and financial contributions to create and preserve affordable housing.

EXPAND PRODUCTION

- H3. Encourage local governments to evaluate

and update local plans, zoning and land use policies to facilitate expansion of homeownership options in communities to keep pace with population changes and shifts in market need and demand.*

- A. Create a grant program that requires matching funds from the local unit of government to support affordable housing. The matching funds can be in the form of fee waivers, pooled tax increment financing, tax levies, general funds, or other local investments.*
- B. Encourage partnerships between local governments and developers to create new housing.
- C. Encourage more local governments to incentivize affordable housing through things such as providing tax abatements, density bonuses, using resources such as the Housing Trust Fund or allowing alternative construction forms such as modular housing.
- D. Develop a best practices guide related to how local governments can support great housing diversity and encourage affordable housing development.
- E. Streamline local processes to reduce the timeline for receiving approvals on various aspects of projects to in turn, reduce development costs.

H4. Identify and encourage ways in which to reduce development and construction costs.*

- A. Conduct targeted outreach and market the construction trade to encourage more people to enter construction.*
- B. Encourage new and young people to enter the development and construction trade through training and mentorship programs.
- C. Encourage developers to use innovation and technology to assist in cost containment including, materials, design, and methodology, including 3D development, panelization, and plastic homes.
- D. Evaluate the procedure and participation in the development of the ICC and the State Building Code to ensure requirements are evaluated for costs and benefits.
- E. Prepare programs and curriculum to ensure that they are readily available when demand for construction trade training increases, including programs related to rehabilitation and remodeling.
- F. Remove sales tax on construction and materials for new housing development priced under \$250,000.

H5. Expand the housing inventory by developing more homes and encouraging alternative forms of homeownership housing options that meet the local community need.

- A. Encourage development of a wide range of homeownership housing options that meet the needs of the local communities including but not limited to manufactured and modular homes, 2-4 unit properties (duplex-quad), condos, townhomes, twin homes, row homes, cooperatively-owned homes, homes with accessory dwelling units, large family homes and community land trust housing.
- B. Implement a statewide developer challenge to build 500 new homes under \$250,000 across the state (idea from Little Falls forum).
- C. Expand acquisition, rehabilitation, resale programs through increasing funding and

encouraging more developers to complete acquisition, rehabilitation, resale projects.

H6. Expand and simplify construction financing products and underwriting for homeownership housing developers.

- A. Explore alternative products such as simplified revolving loan funds for construction financing.
- B. Identify strategies to reduce lender risk for small developers, projects, and new products.
- C. Engage business and philanthropic partners to support lenders and developers in providing funding.
- D. Encourage innovative methods to fund construction such as crowdsourcing.

H7. Provide technical assistance and capacity building for smaller and newer developers for new construction and rehabilitation of affordable homes.

- A. Develop a peer to peer homeownership housing development technical assistance program.

INCREASE MOBILITY

H8. Support and expand the reach of existing homebuyer and financial education and counseling programs.

- A. Increase funding for existing pre-purchase, post-purchase, and financial education and counseling programs such as the Homebuyer Education Counseling and Training program (HECAT) and the Homeownership Capacity program.
- B. Utilize existing resources, networks and best practices to help expand homebuyer and financial education and counseling programs in communities and online through homebuyer education services such as Framework.
- C. Educate Realtors, lenders, developers, and builders about homeownership and financial counseling and education programs.
- D. Provide more education, formally and informally about the importance of inspections, appraisals, and home maintenance.

- E. Require more financial wellness and homeownership education in schools and in adult basic education.
- F. Provide incentives for individuals to receive education such as requiring homebuyer pre-purchase education prior to receiving downpayment assistance or providing a savings match for those who participate in financial education and counseling.

H9. Address the homeownership disparity between households of color and white, non- Hispanic households.

- A. Raise awareness and education around equitable access to homeownership, including the unique needs of immigrant and refugee households.
- B. Ensure programs and services are available for households of color or Hispanic ethnicity to learn about, prepare for and access programs that support homeownership.
- C. Require education for Realtors, lenders, developers, and builders about the homeownership disparity.
- D. Create high school curriculum about racial disparities in income and homeownership and encourage dialogue around addressing racial disparities, asset building, and homeownership opportunities.

INCREASE ACCESS

H10. Increase access to capital for homebuyers through expanding mortgage products, encouraging innovative methods for savings, and growing down payment assistance resources.*

- A. Expand mortgage products, including manual underwriting, Individual Tax Identification Number programs, interest free lending products, and Section 184 loans. Provide extra support to small, local community banks to expand financing products.*
- B. Encourage innovative methods of increasing capital for homebuyers such as crowdsourcing, individual development

accounts, and lending circles.

- C. Encourage employers and foundations to support homebuying through matched homebuyer savings programs, downpayment resources or partnerships with local homeownership advisors.
- D. Increase the number of lenders offering purchase rehabilitation loans and encourage partnerships with nonprofit developers to provide rehabilitation oversight to reduce the process burden on lenders.
- E. Expand available downpayment assistance.
- F. Pool downpayment assistance sources so buyers will not have to apply to multiple programs.

PRESERVATION

H11. Provide technical assistance and capacity building for smaller and newer developers for new construction and rehabilitation of affordable homes.

- A. Develop a rehabilitation mentorship or trade program to develop more skills capacity and encourage more developers to pursue rehabilitation projects.

H12. Expand rehabilitation financing products and programs to enable existing homeowners to maintain their homes.*

- A. Support and expand existing home rehabilitation products and programs both at the state and local levels.*
- B. Expand financing products for manufactured home rehabilitation.

Recommendations from Rental Housing Work Group

CHANGE SYSTEMS

- R1. Quantify the state's housing needs, set goals based on need, and increase public understanding that housing is critical to the economic and social health of the state.*
 - A. Biannually, designate a body (an apolitical, public-private partnership such as the Itasca Project) to publish a statewide rental housing, homeownership, and housing stability forecast that includes:
 - current need
 - future growth, and
 - preservation of federally subsidized housing within and across regions and micro-markets to guide critical infrastructure investments in housing.*
 - B. Create a sustained public information campaign that:
 - builds understanding of how housing is central to the economic and social health of all residents and communities in Minnesota, and
 - connects the forecast with efforts to meet the housing need.*
- R2. Create a statewide dedicated and permanent affordable housing funding source(s), sized to make a significant impact in addressing the production, preservation, and rental assistance needs.*
 - A. Authorize through the legislature, permanent, dedicated funding source(s) for affordable housing that is sized to meet the need and not dependent on appropriations or partisan politics.*
- R3. Encourage municipalities and counties to create of dedicated and permanent affordable housing funding source(s) to meet their local needs and to leverage other investment.*
 - A. Provide legislative authorization to local jurisdictions that enables them to
 - adopt an increase in sales tax
 - increase the maximum levy for the purpose of supporting affordable housing development, preservation, and rental assistance.*
 - B. Provide one-time technical assistance to local jurisdictions to set up Affordable Housing Trust Funds.*
- R4. Expand ongoing private and philanthropic investment in affordable housing production, preservation of government assisted and privately financed/Naturally Occurring Affordable Housing, and rental assistance as an important tool in the housing finance tool box.*
 - A. Create an Innovation Fund that provides flexible financial and technical support for housing innovation and market testing that can be responsive to local needs and conditions, but which may not be competitive in existing funding programs.*
 - B. Establish incentives, similar to the MN Angel Tax Credit Program, for creating privately funded sources of lower-cost equity to leverage private capital in new affordable housing developments, specifically oriented to private market developments with little or no subsidies, in exchange for rent and income limits for at least the term of the investment.*

EXPAND PRODUCTION

- R5. Establish Minnesota as the entrepreneurial center for the advancement of housing innovation and technology.*
 - A. Attract and partner with leaders in education, design, construction, and distribution to develop the talent pipeline, materials, methods, and full value chain for modular, manufactured, and 3D construction.*
 - B. Engage building trades and construction industry professionals to change regulations to support new construction techniques, while maintaining safety and quality standards.*
 - C. Invest directly in and create state financial

incentives to help secure venture capital for research and development in housing technology and to build manufacturing capacity for modular, manufactured, and 3D printed housing.*

- R6. Expand affordability and supportive services by unlocking financing options, speeding up delivery of housing developments, and creating cost efficiencies that improve access to housing for all Minnesotans.
- A. When using the Low Income Housing Tax Credit, ensure that the new Income Averaging (IA) provision is used to create more units for households earning less than 30% AMI.
 - B. Expand supply of and access to workforce rental units (affordable to 60% - 120% AMI) located near job centers in partnership with major employers by
 - helping employers understand the housing needs of their current and future employees
 - providing employers with a tool kit of possible actions and best practices they can take to support their workforce.
 - C. Create service enhanced mortgages (Fannie Mae model) which provide a dependable source of funding for social services which help households maintain stable housing, reach their aspirational goals and move beyond requiring assistance.
 - D. Work with municipalities to create a mechanism(s) of accountability during the local approval process for affordable housing that emphasizes meeting affordable housing goals.
 - E. Create a statewide review panel to evaluate regulations related to building standards, land use, and environmental stewardship for their impact on housing affordability.
- R7. Remove barriers (including lack of information and limits on local authority) that hinder public and private investment in housing.
- A. Inventory and publish online state-controlled surplus/underutilized lands and request legislation that prioritizes its use for affordable

housing, including reflection of this priority in reduced sales price. Encourage cities/counties to do the same.

- B. Authorize local governments to expand the use of Tax Increment Financing (TIF) to
 - subsidize specific affordable housing or mixed income developments or the infrastructure required for these developments
 - pool funding to subsidize affordable housing for the lowest-income and most vulnerable renters in other areas of the city
 - reduce taxes in exchange for reduced rents, including by modifying low-income requirements needed to establish TIF Housing Districts.
- C. Reduce tax burden on properties in exchange for affordability by
 - expanding the uses of tax rate reclassification (Low Income Rental Classification [LIRC]; tax class 4d)
 - authorizing tax abatement for affordable housing in which the local taxing jurisdictions can establish and adopt tax abatement term limits that support public goals.

INCREASE ACCESS

- R8. Create new rental assistance programs and maximize existing federal resources to meet the needs of Minnesota's lowest income and most vulnerable renters.
- A. Create new or expand existing rental assistance program(s) to complement the federal programs that are insufficient to meet need.
 - B. Conduct statewide research on Housing Choice Voucher "porting", its net impact, and potential related funding loss to inform advocacy to maximize the existing federal resource.
 - C. Partner with local public housing authorities and HRAs to
 - apply project-based rental assistance to new development in areas of opportunity
 - encourage the use of project-based vouchers

with inclusionary housing policies to create stable housing choices for families and achieve deeper affordability.

PRESERVATION

- R9. Incentivize private market owners to maintain, expand, or make rental units available affordably to those most in need by offering light incentives with minimal administrative burden.
- A. Modify and expand existing rental rehab programs statewide to simply and efficiently address aging conditions of existing rental properties.
 - B. Implement changes to the property tax regime that would reduce upward pressure on rents and free up capital for owners to make critical repairs and stay current with maintenance needs.
 - C. Reduce utility costs for tenants and property owners
 - shielding properties that deliver affordability from growing utility costs and/or incentivizing energy efficiency upgrades.
 - D. Create new insurance mechanisms or products to reduce costs for property owners that house the lowest-income households or special populations.

Recommendations from Housing Stability and Opportunity Work Group

CHANGE SYSTEMS

- S1. Incentivize private sector participation in affordable housing.*
- A. Create a housing tax credit program, or other incentives, for employers who create affordable housing options for employees. (State, Department of Revenue)*

ENHANCE STABILITY

- S2. Institute tenant protections to ensure transparency and dignity in renting homes*
- A. Support the creation of tenant protection ordinances such as adopted by St. Louis Park in April 2018, which requires landlords to pay moving expenses of low-income tenants if they decide to raise rents, not renew leases, or re-screen tenants within the first three months of owning property. (Local communities)*
 - B. Develop state legislation that requires communication between property owners and tenants regarding ownership/tenancy changes at a minimum of 60 days prior to sale. (State)*
 - C. Develop right of first refusal options for tenants residing in naturally occurring affordable housing, manufactured home parks, or other nonprofit developers (State, local communities)*
 - D. Develop short term assistance resources for tenants displaced by a building sale/renovation. (State)*
- S3. Prevent and mitigate impacts of evictions on tenants*
- A. Draft and present legislation that limits evictions to only appear on a tenant's record following court judgment. Pattern this on the pilot project in Ramsey County in which eviction records will be sealed from public access unless and until a judgment is entered against the defendant (the tenant loses the case). (State, Counties)*
 - B. Implement tenant protection strategies such as just-cause eviction to prevent landlords from terminating leases for the sole purpose of raising rents. (State)*
 - C. Define and crack down on predatory rental practices, including excessive evictions and poor quality. Improve or publicize landlord tiering systems to track predatory landlords. (State, local communities)*
 - D. Increase the speed and flexibility of emergency resources administered by counties as majority of evictions happen due to nonpayment of rent, short term assistance could mitigate evictions. (State and county partners)
 - E. Create problem solving approaches to Housing Court calendars, offering wrap around services.
- S4. Diversify housing options in communities to meet wide-ranging needs
- A. Incentivize universal design to meet future needs of Minnesotans, given changing demographics, including seniors aging in community.
- S5. Develop inclusive housing models and practices
- A. Create a clear and simple process for the expungement of old or resolved criminal records. (State).

EXPAND PRODUCTION

- S6. Increase investment in housing options for Minnesota's lowest income and most vulnerable renters*
- A. Establish Regional Market Innovation Grants to provide technical assistance, housing subsidies for operations, and housing grants for capital investment. (State)*
 - B. Support local communities to address their unique needs by creating adaptable toolkits to develop local housing trust funds and coordinate existing housing funding. (State and local communities)*
 - C. Consider statutory amendments to Tax Increment Financing statute to promote use of

affordable housing districts. (State)

S7. Adapt local land use policies*

- A. Leverage use of Low Income Rental Classification by municipalities, as done with Minneapolis. (State and local communities)*
- B. Support localities to create inclusionary policies for multifamily development, including funding the Inclusionary Housing Account at the Metropolitan Council, which has been unfunded since 2000. (State and local communities)

S8. Diversify housing options in communities to meet wide-ranging needs

- A. Address regulatory and financial barriers to developing affordable housing, with a focus on adding non-traditional housing types, such as accessory dwellings, single room occupancy units, and more communal living opportunities. (State)
- B. Use Comprehensive Plans and long-range planning to identify areas in communities for new multifamily housing development and rezone the areas as needed to support the redevelopment. (local communities)

INCREASE ACCESS

S9. Ensure inclusive housing models and practices*

- A. Promote action items in most recent state and local fair housing plans, including items such as issuing further guidance to landlords on criminal background screening. (State, Fair Housing Implementation Council)*
- B. Make permanent and expand resources for the Landlord Risk Mitigation Fund and create other incentive options for landlords such as lease-signing incentives and payment of holding fees for target populations. (State, Minnesota Housing)*
- C. Develop financial incentives for property owners to expand the availability of master leasing options for human service organizations supporting housing. (State)*
- D. Develop and disseminate best practices for

tenant screening procedures. (State, private sector)*

- E. Incentivize acceptance of housing choice vouchers in the private market, including mitigating administrative burdens of the program.
- F. Draft legislation prohibiting the discrimination of tenants holding Section 8 housing choice vouchers. (State)

S10. Increase investment in housing options for Minnesota's lowest income and most vulnerable renters*

- A. Expand housing voucher programs. Advocate to Congress to increase funding for the Housing Choice Voucher Program and utilize state and local resources to expand existing program or create a new program to support families on Section 8 waiting lists. (State and local partners)*
- B. Identify sustainable sources of revenue that can be dedicated to providing rental assistance, prioritizing extremely low-income households who are severely cost burdened. Example programs include the state housing trust fund and Bridges. (State)*
- C. Support income averaging provisions for Low Income Housing Tax Credit (LIHTC) developments. (State, local allocating agencies)*

S11. Increase supports to access housing for those with the greatest barriers*

- A. Prioritize housing investments to achieve the goals in Heading Home Together: Minnesota's Action Plan to Prevent and End Homelessness for families, youth, veterans, and people experiencing chronic homelessness. Rapidly link people experiencing or at-risk of homelessness with housing and services tailored to their needs.*
- B. Increase the number of affordable housing opportunities for people with disabilities exiting segregated settings by supplementing and/or re-allocating existing funding. (State, Olmstead Plan)*

- C. Implement alternative case management strategies (such as critical time intervention) to take a right sized, person centered approach to local case management. (Counties)*
- D. Develop a single common application system that allows prospective tenants to complete one application and pay one fee to be used for multiple properties. Pilot system with Minnesota Housing's portfolio. (State)*
- E. Provide a dependable stream of funding for proven social services that help households maintain stable housing. (State)
- F. Consider funding housing navigators for Minnesotans facing barriers who need additional support in housing. (State, DHS)
- G. Develop and/or use existing resources to expand funding of rapid re-housing (short-term rental support) or similar programs. (State)
- H. Create a deeper connection with work force services, like workforce investment boards and workforce centers. Consider other innovative ways to access, such as employers writing letters for their employees (State and counties).

INTEGRATE SERVICES

- S12. Facilitate opportunities for integrating housing with health care*
- A. Advance the Housing Supports program (formerly known as Group Residential Housing) by identifying gaps and potential program enhancements to ensure state-wide coverage. (State, Olmstead Plan)*
 - B. Develop formal partnerships between housing and healthcare providers, based on evidence and research showing how healthcare supports can increase housing stability, to systematically connect tenants of affordable housing with services when necessary. Build capacity within supportive housing providers to make those partnerships. (State)*
 - C. Increase housing stability by supporting the development of a robust mental health crisis response system and providing information

to property management about options to respond to a mental health crisis. This could include creating a point of contact at county government for landlords to connect with. (State, Counties)

- D. Promote strategies to access Medicaid coverage for housing related activities and services for people with disabilities. (State, Olmstead Plan)
 - E. Create a multipayer funding pool to have the ability to conduct very tailored interventions (fill gaps in services) outside of the current health care marketplace. (State, private sector partners).
- S13. Increase supports to access housing for those with the greatest barriers*
- A. Develop a consolidated request for proposals (RFP) for supportive services funding similar to Minnesota Housing's RFP for capital housing resources. (State, Counties)*
 - B. Provide families and individuals in transition access to a continuum-of-care in supporting housing needs and difficulties. This includes aftercare models, where support is provided even after housing is secured. (Counties)

PRESERVE ASSETS

- S14. Increase investment in housing options for Minnesota's lowest income and most vulnerable renters.*
- A. Consider a state source to assist PHAs in administering Housing Voucher Programs to increase the number of available vouchers. (State)*
 - B. Substantially increase support for rehabilitation of publicly owned housing (such as through the Publicly Owned Housing Program administered by Minnesota Housing). (State)

**High priority*

Appendix C:

Overview of Affordability and Income

Median Family Income is the income based on the median four-person household in Minnesota. The U.S. Department of Housing and Urban Development (HUD) releases calculations yearly based on the most recent Census data available. HUD develops program income limits for assisted housing programs based on Median Family Income estimates and adjusts them based on household size and location within the state. The income levels in the table below are based on the statewide median income for a family of four (\$80,400), rather than local area median incomes.

Imagine every four-person household in the state is lined up in order of their income, from lowest to highest. The household in the middle – the median household – represents 100% Median Family Income. For the entire state of Minnesota in 2017, that income was \$80,400 for a four-person household. Median Family Income is adjusted based on family size and location. Take a look at the percentage of Minnesota households that are at 30% Median Family Income or lower – it totals 16.2%. However, 45.2% of cost-burdened Minnesotans are at 30% Median Family Income or lower.

	Household Income as % of state Median Family Income ¹	Household Income ²	Affordable Monthly Rent ³	% of Minnesota Households ^{4,5}	% of Minnesota's Cost-Burdened Households ⁵
Extremely Low Income	10%	\$8,040	\$201	3.2%	8.8%
	20%	\$16,080	\$402	6.3%	18.9%
	30%	\$24,120	\$603	6.7%	17.5%
Very Low Income	40%	\$32,160	\$804	6.8%	15.3%
	50%	\$40,200	\$1,005	6.8%	10.6%
Low Income	60%	\$48,240	\$1,206	7.0%	8.6%
	70%	\$56,280	\$1,407	6.5%	5.9%
	80%	\$64,320	\$1,608	5.7%	3.7%
Moderate Income	90%	\$72,360	\$1,809	5.3%	3.2%
	100%	\$80,400	\$2,010	5.3%	2.2%
	110%	\$88,440	\$2,211	5.0%	1.4%
	120%	\$96,480	\$2,412	4.1%	0.9%
Middle Income	130%	\$104,520	\$2,613	4.2%	1.0%
	140%	\$112,560	\$2,814	3.4%	0.4%
	150%	\$120,600	\$3,015	3.0%	0.3%
	160%	\$128,640	\$3,216	2.4%	0.2%

¹Based on a four-person household. ²Incomes are calculated based on the 2017 U.S. Department of Housing and Urban Development (HUD) median family income for Minnesota of \$80,400 for a four-person household. ³Affordable monthly rents are calculated as 30% of the corresponding monthly income. ⁴Percent households by income level is based on American Community Survey 2015 data prorated to 2017 income levels using the percent increase in statewide median income from 2015 to 2017 (3.88%). ⁵Percent of all Minnesota households and cost-burdened households data is not dependent on household size, unlike the income data in this table, which is based on a four-person household. This is important to note. For example, the 6.8% of households at 50% of the state median income includes households of all sizes, and the income at 50% of the state median income (\$40,200) has different implications depending on the size of the household. It would be livable for a one-person household but a significant challenge for a six-person household.

Notes

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- 4 This cost differential has been observed based on properties developed and rehabilitated by Minnesota Housing.
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- 8 Minnesota Housing analysis of data from the U.S. Department of Housing and Urban Development's 2010-2014 CHAS (Comprehensive Housing Affordability Strategy), the Census Bureau's American Community Survey, and the Minnesota Demographer's Office.
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- 10 HousingLink, STREAMS database, <https://www.housinglink.org/streams/>.
- 11 Minnesota Housing Finance Agency, "Evaluating Affordable Housing Efforts: Program Assessment Report 2017," pages 13 and 22, http://www.mnhousing.gov/get/MHFA_1043044.
- 12 HousingLink, STREAMS database, <https://www.housinglink.org/streams/>.
- 13 Inventory compiled by staff to the Governor's Task Force on Housing.
- 14 Minnesota Housing estimate based on public housing rehabilitation projects that it has financed.
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- 17 Minnesota Realtors, "Local Market Update for May 2018," <https://my.mnrealtor.com/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=d94f35de-219a-9ae9-7abf-0c8494709f22&forceDialog=0>.
- 18 Twin Cities Pioneer Press, "Why do Twin Cities homes cost so much? We went to find out." April 17, 2017, <https://www.twincities.com/2017/04/16/twin-cities-housing-costs/>.
- 19 Marquette Advisors, "Apartment Trends," 1st Quarter, 2018.
- 20 This estimate by Minnesota Housing is based on jobs ratios from the Implan Input/Output Model. The jobs would include construction jobs (direct), jobs at Minnesota companies that make components such as windows (indirect), and jobs in the general economy as employees in the other new jobs spent their income.
- 21 Minnesota Housing, Predictive Cost Model. The model uses data from the multifamily developments that Minnesota Housing has financed since 2003 to predict development costs in 2018 dollars.
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- 23 Minnesota Department of Employment and Economic Development, Quarterly Census of Employment and Wages, <https://mn.gov/deed/data/data-tools/qcew/>.
- 24 Goetz, Thompson, Cann, and Becker. "Stretching Affordable Housing Resources through Better Local Government Practices," Proposal to The MN Challenge, June 13, 2014, http://hjcmn.org/_docs/MN_Challenge_proposal_revised_post_award.pdf.
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- 34 CommonBond study, "Social Return on Investment".
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- 40 Steiner, Makarios, & Travis, Examining the Effects of Residential Situations and Residential Mobility on Offender Recidivism, Crime & Delinquency (2015, vol. 61, no. 3, SAGE Publications), p. 388.
- 41 Hennepin County Government, "Hennepin Health Housing Navigation Results Summary," August 2014, page 1, https://www.milbank.org/wp-content/uploads/2016/04/hennepin_health_housing_navigation_results_summary.pdf.
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- 43 Minnesota Housing analysis of data from the U.S. Census Bureau's American Community Survey (2016 1-year sample, microdata, [ipums.org](http://www.ipums.org)).
- 44 Minnesota Housing analysis of data from the U.S. Census Bureau's Manufactured Home Survey (2017).
- 45 Minnesota Housing analysis of data from the U.S. Census Bureau's American Community Survey (2016, 1-year sample microdata), www.ipums.org
- 46 Inventory by staff to the Governor's Task Force on Housing.



Learn more at
www.mnhousingtaskforce.com

Exhibit D: Minutes of July 9, 2019, Board of Electricity Meeting

Meeting Minutes: Board of Electricity

Date: July 9, 2019
Time: 9:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Members Present:

David Curtis
Alfreda Daniels
Cole Funseth
Derrick Givens
Michael Hanson (via tele)
Duane Hendricks – Vice-Chair
Chad Kurdi
Peter Lindahl – Secretary
Daniel Westberg – Chair
John Williamson

Members Absent:

Scott Novotny
Weston Wilson

DLI Staff & Visitors:

Jeff Lebowski (DLI)
Lyndy Logan (DLI)
Neil Furman (DLI)
Dean Hunter (DLI)
Marty Kumm (DLI)
Steve Dudley (DLI)
Todd Green (DLI)
Charlie Durenberger (DLI)
John McNamara (DLI)
Adam Hanson (ABC)
Gary Thaden (NECA)
Ray Zeran (IBEW)
Daivd Fisch (MNESTA)

1. Call to Order

The meeting was called to order at 9:05 a.m. by Chair Westberg. Roll call was taken by Secretary Hendricks and a quorum was declared with 10 of 12 voting members present in person or via teleconference.

2. Approval of Meeting Agenda

A motion was made by Givens, seconded by Lindahl, to approve the agenda as presented. The roll call vote was unanimous with 10 votes in favor of the motion; the motion carried.

3. Approval of Previous Meeting Minutes

A motion was made by Curtis, seconded by Lindahl, to approve the April 9, 2019, meeting minutes as presented. The roll call vote was unanimous with 10 votes in favor of the motion; the motion carried.

4. Regular Business

- a. **Expense Approval** – reviewed and approved the per diem and expenses.
- b. **Enforcement & licensing update** – Charlie Durenberger gave an update on the number of electrical enforcement actions/orders.

c. **Inspections update**

Williamson said for the previous fiscal year there were 108,180 electrical permits filed and 148,088 inspections – the same trend as previous years.

5. **Special Business**

a. **Reciprocity**

Steve Dudley referred to **Attachment A**, Electrical License Reciprocity Comparison of Minnesota, Wisconsin, and Texas, **Attachment B**, Minnesota Statute 326B.33 regarding reciprocity, and **Attachment C**, National Electrical Reciprocal Alliance Bylaws.

Westberg asked if Wisconsin and Texas wished to address the Board and Dudley said Wisconsin does but Texas needs to obtain funding to address the Board in person but they may do so via teleconference. Westberg asked Dudley if other states need to meet the same requirements as Minnesota and Dudley said other states need to meet requirements per statute. Present reciprocity agreements with other states do not meet everything; therefore, if every requirement needs to be met exactly the same as Minnesota, then there are many states that would not be reciprocal because those states are over and above on certain requirements. The Board should review how far off a state is from meeting Minnesota's requirements and determine if it is justifiable to deny reciprocity. If the Board denies reciprocity then that state needs to understand why they were denied and Lebowsky agreed. Lebowsky added that the Board can ask specific questions of a state addressing the Board regarding reciprocity and all states have a right to be heard. Dudley added that, at this time, journeyworkers, not masters, are being discussed. Dudley said Wisconsin and Texas are pursuing Minnesota because Wisconsin has made a lot of changes in their statutory language and they have brought the bar closer to Minnesota's requirements and Texas has similar requirements to Minnesota, does not have a state ratio; however, Texas is primarily municipally inspected in which case municipalities have ratios and those are 1 to 3 or 1 to 5. South Dakota has no ratio and Minnesota is reciprocal with them.

Williamson said that Minnesota's statutory language is broad based. Dudley's matrix, Attachment A, is merely an illustration of similarities, not requirements per statute. It is not written anywhere that all 19 categories in Attachment A need to be an exact match. There is a lot of room for interpretation. Dudley said the chart he created is not all inclusive – the chart only provides an idea of where Minnesota and other states might match up. Westberg said the board's decision is based on requirements and if the Board does not vote for reciprocity then there would need to be a statement of why. Lebowsky said this is correct. Kurdi asked Dudley if Wisconsin and Texas meet Minnesota's requirements and Dudley said yes, in his opinion, if reviewing other states that Minnesota is already reciprocal with then yes, both Texas and Wisconsin we are in line in similarities and differences. There are zero states with reciprocity agreements that are identical to Minnesota. Lindahl said perhaps these other states that do not meet all of Minnesota's requirements should be removed rather than add more states. Dudley asked how this could be done according to statutory language? Lindahl said

states can remove reciprocal agreements. Lebowski said if a state changes their program there is nothing forcing Minnesota to continue with reciprocity but this would have to be a decision on the record with an opportunity to address the Board to explain why reciprocity should continue.

Kurdi asked if the Board has written criteria of requirements before granting a state reciprocity. Westberg said Attachment A would be the criteria to review requirements in place for Wisconsin and Texas. Westberg asked if there could be a subcommittee to analyze Attachment A and bring a decision back to the Board. Lebowski said legally this can be done. He hasn't seen the current reciprocity agreement but there should be language that explains what happens if a state drops below the standard requirements.

Funseth asked who would draft reciprocal agreements and Westberg said that at the October meeting a sub-committee could be formed to review all of the facts and draft an agreement.

Lebowski asked if the board would welcome Texas to appear via teleconference and Lindahl said if it is that important then they should send a representative, in person, and Westberg, Hendricks, and Hanson agreed.

Further discussion on reciprocity was then tabled until the October meeting.

b. NEC Adoption

Lebowski said the Request for Comments was published in the State Register on April 22, 2019 and no comments have been received yet. The Board's target date for implementation is July 2020. The board needs to make a decision if they want to adopt the code with or without Minnesota amendments. If the Board adopts without any MN amendments then the rulemaking process would go forward as it has in past years but this decision would be up to the board. The NEC is not final yet at the national level.

Kurdi said he prefers adopting the national code, without MN amendments, and made a motion, seconded by Givens [motion later withdrawn]. Lebowski said the Board would go forward with rulemaking based on this motion. There is an opportunity for public input and a public hearing. If 25 or more persons request a public hearing then they would try to convince an Administrative Law Judge that the Board should be making Minnesota amendments as opposed to simply adopting as is. Lebowski isn't saying this would happen but there is the potential that it could.

Gary Thaden, Government Affairs Director for the National Electrical Association, said he believes the safest course would be to either call a special meeting after the NFPA decides on final language or delegate to a sub-committee to review. The Board needs to know the final language before adopting otherwise he believes this puts the Board at risk. Hendricks agreed with Thaden – there is no urgency to adopt before the NEC is finalized. Thaden said their association is a strong supporter of the Board and of adopting without MN amendments but he doesn't want to see the process put at risk by

trying to achieve an arbitrary date. Lindahl agreed and asked if Kurdi would like to withdraw his motion to adopt without MN amendments and Kurdi replied yes, and his motion was withdrawn. The Board agreed instead to appoint a sub-committee to review the final NEC and bring a recommendation back to the Board on whether to adopt with or without MN amendments.

A motion was made by Lindahl, seconded by Kurdi, to authorize and appoint a sub-committee to review the finalized NEC at a special meeting and bring their recommendation to the full Board on whether to adopt the NEC with or without MN amendments. The roll call vote was unanimous with 10 votes in favor of the motion; the motion carried.

The NEC 2020 Adoption Review Committee was formed with Lindahl, Kurdi, Funseth, Hendricks, Hanson and Westberg. The sub-committee meeting would be scheduled after August 5.

- c. Election of Officers** – Meeting was turned over to John Williamson, Commissioner’s Designee, for the election of officers.

Chair – Duane Hendricks nominated Dan Westberg. No other nominations were given. The roll call vote was unanimous with 10 votes in favor; the nomination passed. Westberg was re-elected as Chair.

Vice Chair – Dan Westberg nominated Duane Hendricks as Vice Chair. No other nominations were given. The roll call vote was unanimous with 10 votes in favor; the nomination passed. Hendricks was elected as Vice-Chair.

Secretary – Derrick Givens nominated Alfreda Daniels as Secretary and Duane Hendricks nominated Peter Lindahl. No other nominations were given. The majority roll call vote ruled with 6 votes in favor of Lindahl; the nomination passed. Lindahl was elected as Secretary.

Duane Hendricks was assigned as the representative to the CCAC and Alfreda Daniels will serve as the alternate.

6. Committee Reports

Construction Codes Advisory Council (CCAC) – has not met.

7. Complaints

No complaints brought forth

8. Open Forum

Nothing

9. Board Discussion

None

10. Announcements

Next regularly scheduled meetings – 9:00 a.m. Minnesota Room, DLI

- a. July 9, 2019 (annual meeting)
- b. October 8, 2019

11. Adjournment

A motion was made by Lindahl, seconded by Givens, to adjourn the meeting at 10:03 a.m. The vote was unanimous with 10 votes in favor of the motion; the motion carried.

Respectfully Submitted,

Peter Lindahl

Peter Lindahl
Secretary

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

Attachment A

JOURNEYWORKER								
Sort	Subject	Reciprocity Similarities	Minnesota		Wisconsin		Texas	
				Citation		Citation		Citation
1	Statewide licensing	MN Statute 326B.33 Subd. 20	Yes	MN Statute 326B.33	Yes.	WI statute 101.862, with exceptions.	Yes	Texas Occupations Code 51.4041(c) allows reciprocity agreements (subject to approval by the governor)
2	Electrical inspections covered statewide	NERA	Yes. State and municipal	MN Statute 326B.36	Yes. State and municipal.	New one and two family dwellings in SPS 320.10. Farms, public buildings places of employment, etc. in SPS 316.012 and 316.013. Exception for existing industrial and manufacturing facilities in state statute 101.875(2).	Inspections are not mandatory by law, but are required by city and county ordinance.	
3	State administered exam	MN Rule 3800.3520, MN Statute 326B.33 Subd. 20, & NERA	Yes, Minnesota writes and proctors our own exams	MN Rule 3800.3520, MN Statute 326B.33 Subd. 18	Yes. Wisconsin writes and administers its own exams.	SPS 305.09	Yes, Texas creates its own exam, which is administered by a third-party vendor.	Texas Occupations Code 1305.162
4	Number of questions	MN Statute 326B.33 Subd. 20, & NERA	80	Policy	100	Set by policy and not an Administrative rule.	80	Candidate information bulletin located at https://urlz.com/UzdVt
5	Time allowed	MN Statute 326B.33 Subd. 20, & NERA	5.5 hours	Policy	4 hours	Set by policy and not an Administrative rule.	4 hours	Candidate information bulletin located at https://urlz.com/UzdVt
6	Open book/memory	MN Statute 326B.33 Subd. 20, & NERA	Open book	Policy	Open book	SPS 305.09(4)(b) Set by policy and not an Administrative rule.	Open book	Candidate information bulletin located at https://urlz.com/UzdVt
7	Minimum score	MN Statute 326B.33 Subd. 20, & NERA	70%	Policy	70%	SPS 305.09(6)(a)	70%	16 Texas Administrative Code 73.21 ("An individual applicant must achieve a passing score on an examination approved by the executive director of the Texas Department of Licensing and Regulation.")
8	Qualifying experience to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	All hours can be obtained in new installation of light, heat, power in any occupancy type	MN Rule 3800.3520, MN Statute 326B.33	Experience in installing, maintaining, or repairing electrical wiring. Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring	WI statute 101.87(1)	Hours may be gained if under the supervision of a master electrician; must be performing "electrical work" as defined by statute and rule	Texas Occupations Code 1305.002(11); Texas Occupations Code 1305.155(1); 16 Texas Administrative Code 73.10(21)
9	Qualifying experience to qualify to examine (years/hours)	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	8000/4 years OJT	MN Rule 3800.3520, MN Statute 326B.33	8000 hrs. and 4 years OJT or Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring that has a duration of at least 3 years and that is approved by the U.S. department of labor or by the department of workforce development	WI statute 101.87(1)	8,000 hours of on-the-job training under the supervision of a master electrician	Texas Occupations Code 1305.155

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

Attachment A

JOURNEYWORKER								
Sort	Subject	Reciprocity Similarities	Minnesota		Wisconsin		Texas	
				Citation		Citation		Citation
10	Hours granted for the successful completion of a 2 year technical college electrical course	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	2000	MN Rule 3800.3520, MN Statute 326B.33	2000	WI statute 101.87(2m)	n/a	n/a
11	Out of state experience accepted	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	Yes, as long as it is comparable to experience gained in Minnesota	MN Rule 3800.3520	Yes.	WI statute 101.87(1)	Yes, as long as it is comparable to experience gained in Texas	Texas Occupations Code 1305.164; Texas Occupations Code 51.4041(b)
12	Minimum education requirements to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	2 hours CE per year for Minnesota registered unlicensed electricians. No apprenticeship education required. No education requirements for individuals who gained experience in other states	MN Rule 3800.3520, MN Statute 326B.33	None.		No education or apprenticeship is required to take the examination; however, electrical apprentices are required to take 12 hours per year of CE.	16 Texas Administrative Code 73.25
13	Military experience accepted	MN Rule 3800.3520	Yes. Must provide DD214 and MOS must be for electrical	MN Rule 3800.3520	Yes, if the experience is in installing, maintaining, or repairing electrical wiring.	WI statute 101.87(1)	Yes. Must provide DD214 and MOS must be for electrical work.	Texas Occupations Code 1305.1645
14	Duration of journeyworker license	Policy	2 years	Policy	4 years	SPS 305.06	1 year	16 Texas Administrative Code 73.22
15	Continuing education content required to renew journeyworker license	MN Rule 3800.3602	12 hours code 4 hours statute, rules, technical	MN Rule 3800.3602	Content not specified, but has to relate to the skills and knowledge of the license category. Classes must be state approved.	SPS 305.08(1)(a) and (d)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
16	Continuing education hours required to renew journeyworker license	MN Rule 3800.3602	16 hours prior to renewal - 2 year cycle	MN Rule 3800.3602	24 hours. Classes must be state approved.	SPS 305.44(6)(b) and 305.08(1)(a)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
17	NERA Member		Yes		Yes		Yes	
18	Reciprocal States		Alaska, Arkansas, Colorado, Iowa, Montana, Nebraska, North Dakota, South Dakota, Wyoming		New Hampshire, Iowa		Alaska (pending), Arkansas, Idaho, Iowa (pending) Louisiana (master only), Montana, Nebraska, New Mexico, North Carolina, Oklahoma (pending), South Dakota, Wyoming	
19	Code Cycle	MN Rule 1315.0200	2017	MN Rule 1315.0200	1 and 2 family dwellings are on 2011 until January 1, 2020 when they go to 2017. Everything else is on 2017		2017	Texas Occupations Code 1305.101; 16 Texas Administrative Code 73.100

2018 Minnesota Statutes

326B.33 LICENSES.

Subd. 20. Reciprocity.

The commissioner may enter into reciprocity agreements for personal licenses with another state if approved by the board. Once approved by the board, the commissioner may issue a personal license without requiring the applicant to pass an examination provided the applicant:

- (a) submits an application under this section;
- (b) pays the application and examination fee and license fee required under section [326B.092](#); and
- (c) holds a valid comparable license in the state participating in the agreement.

Agreements are subject to the following:

- (1) The parties to the agreement must administer a statewide licensing program that includes examination and qualifying experience or training comparable to Minnesota's.
- (2) The experience and training requirements under which an individual applicant qualified for examination in the qualifying state must be deemed equal to or greater than required for an applicant making application in Minnesota at the time the applicant acquired the license in the qualifying state.
- (3) The applicant must have acquired the license in the qualifying state through an examination deemed equivalent to the same class of license examination in Minnesota. A lesser class of license may be granted where the applicant has acquired a greater class of license in the qualifying state and the applicant otherwise meets the conditions of this subdivision.
- (4) At the time of application, the applicant must hold a valid license in the qualifying state and have held the license continuously for at least one year before making application in Minnesota.
- (5) An applicant is not eligible for a license under this subdivision if the applicant has failed the same or greater class of license examination in Minnesota, or if the applicant's license of the same or greater class has been revoked or suspended.
- (6) An applicant who has failed to renew a personal license for two years or more after its expiration is not eligible for a license under this subdivision.

August 9, 2010; Rev August 6, 2014; February 17, 2016

National Electrical Reciprocal Alliance (NERA)

BYLAWS

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National Electrical Reciprocal Alliance (NERA)

BYLAWS

ARTICLE I: NAME

The name of this Alliance will be the National Electrical Reciprocal Alliance (NERA) formally known at the Multi-state Reciprocal Electrical Licensing Group.

ARTICLE II: MISSION

Encourage similar electrical regulations, nationwide.

ARTICLE III: GOALS

The member states promote reciprocity based on similar, complimentary, and interchangeable requirements without major exception to further the following goals:

- To improve the electrical industry by raising the level of professionalism of the electrical industry and safety for the general public;
- To improve the member states' ability to respond to changing economies and the management of their available resources;
- To provide an efficient response to issues and concerns within the electrical industry and the Alliance;
- To have member state's have similar continuing education requirements and examinations; and
- To recognize equal and fair treatment and respect for the quality of electrical workers licensed by each member state.

ARTICLE IV: PURPOSE

The Alliance is organized to:

- Allow qualified electrical workers to easily become qualified for work in the member states without encountering significant licensing difficulties;
- Allow the member states to respond quickly to emergencies, natural disasters, and construction booms where the demand for skilled labor cannot be met locally;
- Encourage the development, approval, and oversight of electrical education in a manner that is similar and acceptable to member states;
- Encourage the development and use of electrical examination questions, structure, and delivery methods that are common and acceptable to member states;
- Share best practices regarding electrician and electrical contractor licensing and certification, inspection techniques, regulatory language, etc.;
- Encourage support and networking among member states to improve the standardization for all regulatory aspects of the electrical industry;
- Encourage the membership of other states who have similar electrical regulatory requirements, practices, and oversight of electricians and electrical contractors and are willing to reciprocate on a similar basis with the member states; and
- Create a strong alliance where member states focus on the many similarities of their training systems, inspection techniques, and regulatory oversight with the belief that each member state holds the inspection, training, licensing, and certification of electricians and electrical contractors as the key to protecting the general public and workers;

ARTICLE V: DEFINITIONS

The following definitions apply to the bylaws:

- "Applicant" is an individual seeking certification, by reciprocity, from a member state.
- "Certificate" means a journeyman electrician certificate of competency or license issued by a licensing state.
- "Journeyman electrician" means a person who has:
 - Qualified for a journeyman electrician certificate by passing a mandatory examination administered by the licensing state; and
 - Completed either:
 - A journeyman four-year electrical construction apprenticeship approved by the licensing state; or
 - Four years (8,000 hours) of equivalent electrical construction experience, legally obtained as qualification for journeyman electrician, as determined by the licensing state.
- "License" means a journeyman electrician certificate of competency or license issued by a licensing state.
- "Licensing state" means the member state that the applicant is using as a basis of certification to apply for reciprocity to a reciprocal state.
- "Member state" means a state that has jurisdiction over the certification of journeyman electricians and has signed and agreed to uphold these bylaws.
- "Reciprocal state" means the member state where the applicant is making application for reciprocity for a journeyman electrician certificate from a licensing state.
- "Voting member" is the individual authorized by a member state to vote on actionable items at the Alliance's general or other scheduled meetings.

ARTICLE VI: MEMBERSHIP

Members will:

- Support the Mission, Goals, and Purpose of the Alliance;
- Appoint one voting member to represent the member state in a voting capacity at all meetings;
 - The appointment will be made in writing by the member state to the Secretary;
 - If the member state chooses to terminate the appointment, the member state will notify the Secretary, in writing, of the termination and who is being appointed as a replacement;
 - If the voting member cannot attend, the member may provide a written, signed proxy authorization on member state letterhead to the Secretary at the Annual Meeting or other called meetings, allowing an alternate representative of the voting member's state to carry out all duties of the actual voting member.
- Maintain permanent records, for a period corresponding to each state's record retention schedule, of journeyman applicants that document their:
 - Qualifications;
 - Experience;
 - Education;
 - Examinations;
 - Examination scores; and
 - Respond promptly to requests from member states for reciprocity applicant information.

ARTICLE VII: MEMBERSHIP APPLICATION

Any state's electrical licensing or certification authority may make application to join the Alliance. The state making application must have a reciprocal agreement with at least one member state to be eligible for membership. Written request for membership may be made to the Secretary at any time on the application provided by the Alliance. The request should demonstrate to the member states that the applicant states:

- Regulatory system is in place and effective in ensuring the state's laws are enforced; and

- Standards for journeyman electrician qualification, certification, and inspection practices are equivalent to those described in the bylaws and used by the member states.

The Secretary will provide all voting members with a copy of the request for membership within thirty (30) days after receiving the request and at least 30 days prior to a regularly scheduled meeting.

After the Secretary has distributed the request, approval for the membership request may come up for a vote, at a regularly scheduled meeting, by a motion and second from any voting member in attendance. The vote for membership will be by voice ballot of the voting members present and by absentee ballot by voting members not in attendance. Approval for membership requires a simple majority of the voting members.

If the vote fails, the dissenting voting member(s) will furnish the Secretary with a written reason(s) for denying membership within fifteen (15) days of the vote. The Secretary will provide the reason(s) to all voting members and the applicant state within thirty (30) days of the vote.

If the vote passes, membership is immediately effective upon signature by the Chair. Within fifteen (15) days, the Secretary will notify all voting members of the Alliance of the new member(s).

ARTICLE VIII: VOTING MEMBERS

Voting members will:

- Be appointed by the member state.
 - Appointment will be made in writing by the member state to the Secretary;
 - If the member state chooses to terminate the appointment, the member state will notify the Secretary, in writing, of the termination and who is being appointed as a replacement within thirty (30) days after termination;
- Attend regularly scheduled meetings;
- Have a thorough knowledge of all matters scheduled to be presented before the Alliance;
- Be prepared to represent the member state by being prepared and ready to vote on actions scheduled before the Alliance;
- Represent their state in a professional manner;
- Ninety (90) days before each annual meeting, provide the Secretary with their member state's current electrical certification laws and rules;
- Assist the Secretary in comparing the member states' journeyman requirements.

ARTICLE IX: OFFICERS

The Officers will be: Chair, Vice-Chair, and Secretary. The term of Chair and Vice-Chair appointment may not exceed four consecutive years. The terms of the officers begins and ends 30 days after the annual meeting.

The Officers will be determined as follows:

- Must be a voting representative of a member state; and
- Must be selected by a simple majority of the voting member representatives present at the annual meeting;

The Chair, Vice-Chair, or Secretary positions are held by the member state and filled by the member state's voting representative. The vote for appointment will be by voice ballot and requires a simple majority of voting member representatives present.

The Chair, Vice-Chair, or Secretary may come up for a vote to be removed from office at a regularly scheduled general or special meeting. The vote for removal will be by voice ballot and requires a simple majority of voting member representatives present at the meeting. If voted out of office, the officer will immediately relinquish the position and a replacement will be elected. The replacement will immediately take the elected position and continue with the meeting if appropriate.

ARTICLE X: DUTIES OF OFFICERS

The Chair will:

- Preside at all meetings, functions, and affairs of the Alliance;
- Develop the agenda for the regular and special meetings based upon input from the members' voting representatives;
- Appoint all standing and special committee members and designate the committee Chair for same;
- Appoint a member to act as secretary for the meeting in the Secretary's absence;
- Serve as Ex-officio member to all committees; and
- Exercise supervision over all affairs of the Alliance.

The Vice-Chair will:

- Have a working knowledge of all responsibilities of the Chair; and
- In the event of the Chairs' absence, be able to assume all responsibilities and functions of the Chair.

The Secretary will:

- Keep a record of the Bylaws and any Alliance agreements or actions;
- Keep a record of the minutes of all meetings and provide each member's voting representative with a draft copy of the minutes within thirty (30) days after a meeting;
- Submit all information to the members' voting representatives one hundred twenty (120) days prior to the regular meeting for all business to be reviewed or acted on by the Alliance at a regular or special meeting. Business information received after the prescribed one hundred twenty (120) day period may be considered or scheduled for the next regular or special meeting; and
- In the event of the Chairs' and Vice-Chair's absence, be able to assume all responsibilities and functions of the Chair.

ARTICLE XI: MEETINGS

Meeting location:

- The annual meeting location may come up for a vote at a regularly scheduled meeting by a motion and second from any voting member in attendance. The vote for meeting location will be by voice ballot and requires a simple majority vote of the voting members present.
- Teleconferences or other appropriate meeting methods are allowed in lieu of a central meeting location for annual and special meetings.

A quorum for a meeting will be a simple majority of the voting members.

The annual meeting will be held between the months of August to October of each year. The annual meeting will be held in a member state. If the state, selected to host the annual meeting, is unable to perform that duty, the meeting location will be selected by a simple majority of the Officers and concurrence of the selected member state's voting member.

Special meetings may be called by the Chair or Vice Chair if the Chair is unavailable as the situation warrants. The Chair or Vice Chair, as appropriate, will determine the meeting location.

ARTICLE XII: PARLIAMENTARY AUTHORITY

The Rules contained in Robert's Rules of Order Newly Revised, shall govern this Alliance in all cases to which they are applicable and in which they are not inconsistent with these Bylaws.

Except for votes regarding Alliance membership, all votes will be by voice ballot of the voting members present. When a voice ballot is questionable, the Chairman shall request a vote by the show of hands.

Any voting member may request a roll call vote. Votes regarding Alliance membership may be by either voice or absentee ballot.

ARTICLE XIII: AMENDMENTS

The Bylaws may be amended by a 2/3 majority of the voting members provided the amendment has been read at the previous meeting or has been submitted by mail or electronic ballot to the voting members one hundred twenty (120) days prior to the meeting at which the voting will occur.

ARTICLE XIV: TERMINATION OF MEMBERSHIP

The Alliance may terminate a member state's membership in the event the member state fails to:

- Appropriately participate in Alliance activities. Appropriate participation means attending meetings, submission of a report to the group, or other active participation, etc.;
- Maintain a reciprocal agreement with one or more member states; or
- Otherwise fulfill the requirements of the Bylaws.

A motion to terminate membership may only be made at a regularly scheduled meeting. The Secretary will notify the state's voting member in writing of the motion and the reason for termination, including possible solutions, within fifteen (15) days after the motion. The vote for termination will be at the next regularly scheduled meeting following the motion. The vote for termination will be by voice ballot of the voting members present and by absentee ballot by voting members not in attendance. Termination of membership requires a simple majority of the voting members. The state named in the motion has no vote.

A member state can terminate membership by providing thirty (30) days written notification to the Secretary. The notification must include the reason for withdrawal from participation and any possible alternate solutions. The Secretary will notify all voting members within fifteen (15) days of receipt of the member state's notice.

If terminated, the terminated state will be responsible only for performance in accordance with the terms of the bylaws rendered prior to the effective date of termination.

ARTICLE XV: COMPENSATION

In no event will either party attempt to seek from another party any form of reimbursement, compensation, or payment, for any costs, fees, or charges incurred which relate to performance of these Bylaws.

ARTICLE XVI: NONDISCRIMINATION & CIVIL RIGHTS

During the performance of these Bylaws, the member states will comply with all federal and state nondiscrimination laws, regulations, and policies. In the event of any member state's noncompliance or refusal to comply with any nondiscrimination law, regulation, or policy, the member state's membership may be terminated by the Alliance.

ARTICLE XVII: RECORDS MAINTENANCE

Each member state will maintain records of journeyman electricians which will document the applicant's qualifications, experience, education, examinations and scores, for a period corresponding to licensing state's record retention schedule.

Records and other documents, in any medium furnished by one party to these bylaws to another party, will remain the property of the furnishing party, unless otherwise agreed. Unless required by its public

information act or similar open records statute the receiving party will not disclose or make available this material to any third parties without first giving notice to the furnishing party and giving it reasonable opportunity to respond. Each party will utilize reasonable security procedures and protections to assure that records and documents provided by the other party are not erroneously disclosed to third parties.

ARTICLE XVIII: INDEPENDENT CAPACITY

The employees or agents of the member states who are engaged in the performance of these Bylaws will continue to be employees or agents of the member state and will not be considered for any purpose to be employees or agents of the Alliance or another member state.

ARTICLE XIX: GOVERNANCE

The member states agree that all activity performed as a result of these Bylaws will be in accordance with all applicable current or future federal, state and local laws, rules and regulations.

ARTICLE XX: ASSIGNMENT

The work to be provided under these Bylaws, and any claim arising thereunder, is not assignable or delegable by any member state in whole or in part, without the prior written consent of the other member states, which consent shall not be unreasonably withheld..

ARTICLE XXI: SEVERABILITY

If any provision of these Bylaws or any provision of any document incorporated by reference is held to be invalid, such invalidity will not affect the other provisions of these Bylaws which can be effective without the invalid provision.

ARTICLE XXII: CONDITIONS FOR JOURNEYMAN RECIPROCITY

These Bylaws comprise the standards for membership in NERA and shall not be construed as a reciprocity agreement between any of the member states. Actual reciprocity agreements between member states shall be memorialized by a separate written agreement between said states.

All members will, at a minimum, maintain the requirements for journeyman electrician certification.

Applicants must:

- Hold, from the licensing state, a journeyman certificate or a master electrician certificate, that allows the individual to work as a journeyman electrician, that is current, active, and in good standing;
- Have held that certificate continuously during the one (1) year period prior to requesting reciprocity;
- Have gained that certificate through a state administered examination with a passing score from the licensing state;
- Provide the reciprocal state with any information necessary to demonstrate that the licensing state's requirements for journeyman electrician certification have been met;
- When required by the reciprocal state, provide documentation of disciplinary action, education, training and/or experience meeting the requirements of the reciprocal state; and
- Make appropriate application and pay all appropriate fees to the reciprocal state.

August 9, 2010; Rev August 6, 2014; February 17, 2016

The reciprocal state will issue a certificate without written examination when an applicant for reciprocity has:

- Met the above requirements in Section XXII of these Bylaws; and
- Paid the appropriate fees.

Applicants will not be granted a reciprocal certificate where the certificate in the licensing state was granted by grandfathering without having passed a state administered examination as stated above.

ARTICLE XXIII: PERIOD OF PERFORMANCE

These Bylaws begin upon the date of execution and continue in force until terminated or amended under the provisions of these Bylaws.

ARTICLE XXIV: ALL WRITINGS CONTAINED HEREIN

These Bylaws contain all the terms and conditions agreed upon by the member states. No other understanding, oral or otherwise, regarding the subject matter of these Bylaws will be deemed to exist or to bind any of the members hereto.

Exhibit E: Minutes of Sept. 12, 2019, Board of Electricity's NEC Adoption Review Committee

Meeting Minutes: NEC 2020 Adoption Review Committee of the Board of Electricity

Date: September 12, 2019
Time: 11:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Committee Members Present:

Cole Funseth
Michael Hanson
Duane Hendricks
Chad Kurdi
Daniel Westberg – Chair

Committee Members Absent:

Peter Lindahl

Board Members Present:

Scott Novotny
John Williamson

DLI Staff & Visitors:

Jeff Lebowski (Gen. Counsel, DLI)
Dean Hunter (DLI)
Gary Thaden (NECA)

1. Call to Order

The meeting was called to order at 11:00 a.m. by Chair Westberg. Roll call was taken by Secretary Hendricks and a quorum was declared with 5 of 6 voting members present in person or via teleconference.

2. Approval of Meeting Agenda

A motion was made by Cole Funseth, seconded by Michael Hanson, to approve the agenda as presented. The vote was unanimous with five votes in favor of the motion; the motion carried.

3. Regular Business

- a. **Expense Approval** – reviewed and approved the per diem and expenses.

4. Special Business

- a. NEC adoption
 - Board Member, John Williamson, turned this topic over to Dean Hunter who presented Analysis of Changes (attached).

5. Open Forum

- a. Reviewed list of NEC article changes (attached)
 - Discussions and acceptance of 18, 22, 37, and 46.
 - Additional discussion on 5, 15, 20, and 24, all GFCI related.
 - Line 24 was discussed and accepted as is.
 - Continued discussion with 5, 15 and 20. Dean Hunter will send the Committee the technical information by 9/20/19 for review. These items will be discussed again at the October 8th meeting.

6. Announcements

- a. Next NEC 2020 Committee meeting is October 8, 2019 at 8:00 a.m.
- b. Next regular Board of Electricity meeting is October 8, 2019 at 9:00 a.m.

7. Adjournment

A motion was made by Hanson, seconded by Funseth, to adjourn the meeting at 1:41 p.m. The vote was unanimous with 5 votes in favor of the motion; the motion carried.

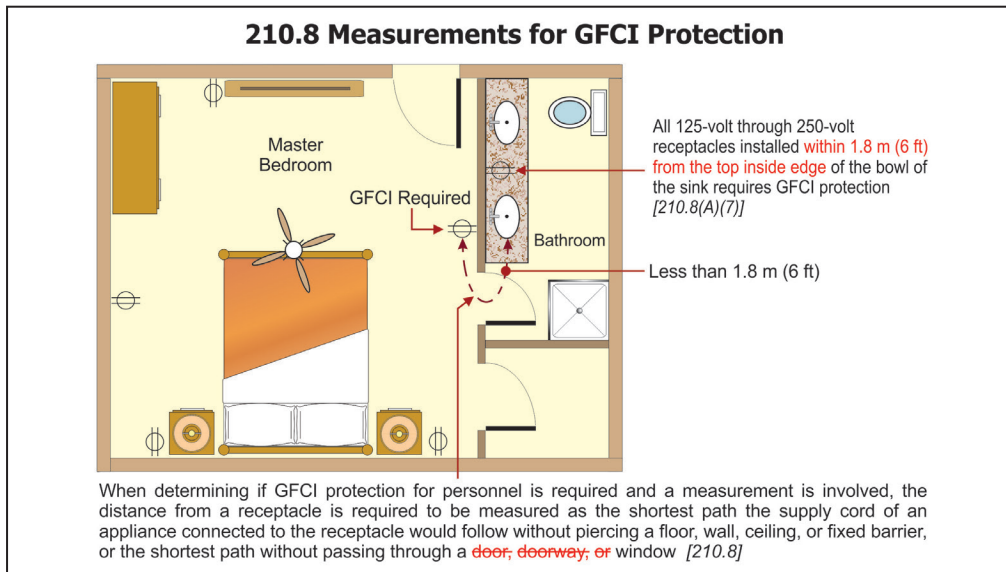
Respectfully Submitted,

Duane Hendricks

Duane Hendricks
Secretary

210.8

Ground-Fault Circuit-Interrupter Protection for Personnel



210.8 Ground-Fault Circuit-Interrupter Protection for Personnel

Type of change: Revision

Change at a Glance: Revision removes “door” and “doorway” as items the supply cord of an appliance connected to the receptacle should not pass through in order to satisfy measurement requirements for GFCI protection.

2017 Requirement: When determining if ground-fault circuit-interrupter (GFCI) protection for personnel was warranted and a measurement was involved, the distance from a receptacle was required to be measured as the shortest path the cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or passing through a door, doorway, or window.

2020 Requirement: For determining if ground-fault circuit-interrupter (GFCI) protection for personnel is required and a measurement is involved, the distance from a receptacle is required to be measured as the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or the shortest path without passing through a window.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for per-

sonnel shall be provided as required in 210.8(A) through ~~(E)~~(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

Informational Note No. 1: See 215.9 for ground-fault circuit-interrupter protection for personnel on feeders.

Informational Note No. 2: See 422.5(A) for GFCI requirements for appliances.

Informational Note No. 3: See 555.9 for GFCI requirements for boat hoists.

Informational Note No. 4: Additional GFCI requirements for specific circuits and equipment are

contained in Chapters 4, 5, and 6.

For the purposes of this section, when determining the distance from receptacles the distance shall be measured as the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or the shortest path without passing through a door, doorway, or window.

Analysis of Changes: For the 2017 *NEC*, a new provision was added at the parent text of 210.8 to indicate that measurements from receptacles to objects (*such as a sink*) that would qualify for GFCI protection should be measured as the “shortest path” a cord of an appliance connected to a receptacle would take without piercing a floor, wall, ceiling, or fixed barrier, or passing through a door, doorway, or window. Prior to this mandate on measurements, when the *Code* gave a measurable dimension such as where receptacles are installed within 1.8 m (6 ft) of a sink needing GFCI protection, there was great debate as to how this measurement was to be accomplished. What path should the installer or enforcer take to determine this distance? Various interpretations have been offered for accomplishing these measurements for as long as they have existed in the *Code* before this 2017 *NEC* provision.

These GFCI measurement requirements were further revised for the 2020 *NEC* by removing “doors and doorways” as items the supply cord of an appliance connected to the receptacle should not pass through in order to complete these GFCI-determining measurements. Is a cabinet door a “door” that would qualify for this measurement requirement? Most in the electrical industry would have answered, “yes” to that question. To eliminate all doubt, CMP-2 removed “door” and “doorway” from the list of obstacles that should not be measured through for this *Code* cycle. The removal of the words “door” and “doorway” addresses the confusion that a cabinet “door” is not intended to eliminate GFCI protection.

The receptacle that has raised the most question for this GFCI protection has been the 120-volt, 20-ampere receptacle under the kitchen sink for the garbage disposer. In the previous edition of the *Code*, in order to apply GFCI protection for this receptacle, one would have had to take the measurement from the top, inside edge of the sink [*see 210.8(A)(7)*] and pass through the kitchen cabinet door to complete this measurement (*which was prohibited by the parent text of 210.8*). For the 2020 *NEC*, passing the measurement through the cabinet door is no longer prohibited. Depending on the rules in place at the time for 210.8, 210.8(A)(6) (kitchens), and 210.8(A)(7) (sinks), this receptacle located under the kitchen sink in the cabinet did or did not required GFCI protection. 2011 *NEC* (No), 2014 *NEC* (Yes), 2017 *NEC* (No), and 2020 *NEC* (Yes). Hopefully, this revision will settle this issue down for a while and stop the back-and-forth for GFCI protection for these receptacles in these areas around sinks and cabinets.

Some in the electrical industry would argue that this revision took this GFCI requirement too far. The removal of “door” would have accomplished the intent of getting GFCI protection for the receptacle located under the kitchen sink behind a cabinet door. By also removing the word “doorway,” this opened up GFCI protection to something like a receptacle located in a bedroom, but also located within 1.8 m (6 ft) of a bathroom sink when the measurement is taken from the top, inside edge of the bathroom sink, through the bathroom doorway to the bedroom receptacle located around the corner from the doorway. A bedroom receptacle outlet has never drawn requirements for GFCI protection but would demand GFCI protection under these unique circumstances.

First Revisions: FR 7863

Second Revisions: SR 7685

Public Inputs: PI 1080, PI 2291, PI 500, PI 4130

Public Comments: PC 845, PC 387

210.8(A)

Dwelling Unit GFCI Protection



210.8(A) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units

Type of change: Revision

Change at a Glance: Dwelling unit GFCI protection has been expanded to all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground installed in the specified areas of 210.8(A).

2017 Requirement: All 125-volt, single-phase, 15- and 20-ampere receptacles installed in (10) specific locations (*bathrooms, kitchens, laundry areas, etc.*) of a dwelling unit required ground-fault circuit-interrupter (GFCI) protection for personnel.

2020 Requirement: All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground installed in (11) specific locations of a dwelling unit require ground-fault circuit-interrupter (GFCI) protection for personnel.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt through 250-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1) through (11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(1) Bathrooms

(2) Garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use

(3) Outdoors

Exception to (3): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

(4) Crawl spaces — at or below grade level

(5) Basements Unfinished portions or areas of the basement not intended as habitable rooms

Exception to (5): A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have ground-fault circuit-interrupter protection.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems. Receptacles installed under the exception to 210.8(A)(5) shall not be considered as meeting the requirements of 210.52(G).

(6) Kitchens — where the receptacles are installed to serve the countertop surfaces

(7) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

(8) Boathouses

(9) Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

(10) Laundry areas

Exception to (1) through (3), (5) through (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be ground-fault circuit-interrupter protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.

(11) Indoor damp and wet locations

Analysis of Changes: When the 1971 NEC was published, the first ground-fault circuit-interrupter (GFCI) protection requirements for dwelling units was introduced for personnel protection. Section 210-22(d) called for GFCI protection for all 120-volt, single-phase, 15- and 20-ampere receptacles installed outdoors. This started a journey of safety for dwelling units that has led to eleven specific locations that demand GFCI protection for this most recent Code cycle. Historically, GFCI protection at dwelling units has been limited to 125-volt, single-phase, 15- and 20-ampere receptacles. For the 2020 NEC, GFCI protection for personnel at dwelling unit will be expanded to include all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground in the specific locations specified at 210.8(A)(1) through (A)(11) (*bathrooms, kitchens, outdoors, etc.*).

The addition of up to 250-volt receptacles and removing the amperage limitations of 15- and 20-amperes will provide GFCI protection to most receptacles commonly used in the specified areas of 210.8(A). The necessity for GFCI protection for areas such as kitchens and laundry areas has been proven for these receptacles over several *Code* cycles. 250-volt rated receptacles present similar shock hazards and substantiation submitted for this change demonstrated the need for GFCI protection for greater than 125-volt rated receptacles. Including these higher rated receptacles for GFCI protection at dwelling units is compatible with the GFCI protection provisions that occurred for other than dwelling units at 210.8(B) during the 2017 *NEC* revision cycle.

What this will all mean is the 240-volt, 30-ampere dryer receptacle in the utility room will now require GFCI protection, Same with the 240-volt, 50-ampere oven or range receptacle. Any receptacle rated up to 250-volts supplied by single-phase branch circuits rated 150 volts or less to ground and installed in a dwelling unit kitchen, bathroom, laundry area, garage, or any other dwelling unit location addressed at 210.8(A)(1) through (A)(11) will now required GFCI protection for personnel.

First Revisions: FR 7705, DFR 8119

Second Revisions: SR 7697

Public Inputs: PI 1875, PI 167

Public Comments: PC 2020, PC 901, PC 401

210.8(A)(5)

GFCI Protection in Dwelling Unit Basements

210.8(A)(5) GFCI Protection for Basements

All **125-volt through 250-volt** receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in any and **all dwelling unit basements** will require ground-fault circuit-interrupter (GFCI) protection for personnel



Unfinished Basement



Finished Basement

210.8(A)(5) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units, Basement

Type of change: Revision

Change at a Glance: GFCI protection now required for *ALL* dwelling unit basements (*not just unfinished portions of basements*).

2017 Requirement: All 125-volt, 15- and 20-ampere receptacles installed in dwelling unit unfinished basements required ground-fault circuit-interrupter (GFCI) protection for personnel. An unfinished portions or areas of a basement was identified as an area “not intended as a habitable room.”

2020 Requirement: All 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in any and all dwelling unit basements require ground-fault circuit-interrupter (GFCI) protection for personnel.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt through 250-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1) through (10)(11) and supplied by single-phase

branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(5) Basements ~~Unfinished portions or areas of the~~ basement not intended as habitable rooms

Analysis of Changes: An unfinished basement of a dwelling unit can be an area that has been shown to be subject to shock hazards from the use of electricity in these areas. Often accompanied by damp conditions, the use of power tools and other electrical equipment has driven the need for ground-fault circuit-interrupter (GFCI) protection for personnel in these areas of the dwelling unit. GFCI protection for all 125-volt, single-phase, 15- and 20-ampere receptacles in dwelling unit basements was first required in the 1987 *NEC*. During the 1993 *NEC*, an “unfinished” basement was first defined as “portions or areas of the basement not intended as habitable rooms and limited to storage areas, work areas, and the like.” Two new exceptions for GFCI protection in an unfinished basement were added for the 1996 *NEC*. The first exception exempted receptacles that were not readily accessible, and the second exception eliminated receptacles installed in dedicated spaces for specific appliances from GFCI protection. A third exception was added for the 1999 *NEC* that identified a receptacle installed in an unfinished basement supplying a permanently installed fire or burglar alarm system from having to comply with GFCI requirements. Previous Exception No. 1 (*not readily accessible*) and Exception No. 2 (*specific appliances*) were removed from the *Code* during the 2008 *NEC* revision cycle leaving these previously exempted receptacles mandatory to GFCI provisions. These dwelling unit unfinished basement GFCI requirements remained unchanged through the 2017 *NEC*.

For the 2020 *NEC*, changes to the *Code* effected the GFCI requirements for receptacles in both an unfinished basement and a finished basement intended as a habitable space. The voltage and amperage thresholds that limited GFCI protection at dwelling units

to 125-volt, 15- and 20-ampere receptacles were revised to include all 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground [see Analysis text at 210.8(A)]. The second changes occurred at the GFCI provision of 210.8(A)(5). While this GFCI requirement was historically reserved for “unfinished” basements, changes to the 2020 *NEC* threw this GFCI provision open to *ALL* dwelling unit basements (*not just unfinished basements*), including basements that are finished out to be a habitable room or space such as a bedroom, exercise room, or game room.

In qualifying the need for GFCI protection for more than an unfinished basement, CMP-2 concluded that conductive floor surfaces may exist in finished and unfinished basements and that basements (*whether finished or unfinished*) are prone to moisture including flooding, thus making GFCI protection a requirement for all basements of a dwelling unit. History has proven that unfinished areas of a basement expose the user of electrical equipment and devices to grounded surfaces and or surfaces in contact to the earth through concrete floors, masonry walls and steel columns embedded in concrete floors. Finished basement floors typically have a painted concrete floor or tiled areas with masonry grout in contact with a concrete floor or masonry walls that are indirectly in contact with the earth. The potential of electrical hazards that reside in basements are not eliminated by establishing a demarcation of finished surfaces compared to unfinished surfaces. The receptacle outlets in finished basements are often used for powering lamps, entertainment equipment, interactive games systems, etc. A prevalent moisture hazard exists with a person being in contact with a damp floor, independent of flooring type, and then interacting with the electrical system. The user of these devices is at the same risk of shock hazard as in an unfinished basement.

First Revisions: FR 7705, DFR 8120

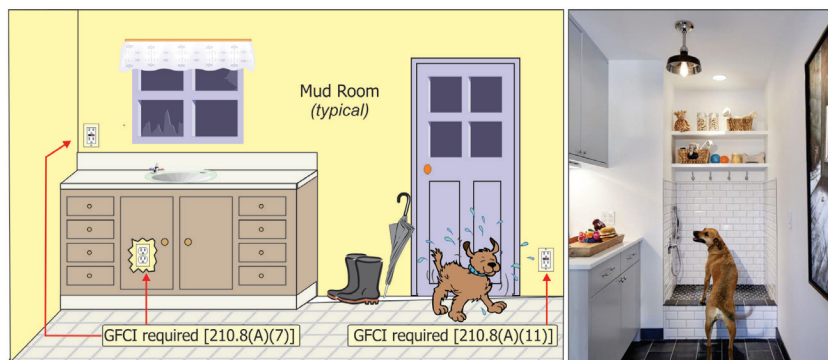
Second Revisions: SR 7697

Public Inputs: PI 46, PI 599, PI 1875, PI 167

Public Comments: PC 696, PC 1437, PC 1384, PC 901, PC 247, PC 401, PC 563

210.8(A)(11)

GFCI Protection at Indoor Damp and Wet Locations of Dwelling Units

210.8(A)(11) GFCI Protection for Indoor Damp or Wet Locations

All 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in indoor damp or wet locations require ground-fault circuit-interrupter (GFCI) protection for personnel

210.8(A)(11) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units, Indoor damp and wet locations**Type of change:** New

Change at a Glance: GFCI protection is now required at indoor damp and wet locations of dwelling units.

2017 Requirement: Ground-fault circuit-interrupter (GFCI) protection was required in specific areas of the dwelling that might be damp or wet on occasion such as kitchens, bathrooms, laundry rooms, bathtub and shower areas, but no specific GFCI requirement for damp or wet locations inside a dwelling unit.

2020 Requirement: List item (11) was added to 210.8(A) requiring GFCI protection for all 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in indoor damp or wet locations regardless of its location.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt through 250-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1)

through (10)(11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(11) Indoor damp and wet locations

Analysis of Changes: If you encounter a damp or wet location in a dwelling unit, chances are pretty good that those locations would be required to supply ground-fault circuit-interrupter (GFCI) protection. Especially if they are located in a bathroom, laundry area, or around a bathtub or shower area. Receptacles in these areas or located within 1.8 m (6 ft) of sinks in these areas required GFCI protection by the existing rules at 210.8(A)(1) through (A)(10). What if you were to encounter an area of the dwelling unit that could be considered a damp or wet location and that locations were not within 1.8 m (6 ft) of a sink, bathtub, or shower area? What if this potential damp or wet location was not located in one of the areas specified by the previous text of 210.8(A)(1) through (A)(10) such as a kitchen or laundry area?

For the 2020 *NEC*, a new list item (11) was added that will require GFCI protection for all 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in indoor damp or wet locations regardless of the room or areas of the dwelling unit it might be located in. The areas that come to mind that this will affect are areas like a mud room with no sink or a mud room with a sink but receptacles in that area are located greater than 1.8 m (6 ft) from said sink. Another area that this new provision will cover would be an indoor area where animals like dogs are washed down before being permitted to re-enter the main dwelling unit.

Of course, this is open to interpretation. What is an indoor damp or wet location? Hopefully, the definitions for a damp, wet, or dry location found in Article 100 will be considered in making the determination as to an area's location being considered damp, wet, or dry. Who determines if a location (indoors or outdoors) is considered a damp, wet, or dry location? That would be up to the authority having jurisdiction (AHJ).

First Revisions: FR 7705, DFR 8121

Public Inputs: PI 1889

210.8(B)

GFCI Requirements at Non-Dwelling Unit Locations

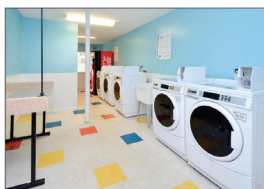
210.8(B) GFCI Protection for Other Than Dwelling Units

New provisions for GFCI protection were added for non-dwelling unit locations for receptacles:



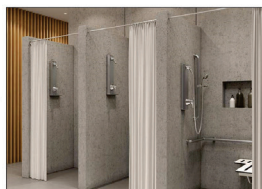
Indoor
Damp
and Wet
Locations

Garages,
accessory
buildings,
and service
bays



Laundry
areas

Bathtubs
and
shower
stalls



210.8 Ground-Fault Circuit-Interrupter Protection for Personnel**Type of change:** New

Change at a Glance: New GFCI requirements at non-dwelling unit locations were added for damp locations, accessory buildings, laundry areas, and areas around bathtubs and shower stalls.

2017 Requirement: GFCI requirements for other than dwelling units applied to all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less installed in (1) bathrooms, (2) kitchens, (3) rooftops, (4) outdoors, (5) within 1.8 m (6 ft) of the top inside edge of a sink, (6) indoor wet locations, (7) locker rooms with associated showering facilities, (8) garages, service bays, and similar areas other than vehicle exhibition halls and showrooms, (9) crawl spaces, and (10) Unfinished portions or areas of the basement not intended as habitable rooms.

2020 Requirement: In addition to the areas listed in the 2017 *NEC*, GFCI protection was expanded to non-dwelling unit (2) areas with a sink and permanent provisions for either food preparation or cooking, (6) indoor damp locations, (8) accessory building, (11) laundry areas, and (12) receptacles that are installed within 1.8 m (6 ft) of the outside edge of a bathtub or shower stall.

CODE LANGUAGE**210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.**

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See *NEC* for remainder of Code text)

(B) Other Than Dwelling Units. All single-phase 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground or less, 50 amperes or less and all receptacles supplied by three-phase receptacles branch circuits rated 150 volts or less to ground or less, 100 amperes or less installed in the following locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection for personnel.

- (1) Bathrooms
- (2) Kitchens or areas with a sink and permanent

provisions for either food preparation or cooking

- (3) Rooftops

Exception: Receptacles on rooftops shall not be required to be readily accessible other than from the rooftop.

- (4) Outdoors

Exception No. 1 to (3) and (4): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

Exception No. 2 to (4): In industrial establishments only, where the conditions of maintenance and supervision ensure that only qualified personnel are involved, an assured equipment grounding conductor program as specified in 590.6(B)(2) shall be permitted for only those receptacle outlets used to supply equipment that would create a

greater hazard if power is interrupted or having a design that is not compatible with GFCI protection.

- (5) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

Exception No. 1 to (5): In industrial laboratories, receptacles used to supply equipment where removal of power would introduce a greater hazard shall be permitted to be installed without GFCI protection.

Exception No. 2 to (5): For Receptacles located in patient bed locations of Category 2 (general care) or Category 1 (critical care) spaces of health care facilities other than those covered under 210.8(B)(1), GFCI protection shall not be required shall be permitted to comply with 517.21.

- (6) Indoor damp and wet locations
(7) Locker rooms with associated showering facilities

- (8) Garages, accessory buildings, service bays, and similar areas other than vehicle exhibition halls and showrooms

- (9) Crawl spaces — at or below grade level

- (10) Unfinished portions or areas of the basements not intended as habitable rooms

Exception to (1) through (5), (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be ground-fault circuit-interrupter protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.

- (11) Laundry areas

- (12) Bathtubs and shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

Analysis of Changes: Ground-fault circuit-interrupter (GFCI) protection for personnel at “other than dwelling units” was first introduced to the public for the 1993 edition of the *NEC*. These GFCI provisions were applicable to 125-volt, single-phase, 15- and 20-ampere receptacles. For the 1993 *NEC*, GFCI protection was required for receptacles in non-dwelling unit bathrooms and receptacles installed on a non-dwelling unit rooftop. These two pioneer areas for non-dwelling unit GFCI protection continue to be applicable even until the latest edition of the *NEC* with an exception for outdoors added during the 1999 *NEC*. This exception removed GFCI protection for a receptacle that was not readily accessible and dedicated to deicing and snow-melting equipment under the purview of Article 426 (*Fixed Outdoor Electric Deicing and Snow-Melting Equipment*). During the 2002 *NEC*, kitchens were added to the GFCI requirements for other than dwelling units. This GFCI rule was different that its cousin requirement for dwelling units as it applied to all non-dwelling unit kitchen receptacles (not just receptacles that served a kitchen countertop). For the 2005 *NEC*, “kitchens” was revised to “commercial and institutional kitchens” with a definition of a “kitchen” added as an “area with a sink and permanent facilities for food preparation and cooking.” The 2005 *NEC* also saw outdoor areas in public spaces and outdoor receptacles installed to comply with 210.63 (*receptacle installed in close proximity to outdoor HVAC equipment*).

The 2008 *NEC* witnessed a new exception added to exempt outdoor receptacles at industrial establishment where conditions of maintenance and supervision ensure only qualified personnel are involved. Receptacles installed within 1.8 m (6 ft) of the outside edge of a non-dwelling unit sink (*with two exception*) was also added for the 2008 *NEC* as well. For the 2011 version of the *NEC*, indoor wet locations, locker rooms

with associated showering facilities, and garages, service bays, and similar areas where electrical diagnostic equipment, electrical hand tools, or portable lighting equipment are to be used were areas added to the non-dwelling unit GFCI requirements. Garages and service bays were revised for the 2014 *NEC* to address garages, service bays, and similar areas “other than vehicle exhibition halls and showrooms.” The 2017 *NEC* was revised to change the limit of non-dwelling unit GFCI protection from 125-volt, single-phase, 15- and 20-ampere rated receptacles to all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less. The previous edition of the *Code* also incorporated GFCI protection for crawl spaces (at or below grade level) and unfinished basements that are not intended as habitable rooms.

GFCI protection for receptacles at non-dwelling units was further expanded for the 2020 *NEC*. List Item (2) was expanded to include GFCI protection for receptacles in non-dwelling unit kitchens “or areas with a sink and permanent provisions for either food preparation or cooking.” This revision will be expanded upon in greater detail in the next changes address by this publication at 210.8(B)(2). The next significant change in 210.8(B) was at List Item (6) where an indoor “damp” location was added to the existing GFCI requirement for indoor wet non-dwelling unit locations. This revision occurred for clarity and consistency as the shock hazard in a damp location is similar in nature a wet location.

The requirement for GFCI protection for receptacles in a non-dwelling unit accessory building were added at 210.8(B)(8) that already covered garages, service bays, and similar areas other than vehicle exhibition halls and showrooms. An accessory building can have the same degree of shock hazard as garages and vehicle service bays and deserved the same level of GFCI protection.

An exception to (B)(1) through (B)(5), (B)(8), and (B)(10) was added pertaining to “listed locking support and mounting receptacles” utilized in combination with compatible attachment fittings installed for the purpose of mounting a ceiling luminaire or ceiling fan. This exception deleted GFCI protection for these devices. These listed locking support and mounting receptacles are (by definition) a “receptacle.” During the 2017 *NEC* revision cycle, the age-old definition of a “receptacle” in Article 100 had to be revised to incorporate these mounting devices. A receptacle is now defined as a contact device installed at the outlet for the connection of an attachment plug, or for the “direct connection of electrical utilization equipment designed to mate with the corresponding contact device.” This revised definition was necessary to correlate with the provisions at 314.27(E) (Separable Attachment Fittings). GFCI protection for all of these non-dwelling unit receptacles was intended for a traditional receptacle where a cord cap would be inserted. Without this exception, luminaire outlets and ceiling fans would have required GFCI protection when utilizing these locking support and mounting receptacles. The same exception was also added at 210.8(A) for dwelling units (*see DFR 8122, SR 7697, PI 3886, PI 1980, and PC 1719*).

A new List Item (11) was added to 210.8(B) that will require GFCI protection for receptacles installed in non-dwelling unit laundry areas. GFCI requirements were added

for dwelling unit laundry areas in the 2014 *NEC*. Laundry areas typically involve electrical appliances and the presence of water with a resulting increased risk of electric shock hazards. Laundry areas at non-dwelling units are similar to laundry areas of a dwelling unit and deserve the same GFCI protection. Most condominiums and apartment complexes provide a common laundry building or area as a convenience to the tenants. An apartment dweller deserves the same GFCI protection as their counterpart that lives in a single-family dwelling unit.

And finally, a new List Item (12) was added to 210.8(B) calling for GFCI protection for receptacles installed within 1.8 m (6 ft) of the outside edge of a non-dwelling unit bathtub or shower stall. Shower stalls and bathtubs can exist in commercial and industrial locations outside of a locker room or bathroom for a variety of purposes such as decontamination, and safety applications. Receptacles installed within 1.8 m (6 ft) of these bathtubs or shower stalls have similar shock hazards as a bathtub or shower stall installed in a bathroom or locker room. These areas often have tile or other conductive or grounded floors, which can present a shock hazard to a person getting out of the shower or bathtub. This requirement for non-dwelling unit bathtubs or shower stalls mirrors that found at 210.8(A)(9) for dwelling unit bathtub or shower stalls, which was added during the 2014 *NEC* revision cycle.

*First Revisions: List Item (6) [SR 7724, PC 854]; List Item (8) [DFR 8124, PI 1429];
Ex: DFR 8128, SR 7724, PI 1984, PI 3891, PC 1720; List Item (11) [DFR 8126, PI 700, PI 4072]; List Item (12) [DFR 8127, PI 324]*

210.8(B)(2)

GFCI Protection for Personnel in Other Than Dwelling Kitchens

210.8(B)(2) GFCI Protection for Kitchens and More

GFCI protection required for all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less installed in areas defined as a "kitchen" and **areas with a sink and permanent provisions for either food preparation or cooking**



Coffee Shop
(no permanent provisions for cooking)



Ice Cream Parlor
(no permanent provisions for cooking)

210.8(B)(2) Ground-Fault Circuit-Interrupter Protection for Personnel, Other Than Dwelling Units, Kitchens

Type of change: Revision

Change at a Glance: Additional language was added to clarify that areas *not defined as a kitchen such as ice cream parlors, coffee shops, smoothie stores, etc.*, with a sink and permanent provisions for either food preparation or cooking have the same potential for shock hazards as a kitchen.

2017 Requirement: GFCI protection was required for all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less installed in any area defined as a “kitchen,” with a kitchen defined as “an area with a sink and permanent provisions for food preparation and cooking.”

2020 Requirement: GFCI protection is now required for all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less installed in areas defined as a “kitchen” and areas with a sink and permanent provisions for either food preparation or cooking.

CODE LANGUAGE**210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.**

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See NEC for remainder of Code text)

(B) Other Than Dwelling Units. All single-phase 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less

to ground or less, 50 amperes or less and all receptacles supplied by three-phase receptacles branch circuits rated 150 volts or less to ground or less, 100 amperes or less installed in the following locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection for personnel.

(2) Kitchens or areas with a sink and permanent provisions for either food preparation or cooking

Analysis of Changes: Ground-fault circuit-interrupter (GFCI) protection for personnel at “other than dwelling units” kitchens was first implemented for enforcement in the 2002 NEC. With this 2002 NEC addition, the word “Kitchens” was added at 210.8(B) (3) as the third area at non-dwelling unit locations requiring GFCI protection for all 125-volt, single-phase, 15- and 20-ampere receptacles joining bathrooms and rooftops. This GFCI rule was different than its similar counterpart requirement for dwelling unit kitchens as it applied to all non-dwelling unit kitchen receptacles (*not just receptacles that served a kitchen countertop*). Part of the substantiation for extending GFCI protection to non-dwelling unit kitchens pertained to an electrocution at a restaurant. A 25-year-old male restaurant manager was cleaning the floor of the kitchen when he came in contact with a refrigerator that had a ground fault and was electrocuted. The victim, who was wearing tennis shoes, put soap and water on the floor and slipped and grabbed the

handle of the commercial refrigerator (which had a ground fault) and the cord did not have a ground prong. The ground fault was apparently caused by excessive wear on the insulation of the conductors (wires) supplying power to the refrigerator compressor. The conductors were exposed and were not protected from abrasion and were not protected by strain relief. If the *Code* had only required the receptacle outlets required the receptacle outlets at non-dwelling unit kitchens that serve kitchen countertops to be GFCI protected, this tragedy would have still occurred. With the substantiation provided, CMP-2 was intentional in requiring ALL non-dwelling unit kitchen 125-volt, single-phase, 15- and 20-ampere receptacles to be GFCI protected.

With the addition of this single word and, at the time, no definition for a “kitchen,” there was wide interpretation as to what constituted a “kitchen” and what did not. For the 2005 *NEC*, “kitchens” was revised at 210.8(B) to “commercial and institutional kitchens” with a description or definition of a “kitchen” added indicating that a kitchen was an “area with a sink and permanent facilities for food preparation and cooking.” With the addition of “commercial and institutional kitchens,” this phrase provided a better overall concept of what this GFCI rule was intended to cover. There are many different designs and configurations of commercial kitchens. Certainly, it is reasonable to conclude that a non-dwelling unit kitchen is an area where there is a sink and provisions for food preparation, sanitation, and cooking. This 2005 *NEC* definition was intended to distinguish commercial and institutional kitchens from those areas that might have a portable cooking appliance or a waitress station where food is kept warm for serving. This definition of a “kitchen” was moved to Article 100 for the 2008 *NEC* so this definition could apply to all kitchens (not just non-dwelling unit kitchens). This definition remained basically the same where a “kitchen” was defined in the 2017 *NEC* as “an area with a sink and permanent provisions for food preparation and cooking.”

For the 2020 *NEC*, the GFCI provisions for 210.8(B)(2) have been expanded to not only kitchens but “areas with a sink and permanent provisions for either food preparation or cooking.” The definition of a “kitchen” remains the same in Article 100 as “an area with a sink and permanent provisions for food preparation and cooking.” The additional added language clarifies that areas (not defined as a kitchen) with a sink and either permanent provisions for cooking or food preparation have the same potential for shock hazards as a kitchen. This would include areas such as ice cream parlors, coffee shops, yogurt or smoothie stores, etc. These areas typically have stainless steel countertop and/or stainless steel appliances but no “permanent provisions for cooking.” These facilities have at least the same potential for shock hazards as a kitchen.

First Revisions: FR 7791, GFR 8129

Public Inputs: PI 3048

210.8(D)

GFCI Protection in Specific Appliances

210.8(D) GFCI Protection for Specific Appliances

New text at new 210.8(D) titled, "Specific Appliances" and the move of the GFCI requirement for dishwashers correlates the requirements found in 422.5(B) (Type and Location for GFCI protection for appliances) and refers to the list of appliances requiring GFCI protection in 422.5(A)



Dishwashers GFCI protection was moved from 210.8(D) to 422.5(A)(7)



Vending machine GFCI protection cannot be factory installed within the appliance

210.8(D) Ground-Fault Circuit-Interrupter Protection for Personnel, Specific Appliances

Type of change: New

Change at a Glance: New List Item (D) correlates the requirements found in 422.5(B) (*Type of GFCI protection for appliances*) and refers to the list of GFCI requirements for appliances in 422.5(A) for continued consistency as the list is modified in future *Code* editions.

2017 Requirement: The majority of GFCI requirements for appliances were found at 422.5 in Article 422 (Appliances). The GFCI requirements for dwelling unit dishwashers (an appliance) was located at 210.8(D), which called for GFCI protection for outlets that supply dishwashers installed in dwelling unit locations.

2020 Requirement: The former GFCI requirements for a dwelling unit dishwasher were moved from 210.8(D) to 422.5(A)(7) (*which now covers all dishwashers*) with the bulk of GFCI requirements for appliances. Modern-day electronically controlled dishwashers have a different failure mode and the potential for an increased risk of electrical shock than their electromechanical ancestors. While the need for GFCI protection could be agreed upon, the location of the requirement was questionable from its inception.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See *NEC for remainder of Code text*)

(D) Specific Appliances. Unless GFCI protec-

tion is provided in accordance with 422.5(B)(3) through (B)(5), the outlets supplying the appliances specified in 422.5(A) shall have GFCI protection in accordance with 422.5(B)(1) or (B)(2).

Where the appliance is a vending machine as specified in 422.5(A)(5) and GFCI protection is not provided in accordance with 422.5(B)(3) or (B)(4), branch circuits supplying vending machines shall have GFCI protection in accordance with 422.5(B)(1) or (B)(2).

Analysis of Changes: During the 2014 *NEC* revision cycle, a new rule was added at 210.8(D) calling for GFCI protection for all outlets that supply dishwashers installed in dwelling units. This included a receptacle outlet or a hard-wired outlet for a dishwasher. Article 210 is titled, “Branch Circuits” and contains rules for receptacle placement. Some would argue that the proper location for a rule dealt with an appliance would be more appropriately covered in Chapter 4 and in particular, Article 422 of the *NEC*. For the 2020 *NEC*, this GFCI rule for dishwashers has been relocated to 422.5(A)(7) for GFCI requirement for appliances. It should be noted that this GFCI requirement that only applied to a dwelling unit dishwasher in the past, now is prevalent for all dishwashers.

The new text at new 210.8(D) titled, “Specific Appliances” and the move of the GFCI requirement for dishwashers correlates the requirements found in 422.5(B) (*Type and Location for GFCI protection for appliances*) and refers to the list of appliances requiring GFCI protection in 422.5(A). This will also provide for continued consistency especially as the list of appliances requiring GFCI protection is modified in future *Code* cycles.

This new requirement attempts to build a bridge for GFCI requirements from 210.8 to 422.5. This new provision at 210.8(D) calls for GFCI protection to be provided for an appliance either as an integral part of the attachment plug, located within the supply cord not more than 300 mm (12 in.) from the attachment plug, or factory installed within the appliance. If those three options are not achievable, then the GFCI protection must be provided by the overcurrent device or a GFCI device installed in the supply circuit such as a GFCI receptacle located at the outlet for the appliance.

Where the appliance is a vending machine and GFCI protection is not provided as an integral part of the attachment plug or located within the supply cord not more than 300 mm (12 in.) from the attachment plug, the branch circuit(s) supplying vending machines is required to have GFCI protection provided by the overcurrent device or a GFCI device installed in the supply circuit. This eliminates the GFCI protection on a vending machine from being factory installed within the vending machine. Ground-fault hazards typically occur with vending machines when the connection method (*typically a supply cord*) is damaged and energizes the metal frame of the vending machine. Locating the GFCI either in the branch circuit, or within 300 mm (12 in.) of, or within

the attachment plug addresses these hazards. Locating the GFCI within the appliance does not remedy that danger.

First Revisions: FR 7689

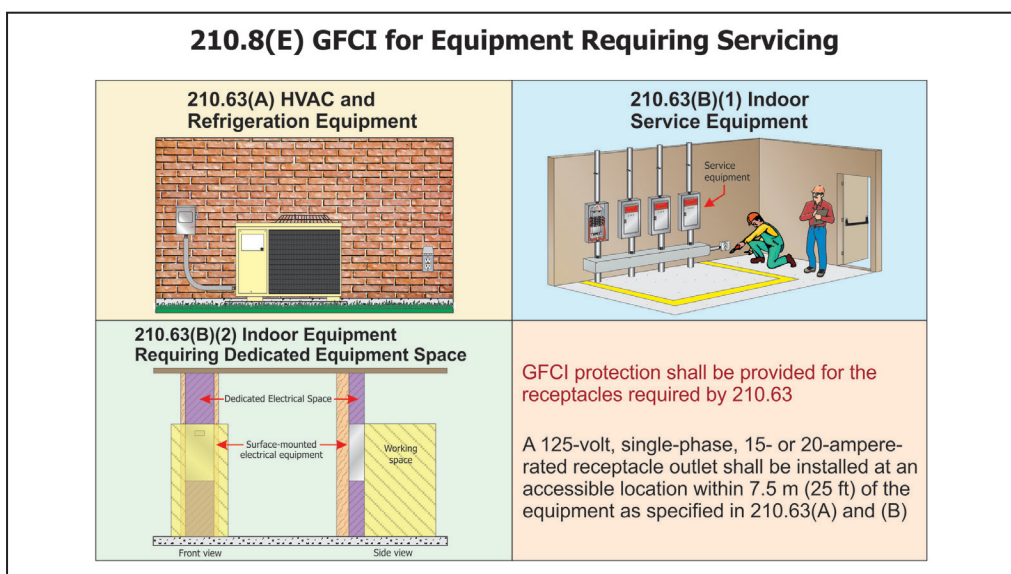
Second Revisions: SR 7737

Public Inputs: PI 2730

Public Comments: PC 2206

210.8(E)

GFCI Protection for Equipment Requiring Servicing



210.8(E) Ground-Fault Circuit-Interrupter Protection for Personnel, Equipment Requiring Servicing

Type of change: New

Change at a Glance: GFCI protection is now required for the receptacles required by 210.63 for HVAC equipment, indoor service equipment, and indoor equipment requiring dedicated equipment space.

2017 Requirement: Section 210.63 required a 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet to be installed at an accessible location on the same level and within 7.5 m (25 ft) of heating, air-conditioning, and refrigeration equipment. If this required receptacle was located outdoors, GFCI protection was required by 210.8(A)(3) or 210.8(B)(4). The requirements of 210.64 called for at least one 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet located within the same room or area and installed in an accessible location within 7.5 m (25 ft) of non-dwelling unit indoor electrical service equipment. Neither of these provisions demanded GFCI protection for these required receptacles.

2020 Requirement: GFCI protection is now required for all receptacle outlets required by 210.63, which would include a 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet installed at an accessible location on the same level and within 7.5 m (25 ft) of heating, air-conditioning, and refrigeration equipment, indoor service equipment, and indoor equipment requiring dedicated equipment space.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through ~~(E)~~(F). The ground-fault circuit

interrupter shall be installed in a readily accessible location.

(See NEC for remainder of Code text)

(E) Equipment Requiring Servicing. GFCI protection shall be provided for the receptacles required by 210.63.

Analysis of Changes: In the previous edition of the *Code*, 210.63 called for a 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet to be installed at an accessible location within 7.5 m (25 ft) of heating, air-conditioning, and refrigeration equipment. This HVAC equipment was typically located outdoors. For the 2020 *NEC*, 210.63 was revised and divided into two list items with the “125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet to be installed at an accessible location within 7.5 m (25 ft)” requirement applying to both list items. List Item (A) is the text from previous 210.63 dealing with HVAC equipment. New 210.63(B)(1) is the previous text from previous 210.64 dealing with indoor service equipment. New 210.63(B)(2) is a new requirement pertaining to indoor equipment requiring dedicated equipment space. If this equipment is located outdoors, the requirements of 210.8(A)(3) and 210.8(B)(4) would drive GFCI protection for this required receptacle. In previous editions of the *Code*, there was no GFCI requirement for the required receptacle when it was installed indoors.

For the 2020 *NEC*, a new 210.8(E) titled, “Equipment Requiring Servicing” will require GFCI protection for all the receptacles required by 210.63 (*indoors and outdoors*). The receptacles required by 210.63 are typically required for the expressed purpose of providing maintenance workers with the necessary access to power for the use of portable tools on the described equipment. Additionally, these receptacles can be located up to 7.5 m (25 ft) away from the equipment, so the use of an extension cord is not uncommon, which can increase the likelihood of a shock hazard.

It is not uncommon for the *NEC* to require GFCI protection for maintenance or service personnel while working on electrical equipment. An example of this can be found at 511.12 (Commercial Garages) and 513.12 (Aircraft Hangars). Both locations require GFCI protection as provided by 210.8(B). Maintenance and service personnel can often be found in commercial garages and aircraft hangers working with electrical diagnostic equipment, electrical hand tools, or portable lighting equipment increasing the need for GFCI protection. The same can be said of the indoor electrical service equipment areas and indoor equipment areas requiring dedicated equipment space.

*Second Revisions: SR 7587**Public Inputs: PI 1397**Public Comments: PC 681*

210.8(F)

GFCI Protection in Outdoor Outlets



210.8(F) Ground-Fault Circuit-Interrupter Protection for Personnel, Outdoor Outlets

Type of change: New

Change at a Glance: GFCI protection is now required on dwelling unit outdoor outlets supplied by single-phase branch circuit rated 150 volts or less to ground, and 50 amperes or less (including 240-volt AC units).

2017 Requirement: GFCI protection was required for all 125-volt, single-phase, 15- and 20-ampere receptacle outlets installed outdoors at dwelling units.

2020 Requirement: GFCI protection is required for all 125-volt through 250-volt receptacle outlets supplied by single-phase branch circuits rated 150 volts or less to ground installed in outdoor locations. Additionally, all outdoor outlets for dwelling units that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less will now require GFCI protection (*with exceptions*). A branch circuit dedicated to deicing and snow-melting equipment or pipeline and vessel heating equipment is not required to be GFCI protected under very specific conditions as this receptacle outlet is exempt from GFCI protection by the requirements of 426.28 (*fixed outdoor electric deicing and snow-melting equipment*.) and 427.22 (*electric heat tracing and heating panels*). GFCI protection is also exempted for outdoor lighting outlets other than those covered in 210.8(C) (*crawl space lighting outlets*).

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See NEC for remainder of Code text)

(F) Outdoor Outlets. All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel.

Exception: *Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).*

Analysis of Changes: GFCI protection for outdoor receptacle outlets at dwelling units has been a part of the *Code* since the 1971 edition of the *NEC* [see 210-22(d) of the 1971 *NEC*]. For the 2020 *NEC*, all outdoor outlets for dwelling units (with exceptions) that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less will be required to be GFCI protected. A branch circuit dedicated to deicing and snow-melting equipment is exempt for this GFCI requirement to avoid a conflict with requirements at 426.28 (*fixed outdoor electric deicing and snow-melting equipment.*) and 427.22 (*electric heat tracing and heating panels*). GFCI protection is also exempted for outdoor lighting outlets other than those covered in 210.8(C) (*crawl space lighting outlets*).

The most dramatic effect this new requirement will have is requiring GFCI protection for dwelling unit outdoor-installed heat pumps and air-conditioning units. With this requirement applying to “all outdoor outlets,” this would include outdoor hard-wired AC units. This new section requiring GFCI protection on outdoor outlets for dwellings is related to the submitted substantiation detailing a couple of facilities associated with outdoor outlet connected equipment such as an outdoor HVAC condensing unit.

One could argue that GFCI protection for outdoor outlets serving loads such as HVAC equipment or a heat pump is not unprecedented or an exceptional load that would create an incompatibility load concern. GFCI protection for commercial kitchen 125-volt, single-phase, 15- and 20-ampere receptacle outlet applications was added to the 2008 edition of the *NEC*. This resulted in compressor-based refrigeration equipment and variable speed drives for motors on mixers and other commercial kitchen appliances requiring GFCI protection. That same GFCI protection was expanded to such receptacles as 250-volt, single-phase, 50-ampere rated receptacles for the previous edition of the *Code*. This expansion in non-dwelling unit applications was even expanded to three-phase receptacles rated up to 100-amperes. Some would argue that HVAC equipment is typically located in high-humidity, wet locations that will lend itself to nuisance tripping of GFCI devices for this new application. GFCI protection for receptacles that supply swimming pool pump motors rated 15- or 20-amperes, 120-volt through 240-volt, single-phase was introduced into the *Code* during the 2002 *NEC* revision cycle. These areas are typically high-humidity areas and even wet location applications. This 17-year-old provision for GFCI protection in these aquatic applications has stood the test of time

2020 NEC Changes Review:

1. Article 242 Overvoltage Protection
2. Article 311 Medium Voltage Conductors and Cables
3. Article 337 "Type P Cable"
4. (New) Article 800 General Requirements for Communications Systems
5. 210.8(A) 250-volt receptacles
6. 90.2(A)(5) and (6) Scope of *NEC*
7. 555.35(A)(1) Receptacles Providing Shore Power
8. 555.35(A)(3) Feeders and Branch Circuits with GFPE
9. 680.2 and 680.50 Splash Pads
10. 230.71(B) Two to Six Service Disconnects
11. 110.26(C)(2) Open Equipment Doors
12. 408.18(C)(2) Grounded Circuit Conductors
13. 314.16(B)(5) Volume Allowance for EGCs
14. Section 310.1 Scope (*Rewrite of Article 310*)
15. 210.8(F) GFCI Outdoor Outlets at Dwelling Units
16. 690.12(B)(2) Inside the Array Boundary
17. Article 100 Definition: Labeled. New I-Note added (*smallest package*)
18. 230.85 Emergency Disconnects at Dwelling Units
19. 705.13 Power Control Systems
20. 210.8(A)(5) ALL dwelling unit basements
21. 250.64 Aluminum and Copper-Clad Aluminum Conductors
22. 406.9(C) Bathtub or Shower Stall Restricted "Zone" for Receptacles
23. Article 100 Fault Current, Fault Current, Available
24. 210.8(B) New GFCI requirements were added for (6) damp locations, (8) accessory buildings, (11) laundry areas, and (12) bathtubs and shower stalls
25. 310.12 and Table 310.12 New Dwelling Unit Table
26. 210.52(C)(2) Countertops and Work Surfaces
27. 408.43 Panelboard Orientation
28. 220.12 and Table 220.12 Section 220.12 and Table 220.12 Extensively Revised
29. 690.41(B) Ground-Fault Protection
30. 210.8 GFCI Protection for Personnel (*Removal of "door" and "doorway"*)
31. 110.14(D) Terminal Connection Torque
32. 555.13 Bonding of Non-Current-Carrying Metal Parts
33. Article 100 Reconditioned
34. 210.15 Reconditioned Equipment
35. 551.71(A) 20-Ampere (RV site supply)
36. 450.9 Ventilation (*prohibit storage on top*)
37. 230.67 Surge Protection at Dwelling Units
38. 690.33 Mating Connectors
39. 110.12(C) Cables and Conductors (*Relocate .24 from Chapters 7 and 8*)
40. 250.68(C)(3) GEC Connections

- 41.110.26(C)(3) Personnel Doors
- 42.230.62(C) Barriers
- 43.312.8(B) Power Monitoring or Energy Management
- 44.200.10(B) Identification of Terminals
- 45.430.7(A) Usual Motor Applications
- 46.220.42 General Lighting
- 47.240.67(C)/240.87(C) Performance Testing
- 48.690.41(B)(3) Indication of Faults
- 49.230.46 Splices and Tapped Conductors
- 50.410.170 and 410.188 Horticultural Lighting
- 51.547.5(G) 15-20A GFCI Receptacles in an AG building
- 52.547.9 AG Distribution Point
- 53.547.9 (C) AG Underground feeders from a distribution point

Others

Article 100 Definition of a Dormitory

210.12 (C) AFCI protection in Nursing Homes and Limited Care facility Sleeping Rooms

Exhibit F: Minutes of Oct. 8, 2019, Board of Electricity's NEC Adoption Review Committee

Meeting Minutes: NEC 2020 Adoption Review Committee of the Board of Electricity

Date: October 8, 2019
Time: 8:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Committee Members Present:

Cole Funseth
Michael Hanson
Duane Hendricks
Chad Kurdi
Peter Lindahl
Daniel Westberg – Chair

DLI Staff & Visitors:

Jeff Lebowski (Gen. Counsel, DLI)
Dean Hunter (DLI)
Steve Dudley (DLI)
Gary Kruse (State of WI)
Gary Thaden (NECA)

Committee Members Absent:

None

Board Members Present:

John Williamson
Scott Novotny

1. Call to Order

The meeting was called to order at 8:00 a.m. by Chair Westberg. Roll call was taken by Secretary Hendricks and a quorum was declared with 5 of 6 voting members – Cole Funseth joined the meeting late resulting in 6 of 6 voting members present in person.

2. Approval of Meeting Agenda

A motion was made by Hanson, seconded by Kurdi, to approve the agenda as presented. The vote was unanimous with 5 votes in favor of the motion; the motion carried.

3. Approval of previous meeting minutes

A motion was made by Kurdi, seconded by Hanson, to approve the Sept. 12, 2019, meeting minutes as presented. The vote was unanimous with 5 votes in favor of the motion; the motion carried.

4. Regular Business

- a. **Expense Approval** – reviewed and approved the per diem and expenses.

Cole Funseth joined the meeting at 8:07 a.m. resulting in 6 of 6 Committee members present.

5. Special Business

a. NEC adoption – Attachment A

Review by the NEC Committee continued of Items 1-53, with special emphasis on Item numbers 5, 15, and 20, of Attachment A related to residential GFCI requirements.

Dean Hunter referred to the International Association of Electrical Inspectors (IAEI) Analysis of Changes contained in the attachment and clarified that, although discussed at the previous meeting, luminaires were not to be included in the new GFCI requirements for outdoor outlets in National Electrical Code Section 210.8(F).

Hendricks said he read through the analysis and there was a lot of discussion of items 5, 15, and 20 and about the basement being all GFCI. He believes all of these are legitimately necessary. And added that the analysis says that if there is water or moisture in the basement it is a safety concern.

Hanson said part of what was discussed at the last meeting was that there shouldn't be changes to codes without ample justification; however, item #5 of Attachment A might possibly create a greater hazard for homeowners since instead of following the new code provisions, contractors might begin hard-wiring dryers and ranges and when a homeowner needs to unclog a dryer exhaust vent, they can no longer unplug the dryer attachment cord from a receptacle since the dryer is hard-wired. The option to hard-wire the appliances could create an unintended or greater hazard.

Hanson referred to item #15 and said he still questions the practical nature of the GFCI on air conditioning units. If people follow the code and install properly, then he struggles to see the need and the expense. He believes the hazard doesn't justify the expense and there will be a lot of electrical "tripping" issues with these condensers. He is fine with the basement receptacle – he doesn't have any objection to item #20. He believes the Committee should review item #5 – it isn't as if every existing home/dwelling unit is wired in accordance with the current code.

Lindahl said he isn't interested in adding costs to wired units, but he believes that in many cases the contractor is not going to return. In many cases he would think the contractor would put the receptacle in, so they don't have to return.

Kurdi said he has concerns with nuisance tripping. The challenge is when the equipment is hard-wired, would the leakage-current threshold be low enough to allow the GFCI to continue to operate – specifically air conditioning units. He can see this becoming a hazard in the future because homeowners will take it upon themselves to remove the GFCI breaker. However, he clarified that he didn't feel the code needed to be amended and that this could be reviewed during the next 2023 NEC code cycle, if necessary.

Lebowski reminded the Committee that the Board could adopt the 2020 NEC code as is and do rulemaking afterwards if there were issues that needed to be addressed. In addition, he added that the Board could also address any unintended issues by opening

emergency rulemaking to fix any code issues and that the Board also has interpretive authority to fine-tune the code on a case-by-case basis, if necessary. Therefore, the Board would not have to wait until the next code cycle to address any issues with adopting the 2020 NEC without Minnesota Amendments.

The Chair said it appears that all are prepared to make a motion on item #20.

A motion was made by Kurdi, seconded by Hanson, to accept item #20 – 210.8(A)(5) ALL dwelling unit basements. The vote was unanimous with 6 votes in favor of the motion; the motion carried.

Williamson said that there are currently 3 code interpretations on the Board of Electricity's webpage, and he reiterated Lebowski's comments that the Board has final interpretative authority. The Board's Final Interpretations can be viewed here: <http://www.dli.mn.gov/about-department/boards-and-councils/board-electricity>

A motion was made by Lindahl, seconded by Hendricks, to accept items #5 – 210.8(A) 250-volt receptacles and #15 – 210.8(F) GFCI Outdoor Outlets at Dwelling Units. The vote was unanimous with 6 votes in favor of the motion; the motion carried.

Hendricks said he would brief the Board on the NEC's rulemaking recommendation.

Kurdi asked if the Committee needed to review costs associated with these recommendations and Williamson said a cost analysis will be completed but hasn't been yet. Hendricks asked if a certain threshold needed to be met regarding costs and Lebowski said yes and no. The Committee must be concerned with costs in general; however, in the Statute there must be a specific statement as to what affect rulemaking will have on small businesses and small cities. Small business is classified as less than 50 employees and small cities as less than 10 employees. There are also general requirements – what was the overall impact and a cost analysis needs to be completed. He doesn't think there are any red flags that costs will be outrageous, but this should be discussed at the Board meeting to the best of the Committee's abilities.

6. Announcements

7. Adjournment

A motion was made by Lindahl, seconded Hanson, to adjourn the meeting at 8:21 a.m. The vote was unanimous with 6 votes in favor of the motion; the motion carried.

Respectfully Submitted,

Dan Westberg

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Board/NEC Committee Chair

2020 NEC Changes Review:

1. Article 242 Overvoltage Protection
2. Article 311 Medium Voltage Conductors and Cables
3. Article 337 "Type P Cable"
4. (New) Article 800 General Requirements for Communications Systems
5. 210.8(A) 250-volt receptacles
6. 90.2(A)(5) and (6) Scope of *NEC*
7. 555.35(A)(1) Receptacles Providing Shore Power
8. 555.35(A)(3) Feeders and Branch Circuits with GFPE
9. 680.2 and 680.50 Splash Pads
10. 230.71(B) Two to Six Service Disconnects
11. 110.26(C)(2) Open Equipment Doors
12. 408.18(C)(2) Grounded Circuit Conductors
13. 314.16(B)(5) Volume Allowance for EGCs
14. Section 310.1 Scope (*Rewrite of Article 310*)
15. 210.8(F) GFCI Outdoor Outlets at Dwelling Units
16. 690.12(B)(2) Inside the Array Boundary
17. Article 100 Definition: Labeled. New I-Note added (*smallest package*)
18. 230.85 Emergency Disconnects at Dwelling Units
19. 705.13 Power Control Systems
20. 210.8(A)(5) ALL dwelling unit basements
21. 250.64 Aluminum and Copper-Clad Aluminum Conductors
22. 406.9(C) Bathtub or Shower Stall Restricted "Zone" for Receptacles
23. Article 100 Fault Current, Fault Current, Available
24. 210.8(B) New GFCI requirements were added for (6) damp locations, (8) accessory buildings, (11) laundry areas, and (12) bathtubs and shower stalls
25. 310.12 and Table 310.12 New Dwelling Unit Table
26. 210.52(C)(2) Countertops and Work Surfaces
27. 408.43 Panelboard Orientation
28. 220.12 and Table 220.12 Section 220.12 and Table 220.12 Extensively Revised
29. 690.41(B) Ground-Fault Protection
30. 210.8 GFCI Protection for Personnel (*Removal of "door" and "doorway"*)
31. 110.14(D) Terminal Connection Torque
32. 555.13 Bonding of Non-Current-Carrying Metal Parts
33. Article 100 Reconditioned
34. 210.15 Reconditioned Equipment
35. 551.71(A) 20-Ampere (RV site supply)
36. 450.9 Ventilation (*prohibit storage on top*)
37. 230.67 Surge Protection at Dwelling Units
38. 690.33 Mating Connectors
39. 110.12(C) Cables and Conductors (*Relocate .24 from Chapters 7 and 8*)
40. 250.68(C)(3) GEC Connections

- 41.110.26(C)(3) Personnel Doors
- 42.230.62(C) Barriers
- 43.312.8(B) Power Monitoring or Energy Management
- 44.200.10(B) Identification of Terminals
- 45.430.7(A) Usual Motor Applications
- 46.220.42 General Lighting
- 47.240.67(C)/240.87(C) Performance Testing
- 48.690.41(B)(3) Indication of Faults
- 49.230.46 Splices and Tapped Conductors
- 50.410.170 and 410.188 Horticultural Lighting
- 51.547.5(G) 15-20A GFCI Receptacles in an AG building
- 52.547.9 AG Distribution Point
- 53.547.9 (C) AG Underground feeders from a distribution point

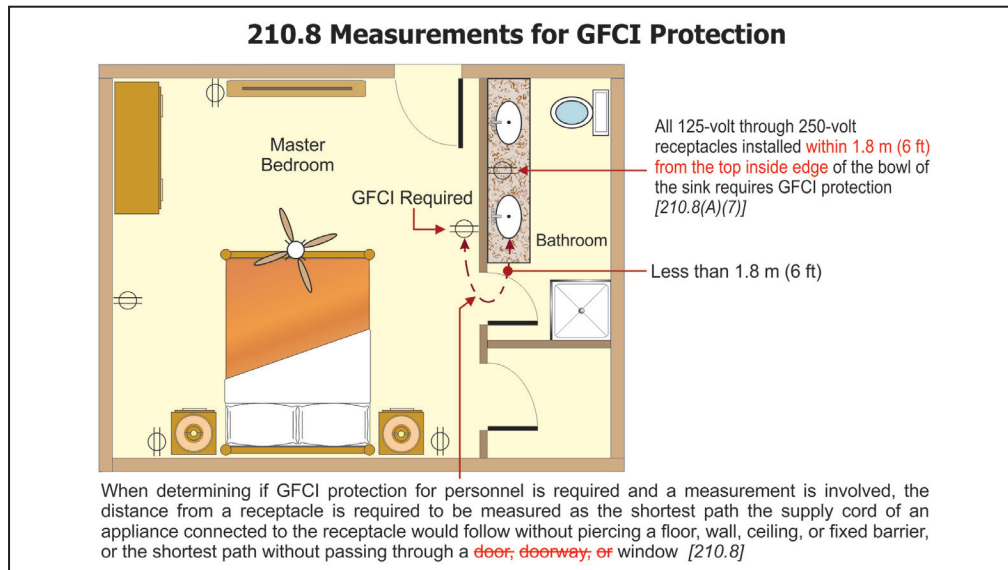
Others

Article 100 Definition of a Dormitory

210.12 (C) AFCI protection in Nursing Homes and Limited Care facility Sleeping Rooms

210.8

Ground-Fault Circuit-Interrupter Protection for Personnel



210.8 Ground-Fault Circuit-Interrupter Protection for Personnel

Type of change: Revision

Change at a Glance: Revision removes “door” and “doorway” as items the supply cord of an appliance connected to the receptacle should not pass through in order to satisfy measurement requirements for GFCI protection.

2017 Requirement: When determining if ground-fault circuit-interrupter (GFCI) protection for personnel was warranted and a measurement was involved, the distance from a receptacle was required to be measured as the shortest path the cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or passing through a door, doorway, or window.

2020 Requirement: For determining if ground-fault circuit-interrupter (GFCI) protection for personnel is required and a measurement is involved, the distance from a receptacle is required to be measured as the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or the shortest path without passing through a window.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for per-

sonnel shall be provided as required in 210.8(A) through ~~(E)~~(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

Informational Note No. 1: See 215.9 for ground-fault circuit-interrupter protection for personnel on feeders.

Informational Note No. 2: See 422.5(A) for GFCI requirements for appliances.

Informational Note No. 3: See 555.9 for GFCI requirements for boat hoists.

Informational Note No. 4: Additional GFCI requirements for specific circuits and equipment are

contained in Chapters 4, 5, and 6.

For the purposes of this section, when determining the distance from receptacles the distance shall be measured as the shortest path the supply cord of an appliance connected to the receptacle would follow without piercing a floor, wall, ceiling, or fixed barrier, or the shortest path without passing through a door, doorway, or window.

Analysis of Changes: For the 2017 *NEC*, a new provision was added at the parent text of 210.8 to indicate that measurements from receptacles to objects (*such as a sink*) that would qualify for GFCI protection should be measured as the “shortest path” a cord of an appliance connected to a receptacle would take without piercing a floor, wall, ceiling, or fixed barrier, or passing through a door, doorway, or window. Prior to this mandate on measurements, when the *Code* gave a measurable dimension such as where receptacles are installed within 1.8 m (6 ft) of a sink needing GFCI protection, there was great debate as to how this measurement was to be accomplished. What path should the installer or enforcer take to determine this distance? Various interpretations have been offered for accomplishing these measurements for as long as they have existed in the *Code* before this 2017 *NEC* provision.

These GFCI measurement requirements were further revised for the 2020 *NEC* by removing “doors and doorways” as items the supply cord of an appliance connected to the receptacle should not pass through in order to complete these GFCI-determining measurements. Is a cabinet door a “door” that would qualify for this measurement requirement? Most in the electrical industry would have answered, “yes” to that question. To eliminate all doubt, CMP-2 removed “door” and “doorway” from the list of obstacles that should not be measured through for this *Code* cycle. The removal of the words “door” and “doorway” addresses the confusion that a cabinet “door” is not intended to eliminate GFCI protection.

The receptacle that has raised the most question for this GFCI protection has been the 120-volt, 20-ampere receptacle under the kitchen sink for the garbage disposer. In the previous edition of the *Code*, in order to apply GFCI protection for this receptacle, one would have had to take the measurement from the top, inside edge of the sink [*see 210.8(A)(7)*] and pass through the kitchen cabinet door to complete this measurement (*which was prohibited by the parent text of 210.8*). For the 2020 *NEC*, passing the measurement through the cabinet door is no longer prohibited. Depending on the rules in place at the time for 210.8, 210.8(A)(6) (kitchens), and 210.8(A)(7) (sinks), this receptacle located under the kitchen sink in the cabinet did or did not require GFCI protection. 2011 *NEC* (No), 2014 *NEC* (Yes), 2017 *NEC* (No), and 2020 *NEC* (Yes). Hopefully, this revision will settle this issue down for a while and stop the back-and-forth for GFCI protection for these receptacles in these areas around sinks and cabinets.

Some in the electrical industry would argue that this revision took this GFCI requirement too far. The removal of “door” would have accomplished the intent of getting GFCI protection for the receptacle located under the kitchen sink behind a cabinet door. By also removing the word “doorway,” this opened up GFCI protection to something like a receptacle located in a bedroom, but also located within 1.8 m (6 ft) of a bathroom sink when the measurement is taken from the top, inside edge of the bathroom sink, through the bathroom doorway to the bedroom receptacle located around the corner from the doorway. A bedroom receptacle outlet has never drawn requirements for GFCI protection but would demand GFCI protection under these unique circumstances.

First Revisions: FR 7863

Second Revisions: SR 7685

Public Inputs: PI 1080, PI 2291, PI 500, PI 4130

Public Comments: PC 845, PC 387

210.8(A)

Dwelling Unit GFCI Protection



210.8(A) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units

Type of change: Revision

Change at a Glance: Dwelling unit GFCI protection has been expanded to all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground installed in the specified areas of 210.8(A).

2017 Requirement: All 125-volt, single-phase, 15- and 20-ampere receptacles installed in (10) specific locations (*bathrooms, kitchens, laundry areas, etc.*) of a dwelling unit required ground-fault circuit-interrupter (GFCI) protection for personnel.

2020 Requirement: All 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground installed in (11) specific locations of a dwelling unit require ground-fault circuit-interrupter (GFCI) protection for personnel.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt through 250-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1) through (11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(1) Bathrooms

(2) Garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use

(3) Outdoors

Exception to (3): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

(4) Crawl spaces — at or below grade level

(5) Basements Unfinished portions or areas of the basement not intended as habitable rooms

Exception to (5): A receptacle supplying only a permanently installed fire alarm or burglar alarm system shall not be required to have ground-fault circuit-interrupter protection.

Informational Note: See 760.41(B) and 760.121(B) for power supply requirements for fire alarm systems. Receptacles installed under the exception to 210.8(A)(5) shall not be considered as meeting the requirements of 210.52(G).

(6) Kitchens — where the receptacles are installed to serve the countertop surfaces

(7) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

(8) Boathouses

(9) Bathtubs or shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

(10) Laundry areas

Exception to (1) through (3), (5) through (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be ground-fault circuit-interrupter protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.

(11) Indoor damp and wet locations

Analysis of Changes: When the 1971 *NEC* was published, the first ground-fault circuit-interrupter (GFCI) protection requirements for dwelling units was introduced for personnel protection. Section 210-22(d) called for GFCI protection for all 120-volt, single-phase, 15- and 20-ampere receptacles installed outdoors. This started a journey of safety for dwelling units that has led to eleven specific locations that demand GFCI protection for this most recent *Code* cycle. Historically, GFCI protection at dwelling units has been limited to 125-volt, single-phase, 15- and 20-ampere receptacles. For the 2020 *NEC*, GFCI protection for personnel at dwelling unit will be expanded to include all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground in the specific locations specified at 210.8(A)(1) through (A)(11) (*bathrooms, kitchens, outdoors, etc.*).

The addition of up to 250-volt receptacles and removing the amperage limitations of 15- and 20-amperes will provide GFCI protection to most receptacles commonly used in the specified areas of 210.8(A). The necessity for GFCI protection for areas such as kitchens and laundry areas has been proven for these receptacles over several *Code* cycles. 250-volt rated receptacles present similar shock hazards and substantiation submitted for this change demonstrated the need for GFCI protection for greater than 125-volt rated receptacles. Including these higher rated receptacles for GFCI protection at dwelling units is compatible with the GFCI protection provisions that occurred for other than dwelling units at 210.8(B) during the 2017 *NEC* revision cycle.

What this will all mean is the 240-volt, 30-ampere dryer receptacle in the utility room will now require GFCI protection, Same with the 240-volt, 50-ampere oven or range receptacle. Any receptacle rated up to 250-volts supplied by single-phase branch circuits rated 150 volts or less to ground and installed in a dwelling unit kitchen, bathroom, laundry area, garage, or any other dwelling unit location addressed at 210.8(A)(1) through (A)(11) will now required GFCI protection for personnel.

First Revisions: FR 7705, DFR 8119

Second Revisions: SR 7697

Public Inputs: PI 1875, PI 167

Public Comments: PC 2020, PC 901, PC 401

210.8(A)(5)

GFCI Protection in Dwelling Unit Basements

210.8(A)(5) GFCI Protection for Basements

All **125-volt through 250-volt** receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in any and **all dwelling unit basements** will require ground-fault circuit-interrupter (GFCI) protection for personnel



Unfinished Basement



Finished Basement

210.8(A)(5) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units, Basement

Type of change: Revision

Change at a Glance: GFCI protection now required for *ALL* dwelling unit basements (*not just unfinished portions of basements*).

2017 Requirement: All 125-volt, 15- and 20-ampere receptacles installed in dwelling unit unfinished basements required ground-fault circuit-interrupter (GFCI) protection for personnel. An unfinished portions or areas of a basement was identified as an area “not intended as a habitable room.”

2020 Requirement: All 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in any and all dwelling unit basements require ground-fault circuit-interrupter (GFCI) protection for personnel.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt through 250-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1) through (10)(11) and supplied by single-phase

branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(5) Basements ~~Unfinished portions or areas of the~~ basement not intended as habitable rooms

Analysis of Changes: An unfinished basement of a dwelling unit can be an area that has been shown to be subject to shock hazards from the use of electricity in these areas. Often accompanied by damp conditions, the use of power tools and other electrical equipment has driven the need for ground-fault circuit-interrupter (GFCI) protection for personnel in these areas of the dwelling unit. GFCI protection for all 125-volt, single-phase, 15- and 20-ampere receptacles in dwelling unit basements was first required in the 1987 *NEC*. During the 1993 *NEC*, an “unfinished” basement was first defined as “portions or areas of the basement not intended as habitable rooms and limited to storage areas, work areas, and the like.” Two new exceptions for GFCI protection in an unfinished basement were added for the 1996 *NEC*. The first exception exempted receptacles that were not readily accessible, and the second exception eliminated receptacles installed in dedicated spaces for specific appliances from GFCI protection. A third exception was added for the 1999 *NEC* that identified a receptacle installed in an unfinished basement supplying a permanently installed fire or burglar alarm system from having to comply with GFCI requirements. Previous Exception No. 1 (*not readily accessible*) and Exception No. 2 (*specific appliances*) were removed from the *Code* during the 2008 *NEC* revision cycle leaving these previously exempted receptacles mandatory to GFCI provisions. These dwelling unit unfinished basement GFCI requirements remained unchanged through the 2017 *NEC*.

For the 2020 *NEC*, changes to the *Code* effected the GFCI requirements for receptacles in both an unfinished basement and a finished basement intended as a habitable space. The voltage and amperage thresholds that limited GFCI protection at dwelling units

to 125-volt, 15- and 20-ampere receptacles were revised to include all 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground [see Analysis text at 210.8(A)]. The second changes occurred at the GFCI provision of 210.8(A)(5). While this GFCI requirement was historically reserved for “unfinished” basements, changes to the 2020 *NEC* threw this GFCI provision open to *ALL* dwelling unit basements (*not just unfinished basements*), including basements that are finished out to be a habitable room or space such as a bedroom, exercise room, or game room.

In qualifying the need for GFCI protection for more than an unfinished basement, CMP-2 concluded that conductive floor surfaces may exist in finished and unfinished basements and that basements (*whether finished or unfinished*) are prone to moisture including flooding, thus making GFCI protection a requirement for all basements of a dwelling unit. History has proven that unfinished areas of a basement expose the user of electrical equipment and devices to grounded surfaces and or surfaces in contact to the earth through concrete floors, masonry walls and steel columns embedded in concrete floors. Finished basement floors typically have a painted concrete floor or tiled areas with masonry grout in contact with a concrete floor or masonry walls that are indirectly in contact with the earth. The potential of electrical hazards that reside in basements are not eliminated by establishing a demarcation of finished surfaces compared to unfinished surfaces. The receptacle outlets in finished basements are often used for powering lamps, entertainment equipment, interactive games systems, etc. A prevalent moisture hazard exists with a person being in contact with a damp floor, independent of flooring type, and then interacting with the electrical system. The user of these devices is at the same risk of shock hazard as in an unfinished basement.

First Revisions: FR 7705, DFR 8120

Second Revisions: SR 7697

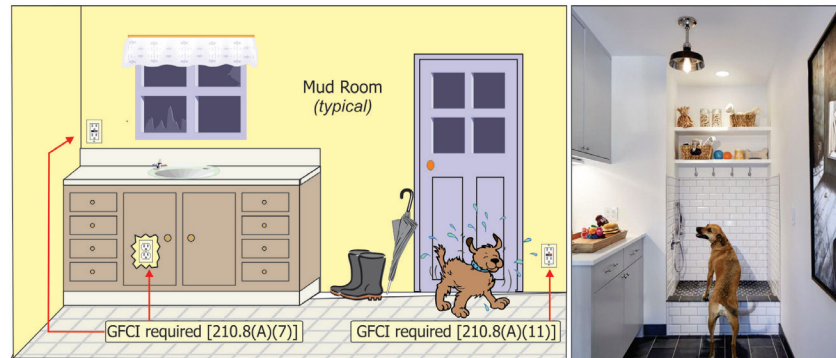
Public Inputs: PI 46, PI 599, PI 1875, PI 167

Public Comments: PC 696, PC 1437, PC 1384, PC 901, PC 247, PC 401, PC 563

210.8(A)(11)

GFCI Protection at Indoor Damp and Wet Locations of Dwelling Units

210.8(A)(11) GFCI Protection for Indoor Damp or Wet Locations



All 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in indoor damp or wet locations require ground-fault circuit-interrupter (GFCI) protection for personnel

210.8(A)(11) Ground-Fault Circuit-Interrupter Protection for Personnel, Dwelling Units, Indoor damp and wet locations

Type of change: New

Change at a Glance: GFCI protection is now required at indoor damp and wet locations of dwelling units.

2017 Requirement: Ground-fault circuit-interrupter (GFCI) protection was required in specific areas of the dwelling that might be damp or wet on occasion such as kitchens, bathrooms, laundry rooms, bathtub and shower areas, but no specific GFCI requirement for damp or wet locations inside a dwelling unit.

2020 Requirement: List item (11) was added to 210.8(A) requiring GFCI protection for all 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in indoor damp or wet locations regardless of its location.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt through 250-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1)

through (10)(11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel.

(11) Indoor damp and wet locations

Analysis of Changes: If you encounter a damp or wet location in a dwelling unit, chances are pretty good that those locations would be required to supply ground-fault circuit-interrupter (GFCI) protection. Especially if they are located in a bathroom, laundry area, or around a bathtub or shower area. Receptacles in these areas or located within 1.8 m (6 ft) of sinks in these areas required GFCI protection by the existing rules at 210.8(A)(1) through (A)(10). What if you were to encounter an area of the dwelling unit that could be considered a damp or wet location and that locations were not within 1.8 m (6 ft) of a sink, bathtub, or shower area? What if this potential damp or wet location was not located in one of the areas specified by the previous text of 210.8(A)(1) through (A)(10) such as a kitchen or laundry area?

For the 2020 *NEC*, a new list item (11) was added that will require GFCI protection for all 125-volt through 250-volt receptacles supplied by a single-phase branch circuit rated 150 volts or less to ground installed in indoor damp or wet locations regardless of the room or areas of the dwelling unit it might be located in. The areas that come to mind that this will affect are areas like a mud room with no sink or a mud room with a sink but receptacles in that area are located greater than 1.8 m (6 ft) from said sink. Another area that this new provision will cover would be an indoor area where animals like dogs are washed down before being permitted to re-enter the main dwelling unit.

Of course, this is open to interpretation. What is an indoor damp or wet location? Hopefully, the definitions for a damp, wet, or dry location found in Article 100 will be considered in making the determination as to an area's location being considered damp, wet, or dry. Who determines if a location (indoors or outdoors) is considered a damp, wet, or dry location? That would be up to the authority having jurisdiction (AHJ).

First Revisions: FR 7705, DFR 8121

Public Inputs: PI 1889

210.8(B)

GFCI Requirements at Non-Dwelling Unit Locations

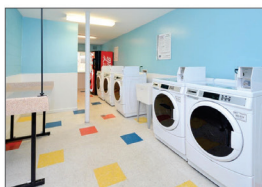
210.8(B) GFCI Protection for Other Than Dwelling Units

New provisions for GFCI protection were added for non-dwelling unit locations for receptacles:



Indoor
Damp
and Wet
Locations

Garages,
accessory
buildings,
and service
bays



Laundry
areas

Bathtubs
and
shower
stalls



210.8 Ground-Fault Circuit-Interrupter Protection for Personnel**Type of change:** New

Change at a Glance: New GFCI requirements at non-dwelling unit locations were added for damp locations, accessory buildings, laundry areas, and areas around bathtubs and shower stalls.

2017 Requirement: GFCI requirements for other than dwelling units applied to all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less installed in (1) bathrooms, (2) kitchens, (3) rooftops, (4) outdoors, (5) within 1.8 m (6 ft) of the top inside edge of a sink, (6) indoor damp locations, (7) locker rooms with associated showering facilities, (8) garages, service bays, and similar areas other than vehicle exhibition halls and showrooms, (9) crawl spaces, and (10) Unfinished portions or areas of the basement not intended as habitable rooms.

2020 Requirement: In addition to the areas listed in the 2017 *NEC*, GFCI protection was expanded to non-dwelling unit (2) areas with a sink and permanent provisions for either food preparation or cooking, (6) indoor damp locations, (8) accessory building, (11) laundry areas, and (12) receptacles that are installed within 1.8 m (6 ft) of the outside edge of a bathtub or shower stall.

CODE LANGUAGE**210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.**

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See *NEC* for remainder of Code text)

(B) Other Than Dwelling Units. All single-phase 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground or less, 50 amperes or less and all receptacles supplied by three-phase receptacles branch circuits rated 150 volts or less to ground or less, 100 amperes or less installed in the following locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection for personnel.

- (1) Bathrooms
- (2) Kitchens or areas with a sink and permanent

provisions for either food preparation or cooking

- (3) Rooftops

Exception: Receptacles on rooftops shall not be required to be readily accessible other than from the rooftop.

- (4) Outdoors

Exception No. 1 to (3) and (4): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

Exception No. 2 to (4): In industrial establishments only, where the conditions of maintenance and supervision ensure that only qualified personnel are involved, an assured equipment grounding conductor program as specified in 590.6(B)(2) shall be permitted for only those receptacle outlets used to supply equipment that would create a

greater hazard if power is interrupted or having a design that is not compatible with GFCI protection.

- (5) Sinks — where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink

Exception No. 1 to (5): In industrial laboratories, receptacles used to supply equipment where removal of power would introduce a greater hazard shall be permitted to be installed without GFCI protection.

Exception No. 2 to (5): For Receptacles located in patient bed locations of Category 2 (general care) or Category 1 (critical care) spaces of health care facilities other than those covered under 210.8(B)(1), GFCI protection shall not be required shall be permitted to comply with 517.21.

- (6) Indoor damp and wet locations
(7) Locker rooms with associated showering facilities

- (8) Garages, accessory buildings, service bays, and similar areas other than vehicle exhibition halls and showrooms

- (9) Crawl spaces — at or below grade level

- (10) Unfinished portions or areas of the basements not intended as habitable rooms

Exception to (1) through (5), (8), and (10): Listed locking support and mounting receptacles utilized in combination with compatible attachment fittings installed for the purpose of serving a ceiling luminaire or ceiling fan shall not be required to be ground-fault circuit-interrupter protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling fan, GFCI protection shall be provided.

- (11) Laundry areas

- (12) Bathtubs and shower stalls — where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall

Analysis of Changes: Ground-fault circuit-interrupter (GFCI) protection for personnel at “other than dwelling units” was first introduced to the public for the 1993 edition of the *NEC*. These GFCI provisions were applicable to 125-volt, single-phase, 15- and 20-ampere receptacles. For the 1993 *NEC*, GFCI protection was required for receptacles in non-dwelling unit bathrooms and receptacles installed on a non-dwelling unit rooftop. These two pioneer areas for non-dwelling unit GFCI protection continue to be applicable even until the latest edition of the *NEC* with an exception for outdoors added during the 1999 *NEC*. This exception removed GFCI protection for a receptacle that was not readily accessible and dedicated to deicing and snow-melting equipment under the purview of Article 426 (*Fixed Outdoor Electric Deicing and Snow-Melting Equipment*). During the 2002 *NEC*, kitchens were added to the GFCI requirements for other than dwelling units. This GFCI rule was different that its cousin requirement for dwelling units as it applied to all non-dwelling unit kitchen receptacles (not just receptacles that served a kitchen countertop). For the 2005 *NEC*, “kitchens” was revised to “commercial and institutional kitchens” with a definition of a “kitchen” added as an “area with a sink and permanent facilities for food preparation and cooking.” The 2005 *NEC* also saw outdoor areas in public spaces and outdoor receptacles installed to comply with 210.63 (*receptacle installed in close proximity to outdoor HVAC equipment*).

The 2008 *NEC* witnessed a new exception added to exempt outdoor receptacles at industrial establishment where conditions of maintenance and supervision ensure only qualified personnel are involved. Receptacles installed within 1.8 m (6 ft) of the outside edge of a non-dwelling unit sink (*with two exception*) was also added for the 2008 *NEC* as well. For the 2011 version of the *NEC*, indoor wet locations, locker rooms

with associated showering facilities, and garages, service bays, and similar areas where electrical diagnostic equipment, electrical hand tools, or portable lighting equipment are to be used were areas added to the non-dwelling unit GFCI requirements. Garages and service bays were revised for the 2014 *NEC* to address garages, service bays, and similar areas “other than vehicle exhibition halls and showrooms.” The 2017 *NEC* was revised to change the limit of non-dwelling unit GFCI protection from 125-volt, single-phase, 15- and 20-ampere rated receptacles to all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less. The previous edition of the *Code* also incorporated GFCI protection for crawl spaces (at or below grade level) and unfinished basements that are not intended as habitable rooms.

GFCI protection for receptacles at non-dwelling units was further expanded for the 2020 *NEC*. List Item (2) was expanded to include GFCI protection for receptacles in non-dwelling unit kitchens “or areas with a sink and permanent provisions for either food preparation or cooking.” This revision will be expanded upon in greater detail in the next changes address by this publication at 210.8(B)(2). The next significant change in 210.8(B) was at List Item (6) where an indoor “damp” location was added to the existing GFCI requirement for indoor wet non-dwelling unit locations. This revision occurred for clarity and consistency as the shock hazard in a damp location is similar in nature a wet location.

The requirement for GFCI protection for receptacles in a non-dwelling unit accessory building were added at 210.8(B)(8) that already covered garages, service bays, and similar areas other than vehicle exhibition halls and showrooms. An accessory building can have the same degree of shock hazard as garages and vehicle service bays and deserved the same level of GFCI protection.

An exception to (B)(1) through (B)(5), (B)(8), and (B)(10) was added pertaining to “listed locking support and mounting receptacles” utilized in combination with compatible attachment fittings installed for the purpose of mounting a ceiling luminaire or ceiling fan. This exception deleted GFCI protection for these devices. These listed locking support and mounting receptacles are (by definition) a “receptacle.” During the 2017 *NEC* revision cycle, the age-old definition of a “receptacle” in Article 100 had to be revised to incorporate these mounting devices. A receptacle is now defined as a contact device installed at the outlet for the connection of an attachment plug, or for the “direct connection of electrical utilization equipment designed to mate with the corresponding contact device.” This revised definition was necessary to correlate with the provisions at 314.27(E) (Separable Attachment Fittings). GFCI protection for all of these non-dwelling unit receptacles was intended for a traditional receptacle where a cord cap would be inserted. Without this exception, luminaire outlets and ceiling fans would have required GFCI protection when utilizing these locking support and mounting receptacles. The same exception was also added at 210.8(A) for dwelling units (*see DFR 8122, SR 7697, PI 3886, PI 1980, and PC 1719*).

A new List Item (11) was added to 210.8(B) that will require GFCI protection for receptacles installed in non-dwelling unit laundry areas. GFCI requirements were added

for dwelling unit laundry areas in the 2014 *NEC*. Laundry areas typically involve electrical appliances and the presence of water with a resulting increased risk of electric shock hazards. Laundry areas at non-dwelling units are similar to laundry areas of a dwelling unit and deserve the same GFCI protection. Most condominiums and apartment complexes provide a common laundry building or area as a convenience to the tenants. An apartment dweller deserves the same GFCI protection as their counterpart that lives in a single-family dwelling unit.

And finally, a new List Item (12) was added to 210.8(B) calling for GFCI protection for receptacles installed within 1.8 m (6 ft) of the outside edge of a non-dwelling unit bathtub or shower stall. Shower stalls and bathtubs can exist in commercial and industrial locations outside of a locker room or bathroom for a variety of purposes such as decontamination, and safety applications. Receptacles installed within 1.8 m (6 ft) of these bathtubs or shower stalls have similar shock hazards as a bathtub or shower stall installed in a bathroom or locker room. These areas often have tile or other conductive or grounded floors, which can present a shock hazard to a person getting out of the shower or bathtub. This requirement for non-dwelling unit bathtubs or shower stalls mirrors that found at 210.8(A)(9) for dwelling unit bathtub or shower stalls, which was added during the 2014 *NEC* revision cycle.

*First Revisions: List Item (6) [SR 7724, PC 854]; List Item (8) [DFR 8124, PI 1429];
Ex: DFR 8128, SR 7724, PI 1984, PI 3891, PC 1720; List Item (11) [DFR 8126, PI 700, PI 4072]; List Item (12) [DFR 8127, PI 324]*

210.8(B)(2)

GFCI Protection for Personnel in Other Than Dwelling Kitchens

210.8(B)(2) GFCI Protection for Kitchens and More

GFCI protection required for all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less installed in areas defined as a "kitchen" and **areas with a sink and permanent provisions for either food preparation or cooking**



Coffee Shop
(no permanent provisions for cooking)



Ice Cream Parlor
(no permanent provisions for cooking)

210.8(B)(2) Ground-Fault Circuit-Interrupter Protection for Personnel, Other Than Dwelling Units, Kitchens

Type of change: Revision

Change at a Glance: Additional language was added to clarify that areas *not defined as a kitchen such as ice cream parlors, coffee shops, smoothie stores, etc.*, with a sink and permanent provisions for either food preparation or cooking have the same potential for shock hazards as a kitchen.

2017 Requirement: GFCI protection was required for all single-phase receptacles rated 150 volts to ground or less, 50 amperes or less and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less installed in any area defined as a “kitchen,” with a kitchen defined as “an area with a sink and permanent provisions for food preparation and cooking.”

2020 Requirement: GFCI protection is now required for all 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less to ground, 50 amperes or less and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less installed in areas defined as a “kitchen” and areas with a sink and permanent provisions for either food preparation or cooking.

CODE LANGUAGE**210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.**

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See NEC for remainder of Code text)

(B) Other Than Dwelling Units. All single-phase 125-volt through 250-volt receptacles supplied by single-phase branch circuits rated 150 volts or less

to ground or less, 50 amperes or less and all receptacles supplied by three-phase receptacles branch circuits rated 150 volts or less to ground or less, 100 amperes or less installed in the following locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection for personnel.

(2) Kitchens or areas with a sink and permanent provisions for either food preparation or cooking

Analysis of Changes: Ground-fault circuit-interrupter (GFCI) protection for personnel at “other than dwelling units” kitchens was first implemented for enforcement in the 2002 *NEC*. With this 2002 *NEC* addition, the word “Kitchens” was added at 210.8(B) (3) as the third area at non-dwelling unit locations requiring GFCI protection for all 125-volt, single-phase, 15- and 20-ampere receptacles joining bathrooms and rooftops. This GFCI rule was different than its similar counterpart requirement for dwelling unit kitchens as it applied to all non-dwelling unit kitchen receptacles (*not just receptacles that served a kitchen countertop*). Part of the substantiation for extending GFCI protection to non-dwelling unit kitchens pertained to an electrocution at a restaurant. A 25-year-old male restaurant manager was cleaning the floor of the kitchen when he came in contact with a refrigerator that had a ground fault and was electrocuted. The victim, who was wearing tennis shoes, put soap and water on the floor and slipped and grabbed the

handle of the commercial refrigerator (which had a ground fault) and the cord did not have a ground prong. The ground fault was apparently caused by excessive wear on the insulation of the conductors (wires) supplying power to the refrigerator compressor. The conductors were exposed and were not protected from abrasion and were not protected by strain relief. If the *Code* had only required the receptacle outlets required the receptacle outlets at non-dwelling unit kitchens that serve kitchen countertops to be GFCI protected, this tragedy would have still occurred. With the substantiation provided, CMP-2 was intentional in requiring ALL non-dwelling unit kitchen 125-volt, single-phase, 15- and 20-ampere receptacles to be GFCI protected.

With the addition of this single word and, at the time, no definition for a “kitchen,” there was wide interpretation as to what constituted a “kitchen” and what did not. For the 2005 *NEC*, “kitchens” was revised at 210.8(B) to “commercial and institutional kitchens” with a description or definition of a “kitchen” added indicating that a kitchen was an “area with a sink and permanent facilities for food preparation and cooking.” With the addition of “commercial and institutional kitchens,” this phrase provided a better overall concept of what this GFCI rule was intended to cover. There are many different designs and configurations of commercial kitchens. Certainly, it is reasonable to conclude that a non-dwelling unit kitchen is an area where there is a sink and provisions for food preparation, sanitation, and cooking. This 2005 *NEC* definition was intended to distinguish commercial and institutional kitchens from those areas that might have a portable cooking appliance or a waitress station where food is kept warm for serving. This definition of a “kitchen” was moved to Article 100 for the 2008 *NEC* so this definition could apply to all kitchens (not just non-dwelling unit kitchens). This definition remained basically the same where a “kitchen” was defined in the 2017 *NEC* as “an area with a sink and permanent provisions for food preparation and cooking.”

For the 2020 *NEC*, the GFCI provisions for 210.8(B)(2) have been expanded to not only kitchens but “areas with a sink and permanent provisions for either food preparation or cooking.” The definition of a “kitchen” remains the same in Article 100 as “an area with a sink and permanent provisions for food preparation and cooking.” The additional added language clarifies that areas (not defined as a kitchen) with a sink and either permanent provisions for cooking or food preparation have the same potential for shock hazards as a kitchen. This would include areas such as ice cream parlors, coffee shops, yogurt or smoothie stores, etc. These areas typically have stainless steel countertop and/or stainless steel appliances but no “permanent provisions for cooking.” These facilities have at least the same potential for shock hazards as a kitchen.

First Revisions: FR 7791, GFR 8129

Public Inputs: PI 3048

210.8(D)

GFCI Protection in Specific Appliances

210.8(D) GFCI Protection for Specific Appliances

New text at new 210.8(D) titled, "Specific Appliances" and the move of the GFCI requirement for dishwashers correlates the requirements found in 422.5(B) (Type and Location for GFCI protection for appliances) and refers to the list of appliances requiring GFCI protection in 422.5(A)



Dishwashers GFCI protection was moved from 210.8(D) to 422.5(A)(7)



Vending machine GFCI protection cannot be factory installed within the appliance

210.8(D) Ground-Fault Circuit-Interrupter Protection for Personnel, Specific Appliances

Type of change: New

Change at a Glance: New List Item (D) correlates the requirements found in 422.5(B) (*Type of GFCI protection for appliances*) and refers to the list of GFCI requirements for appliances in 422.5(A) for continued consistency as the list is modified in future *Code* editions.

2017 Requirement: The majority of GFCI requirements for appliances were found at 422.5 in Article 422 (Appliances). The GFCI requirements for dwelling unit dishwashers (an appliance) was located at 210.8(D), which called for GFCI protection for outlets that supply dishwashers installed in dwelling unit locations.

2020 Requirement: The former GFCI requirements for a dwelling unit dishwasher were moved from 210.8(D) to 422.5(A)(7) (*which now covers all dishwashers*) with the bulk of GFCI requirements for appliances. Modern-day electronically controlled dishwashers have a different failure mode and the potential for an increased risk of electrical shock than their electromechanical ancestors. While the need for GFCI protection could be agreed upon, the location of the requirement was questionable from its inception.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See *NEC for remainder of Code text*)

(D) Specific Appliances. Unless GFCI protec-

tion is provided in accordance with 422.5(B)(3) through (B)(5), the outlets supplying the appliances specified in 422.5(A) shall have GFCI protection in accordance with 422.5(B)(1) or (B)(2).

Where the appliance is a vending machine as specified in 422.5(A)(5) and GFCI protection is not provided in accordance with 422.5(B)(3) or (B)(4), branch circuits supplying vending machines shall have GFCI protection in accordance with 422.5(B)(1) or (B)(2).

Analysis of Changes: During the 2014 *NEC* revision cycle, a new rule was added at 210.8(D) calling for GFCI protection for all outlets that supply dishwashers installed in dwelling units. This included a receptacle outlet or a hard-wired outlet for a dishwasher. Article 210 is titled, “Branch Circuits” and contains rules for receptacle placement. Some would argue that the proper location for a rule dealt with an appliance would be more appropriately covered in Chapter 4 and in particular, Article 422 of the *NEC*. For the 2020 *NEC*, this GFCI rule for dishwashers has been relocated to 422.5(A)(7) for GFCI requirement for appliances. It should be noted that this GFCI requirement that only applied to a dwelling unit dishwasher in the past, now is prevalent for all dishwashers.

The new text at new 210.8(D) titled, “Specific Appliances” and the move of the GFCI requirement for dishwashers correlates the requirements found in 422.5(B) (*Type and Location for GFCI protection for appliances*) and refers to the list of appliances requiring GFCI protection in 422.5(A). This will also provide for continued consistency especially as the list of appliances requiring GFCI protection is modified in future *Code* cycles.

This new requirement attempts to build a bridge for GFCI requirements from 210.8 to 422.5. This new provision at 210.8(D) calls for GFCI protection to be provided for an appliance either as an integral part of the attachment plug, located within the supply cord not more than 300 mm (12 in.) from the attachment plug, or factory installed within the appliance. If those three options are not achievable, then the GFCI protection must be provided by the overcurrent device or a GFCI device installed in the supply circuit such as a GFCI receptacle located at the outlet for the appliance.

Where the appliance is a vending machine and GFCI protection is not provided as an integral part of the attachment plug or located within the supply cord not more than 300 mm (12 in.) from the attachment plug, the branch circuit(s) supplying vending machines is required to have GFCI protection provided by the overcurrent device or a GFCI device installed in the supply circuit. This eliminates the GFCI protection on a vending machine from being factory installed within the vending machine. Ground-fault hazards typically occur with vending machines when the connection method (*typically a supply cord*) is damaged and energizes the metal frame of the vending machine. Locating the GFCI either in the branch circuit, or within 300 mm (12 in.) of, or within

the attachment plug addresses these hazards. Locating the GFCI within the appliance does not remedy that danger.

First Revisions: FR 7689

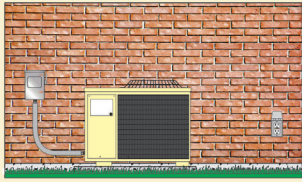

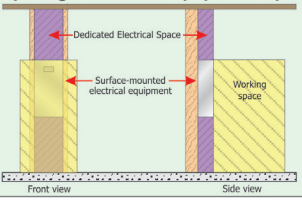
Second Revisions: SR 7737

Public Inputs: PI 2730

Public Comments: PC 2206

210.8(E)

GFCI Protection for Equipment Requiring Servicing

210.8(E) GFCI for Equipment Requiring Servicing	
<p>210.63(A) HVAC and Refrigeration Equipment</p> 	<p>210.63(B)(1) Indoor Service Equipment</p> 
<p>210.63(B)(2) Indoor Equipment Requiring Dedicated Equipment Space</p> 	<p>GFCI protection shall be provided for the receptacles required by 210.63</p> <p>A 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet shall be installed at an accessible location within 7.5 m (25 ft) of the equipment as specified in 210.63(A) and (B)</p>

210.8(E) Ground-Fault Circuit-Interrupter Protection for Personnel, Equipment Requiring Servicing

Type of change: New

Change at a Glance: GFCI protection is now required for the receptacles required by 210.63 for HVAC equipment, indoor service equipment, and indoor equipment requiring dedicated equipment space.

2017 Requirement: Section 210.63 required a 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet to be installed at an accessible location on the same level and within 7.5 m (25 ft) of heating, air-conditioning, and refrigeration equipment. If this required receptacle was located outdoors, GFCI protection was required by 210.8(A)(3) or 210.8(B)(4). The requirements of 210.64 called for at least one 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet located within the same room or area and installed in an accessible location within 7.5 m (25 ft) of non-dwelling unit indoor electrical service equipment. Neither of these provisions demanded GFCI protection for these required receptacles.

2020 Requirement: GFCI protection is now required for all receptacle outlets required by 210.63, which would include a 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet installed at an accessible location on the same level and within 7.5 m (25 ft) of heating, air-conditioning, and refrigeration equipment, indoor service equipment, and indoor equipment requiring dedicated equipment space.

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through ~~(E)~~(F). The ground-fault circuit

interrupter shall be installed in a readily accessible location.

(See NEC for remainder of Code text)

(E) Equipment Requiring Servicing. GFCI protection shall be provided for the receptacles required by 210.63.

Analysis of Changes: In the previous edition of the *Code*, 210.63 called for a 125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet to be installed at an accessible location within 7.5 m (25 ft) of heating, air-conditioning, and refrigeration equipment. This HVAC equipment was typically located outdoors. For the 2020 *NEC*, 210.63 was revised and divided into two list items with the “125-volt, single-phase, 15- or 20-ampere-rated receptacle outlet to be installed at an accessible location within 7.5 m (25 ft)” requirement applying to both list items. List Item (A) is the text from previous 210.63 dealing with HVAC equipment. New 210.63(B)(1) is the previous text from previous 210.64 dealing with indoor service equipment. New 210.63(B)(2) is a new requirement pertaining to indoor equipment requiring dedicated equipment space. If this equipment is located outdoors, the requirements of 210.8(A)(3) and 210.8(B)(4) would drive GFCI protection for this required receptacle. In previous editions of the *Code*, there was no GFCI requirement for the required receptacle when it was installed indoors.

For the 2020 *NEC*, a new 210.8(E) titled, “Equipment Requiring Servicing” will require GFCI protection for all the receptacles required by 210.63 (*indoors and outdoors*). The receptacles required by 210.63 are typically required for the expressed purpose of providing maintenance workers with the necessary access to power for the use of portable tools on the described equipment. Additionally, these receptacles can be located up to 7.5 m (25 ft) away from the equipment, so the use of an extension cord is not uncommon, which can increase the likelihood of a shock hazard.

It is not uncommon for the *NEC* to require GFCI protection for maintenance or service personnel while working on electrical equipment. An example of this can be found at 511.12 (Commercial Garages) and 513.12 (Aircraft Hangars). Both locations require GFCI protection as provided by 210.8(B). Maintenance and service personnel can often be found in commercial garages and aircraft hangers working with electrical diagnostic equipment, electrical hand tools, or portable lighting equipment increasing the need for GFCI protection. The same can be said of the indoor electrical service equipment areas and indoor equipment areas requiring dedicated equipment space.

*Second Revisions: SR 7587**Public Inputs: PI 1397**Public Comments: PC 681*

210.8(F)

GFCI Protection in Outdoor Outlets



210.8(F) Ground-Fault Circuit-Interrupter Protection for Personnel, Outdoor Outlets

Type of change: New

Change at a Glance: GFCI protection is now required on dwelling unit outdoor outlets supplied by single-phase branch circuit rated 150 volts or less to ground, and 50 amperes or less (including 240-volt AC units).

2017 Requirement: GFCI protection was required for all 125-volt, single-phase, 15- and 20-ampere receptacle outlets installed outdoors at dwelling units.

2020 Requirement: GFCI protection is required for all 125-volt through 250-volt receptacle outlets supplied by single-phase branch circuits rated 150 volts or less to ground installed in outdoor locations. Additionally, all outdoor outlets for dwelling units that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less will now require GFCI protection (*with exceptions*). A branch circuit dedicated to deicing and snow-melting equipment or pipeline and vessel heating equipment is not required to be GFCI protected under very specific conditions as this receptacle outlet is exempt from GFCI protection by the requirements of 426.28 (*fixed outdoor electric deicing and snow-melting equipment*.) and 427.22 (*electric heat tracing and heating panels*). GFCI protection is also exempted for outdoor lighting outlets other than those covered in 210.8(C) (*crawl space lighting outlets*).

CODE LANGUAGE

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Ground-fault circuit-interrupter protection for personnel shall be provided as required in 210.8(A) through (E)(F). The ground-fault circuit interrupter shall be installed in a readily accessible location.

(See NEC for remainder of Code text)

(F) Outdoor Outlets. All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel.

Exception: *Ground-fault circuit-interrupter protection shall not be required on lighting outlets other than those covered in 210.8(C).*

Analysis of Changes: GFCI protection for outdoor receptacle outlets at dwelling units has been a part of the *Code* since the 1971 edition of the *NEC* [see 210-22(d) of the 1971 *NEC*]. For the 2020 *NEC*, all outdoor outlets for dwelling units (with exceptions) that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less will be required to be GFCI protected. A branch circuit dedicated to deicing and snow-melting equipment is exempt for this GFCI requirement to avoid a conflict with requirements at 426.28 (*fixed outdoor electric deicing and snow-melting equipment.*) and 427.22 (*electric heat tracing and heating panels*). GFCI protection is also exempted for outdoor lighting outlets other than those covered in 210.8(C) (*crawl space lighting outlets*).

The most dramatic effect this new requirement will have is requiring GFCI protection for dwelling unit outdoor-installed heat pumps and air-conditioning units. With this requirement applying to “all outdoor outlets,” this would include outdoor hard-wired AC units. This new section requiring GFCI protection on outdoor outlets for dwellings is related to the submitted substantiation detailing a couple of facilities associated with outdoor outlet connected equipment such as an outdoor HVAC condensing unit.

One could argue that GFCI protection for outdoor outlets serving loads such as HVAC equipment or a heat pump is not unprecedented or an exceptional load that would create an incompatibility load concern. GFCI protection for commercial kitchen 125-volt, single-phase, 15- and 20-ampere receptacle outlet applications was added to the 2008 edition of the *NEC*. This resulted in compressor-based refrigeration equipment and variable speed drives for motors on mixers and other commercial kitchen appliances requiring GFCI protection. That same GFCI protection was expanded to such receptacles as 250-volt, single-phase, 50-ampere rated receptacles for the previous edition of the *Code*. This expansion in non-dwelling unit applications was even expanded to three-phase receptacles rated up to 100-amperes. Some would argue that HVAC equipment is typically located in high-humidity, wet locations that will lend itself to nuisance tripping of GFCI devices for this new application. GFCI protection for receptacles that supply swimming pool pump motors rated 15- or 20-amperes, 120-volt through 240-volt, single-phase was introduced into the *Code* during the 2002 *NEC* revision cycle. These areas are typically high-humidity areas and even wet location applications. This 17-year-old provision for GFCI protection in these aquatic applications has stood the test of time

Exhibit G: Minutes of Oct. 8, 2019, Board of Electricity Meeting

Meeting Minutes: Board of Electricity

Date: October 8, 2019
Time: 9:00 a.m.
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road North, St. Paul, MN 55155

Members Present:

David Curtis
Alfreda Daniels
Cole Funseth
Derrick Givens
Michael Hanson
Duane Hendricks – Vice-Chair
Chad Kurdi
Peter Lindahl – Secretary
Scott Novotny
Daniel Westberg – Chair
John Williamson
Weston Wilson

Members Absent:

None

DLI Staff & Visitors:

Jeff Lebowski (DLI)
Lyndy Logan (DLI)
Neil Furman (DLI)
Dean Hunter (DLI)
Marty Kumm (DLI)
Steve Dudley (DLI)
Todd Green (DLI)
Adam Hanson (ABC)
Gary Thaden (NECA)
Ray Zeran (IBEW Local 132)
Michelle Dreier (Electrical Assn.)
Jerry Daniel (TX Dept of Licensing) – Tele
Yvonne Feinleib (TX Dept of Licensing) – Tele
Derrick Atkins (Mpls JATC)
Craig Mulder (State of WI)
Gary Krause (State of WI)
Greg Mueller (State of WI)

1. Call to Order

The meeting was called to order at 9:01 a.m. by Chair Westberg. Roll call was taken by Secretary Hendricks and a quorum was declared with 12 of 12 voting members present in person.

2. Approval of Meeting Agenda

A motion was made by Kurdi, seconded by Hanson, to approve the agenda as presented. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

3. Approval of Previous Meeting Minutes

A motion was made by Hendricks, seconded by Curtis, to approve the July 9, 2019, meeting minutes as presented. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

4. Regular Business

- a. **Expense Approval** – reviewed and approved the per diem and expenses.
- b. **Enforcement & licensing update** – A handout was provided to members with the number of electrical enforcement actions/orders.

c. **Inspections update**

Williamson demonstrated the department's new web-based permitting software, iMS, that replaced eTrakit on Oct. 7, 2019, for obtaining electrical permits.

5. **Special Business**

a. **Reciprocity**

Dudley referred to the Electrical License Reciprocity Comparison Chart for Minnesota, Wisconsin, and Texas – **see Attachment A.**

TEXAS:

Jerry Daniel, Texas Department of Licensing and Regulation, addressed the Board via teleconference. Daniel said Texas is part of the NERA group and believes a reciprocity agreement with Minnesota would help all electricians. Three years ago, when in Duluth for the NERA meeting, he spoke with several representatives that wanted a reciprocity agreement [between MN and TX] and therefore they've asked for this.

Lindahl asked Daniel how many electricians there are in Texas and Daniel said approximately 150,000 licensed electricians, and must all have, at a minimum, an apprentice license. Hendricks asked how long licensing for apprentices and journey workers have been in place and Daniel said this was passed in 2003 with an effective date of September 1, 2004. Hendricks asked if there were any licensing requirements in place prior to 2004 and Daniel said not state-wide, but at least 80-90% of the state were governed by municipality licenses. Hendricks asked if those doing electrical work prior to 2004 became licensed by the state and Daniel said yes, those with a municipal electrical license received a state license of equal value; however, reciprocity they are seeking with Minnesota would not include these individuals, only individuals that pass the State of Texas's examination. Lindahl asked if Texas municipalities had different licensing exams prior to 2004 and Daniel said yes; however, municipality exams required 8,000 hours to become a journey worker plus a passing exam score. Lindahl asked if each municipality had their own exam and Daniel said yes, but that now all state requirements must be met. Daniel explained that those with municipality licenses prior to 2004 were grandfathered in and did not have to take the state's exam. He further explained that these individuals would not be included in a reciprocity agreement [with Minnesota]. Lindahl asked how these individuals would be differentiated from those that passed Texas's exam and Daniel said their system separates those who took the exam and those grandfathered in. Texas would collaborate with NERA to approve reciprocity for only those individuals that meet state requirements to perform electrical work in Minnesota who would be able to perform electrical work through a reciprocity agreement. Lindahl asked if those that passed Texas's exam would receive reciprocity to perform electrical work in Minnesota automatically and Daniel said no, only if the 8,000-hour requirement of on the job training were completed and the state's exam had a passing score – those grandfathered in would not be eligible. Kurdi asked which version of the NEC has been adopted by Texas and Daniel replied 2017 and Texas will be adopting the 2020 NEC in 2020. Lindahl asked if Texas inspectors are exclusively electrical inspectors or if other types of inspections are performed and Daniel said

absolutely, they are for the state of Texas; however, some municipalities have combination inspectors. Novotny asked Daniel how many inspectors the state of Texas has, and Daniel said currently they have two – they mainly handle unincorporated areas. Inspections in cities are handled by municipal inspectors. Larger cities such as Houston (37 inspectors), Austin (21 inspectors), San Antonio, and Dallas (30 inspectors), employ inspectors that were previously licensed electricians. Hendricks asked Daniel if Texas has measured the success of the pass rates of their exams (since 2004) and if work/inspections [performed] met NEC criteria. Daniel said he wasn't sure what Hendricks was asking but said that yes, [all inspections] meet NEC criteria. Texas developed and write their own exams that are a product of Texas. PSI ensures exams are psychometrically sound, dependable in a court of law, and are the property of Texas. Current exams are written on the NEC and will be updated to NEC 2020. Daniel said the journey worker pass/fail rate is approximately 40%. There is a lot of work in Texas. He is not concerned that there will be a lot of individuals from Texas working in Minnesota – Texas has a lot of work with a 21% shortage and he believes that both states could benefit from a reciprocity agreement.

Lebowski asked Chair Westberg if the Board wanted to make a motion on reciprocity with Texas now or wait and do both Texas and Wisconsin at one time. Westberg and other members agreed to make a one motion that would include both states.

WISCONSIN:

Garry Krause, Bureau Director, Department of Safety and Professional Services, State of Wisconsin, addressed the Board. Krause said he was formerly licensed as an electrical journey worker in Minnesota; therefore, he is very familiar with Minnesota's electrical licensing requirements. Krause introduced Greg Mueller, one of the state's inspectors. Krause said Wisconsin has been working through several legislative activities, such as, mandatory statewide commercial inspection effective on 1/1/2020. The state already requires mandatory residential inspection. There are approximately 6,000 licensed journey workers and 6,000 master electricians licensed in Wisconsin. Most individuals fail the journey worker exam the first time it is taken. There is a general, overall pass rate of 25-30%. Wisconsin is currently using the 2017 code, and for one- and two-family dwellings they use the 2011; however, effective 1/1/2020 they will be using the 2017. Licensed electrical inspectors must take an exam to receive their credentials. They are currently processing 200 municipalities for approval (must pass the state's new ordinance). There are two parts municipalities must pass – must adopt the state's ordinance (a copy was provided in its entirety to the BOE) and they must submit their credentialled licensed individuals. Therefore, the state knows exactly who the municipality inspectors are and only credentialled individuals are approved. They have a full-time staff member committed to the integrity of this process. There is a shortage around the country of workers and contractors, as you are all aware, as this was discussed at the last NERA meeting. Krause was formerly a dean of a technical college and was also an apprenticeship coordinator for both segments – the ABC and the IBEW. There is a long border of communities where people are going back and forth with contractors and there is a need for staffing across the country. Recently Wisconsin

workers went to Nebraska and this created a lot of turmoil for companies when workers must be re-licensed in every state. Wisconsin is a bordering state [to Minnesota], laws are very similar, almost identical, as shown by the comparison chart (Attachment A). He emphasized how important this opportunity would be for employers and employees. This would be a great opportunity and believes that with the adoption of Wisconsin's new laws that Wisconsin and Minnesota are almost identical. Their system is designed to address most of the questions asked earlier by the Board – they are on the same page [as Minnesota] and this would be good for both states.

Wilson asked how many journey workers were licensed in Wisconsin and Kraus said approximately 6,000, all have taken the examination. No journey workers have been grandfathered in. Wilson asked who would be grandfathered in and Kraus said only those that hold a Registered Master Electrician license (must have been born before January 1, 1956 and have at least 15 years of experience). All licensed journey workers have passed the state's examination.

Lindahl asked if journeyworker electricians licensed in the 1980's would have been required to take the state's exam and Mueller said that the state began administering examinations in 1986. Mueller further explain that individuals licensed prior to 1986 had to take the state's test in order to receive a journey worker license. Prior to this, from 1986 to 2014, there was an optional exam, but it was administered by the state. Some municipalities had their own licensing but none of these were grandfathered. There was no grandfathering of any type of license. Krause said their exam questions are created in-house by content experts, next the exam goes to credentialing. All individuals, when in the same room, receive a different test that is randomly generated from a pool of questions. His staff doesn't have access to the questions. They are kept in a locked storage system. There is great integrity in their testing process. Exam questions can't be accessed, they are auto-generated and auto-coded.

Lindahl asked if the test administered in 1986 is the same test used to today or was it changed. Mueller doesn't know how many questions, or time allotted, was included in the test in 1986; however, the exam is updated every time the NEC code cycles are updated. At least since the mid 1990's the number of questions and time allotted have been the same with only updates to a new code. Lindahl said the critical point is allowing someone to get a license as a formality to cover the status of licensed or not licensed. Krause said they haven't made the test easier, there is a high failure rate. No exam can leave the room and there are numerous complaints that their exam is too hard. Hendricks said there is a 2017 test,

Lebowski said the Board of Electricity makes approval or disapproval of reciprocity agreements and, if approved, the DLI Commissioner *may* enter into an agreement with that state.

A motion was made by Kurdi, seconded by Hanson, to enter into a Reciprocal Agreement with Texas. The majority vote ruled with 7 votes in favor, 5 opposed, of the motion; the motion carried.

A motion was made by Lindahl, seconded by Wilson, to deny entering into a Reciprocal Agreement with Wisconsin. The vote was 7 to deny, 5 to accept the motion; the motion was denied and did not carry.

A motion was made by Kurdi, seconded by Hanson, to approve entering into a Reciprocal Agreement with Wisconsin. The majority vote ruled with 7 votes in favor, 5 opposed, of the motion; the motion carried.

b. NEC Adoption

The Rules Subcommittee provided the full Board with their NEC Adoption report and recommended that the Board adopt the 2020 NEC as-is without Minnesota specific amendments. Lindahl said he is for accepting the 2020 NEC code as is. Williamson said the Board needs a motion.

A motion was made by Givens, seconded by Novotny, to accept the NEC Committee's recommendation to go forward without amendments. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

A motion was made by Williamson, seconded by Givens, to authorize and direct the Board Chair to pursue adoption of the 2020 NEC without Minnesota amendments, including the publication of the Board's Dual Notice of Intent to Adopt Rules in the *State Register*, providing Additional Notice to those who have registered their names with the Board for that purpose, acting as the Board's representative at any possible Hearing on the rules, signing any required filings or final Order for Adoption of the rules, and doing anything else in the rulemaking process necessary to ensure the successful adoption of the 2020 NEC in the State of Minnesota. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

A motion was made by Williamson, seconded by Givens, to establish an effective date of July 1, 2020, because the Board finds that an earlier effective date than that provided for in Minn. Stat. 326B.13, subd. 8, is necessary to protect the public's health and safety after considering among other things, training time needed for enforcement and compliance with the new Code, the need for uniformity with past practice and among the several states participating in reciprocity, and general business continuity. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

6. Committee Reports

Construction Codes Advisory Council (CCAC) – met on July 18, 2019. The next meeting will be at 9:30 a.m. on Oct. 21, 2019.

Kurdi asked if it included the Building Code and Lebowski said yes, approximately 12 chapters that are considered the State Building Code. Williamson chapter 1513 is the Electrical Code and is part of the Building Code, it doesn't stand alone.

7. Complaints

No complaints brought forth

8. Open Forum

Nothing

9. Board Discussion

Westberg thanked the NEC Committee for their work.

Dudley summarized the NERA meeting he attended on August 13, 2019, in Utah – see **Attachment B.**

10. Announcements

Next regularly scheduled meetings – 9:00 a.m. Minnesota Room, DLI

a. January 14, 2020

11. Adjournment

A motion was made by Givens, seconded by Daniels, to adjourn the meeting at 10:15 a.m. The vote was unanimous with 12 votes in favor of the motion; the motion carried.

Respectfully Submitted,

Peter Lindahl

Peter Lindahl

Secretary

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

Attachment A

JOURNEYWORKER								
Sort	Subject	Reciprocity Similarities	Minnesota		Wisconsin		Texas	
				Citation		Citation		Citation
1	Statewide licensing	MN Statute 326B.33 Subd. 20	Yes	MN Statute 326B.33	Yes.	WI statute 101.862, with exceptions.	Yes	Texas Occupations Code 51.4041(c) allows reciprocity agreements (subject to approval by the governor)
2	Electrical inspections covered statewide	NERA	Yes. State and municipal	MN Statute 326B.36	Yes. State and municipal.	New one and two family dwellings in SPS 320.10. Farms, public buildings places of employment, etc. in SPS 316.012 and 316.013. Exception for existing industrial and manufacturing facilities in state statute 101.875(2).	Inspections are not mandatory by law, but are required by city and county ordinance.	
3	State administered exam	MN Rule 3800.3520, MN Statute 326B.33 Subd. 20, & NERA	Yes, Minnesota writes and proctors our own exams	MN Rule 3800.3520, MN Statute 326B.33 Subd. 18	Yes. Wisconsin writes and administers its own exams.	SPS 305.09	Yes, Texas creates its own exam, which is administered by a third-party vendor.	Texas Occupations Code 1305.162
4	Number of questions	MN Statute 326B.33 Subd. 20, & NERA	80	Policy	100	Set by policy and not an Administrative rule.	80	Candidate information bulletin located at https://urlz.com/UzdVt
5	Time allowed	MN Statute 326B.33 Subd. 20, & NERA	5.5 hours	Policy	4 hours	Set by policy and not an Administrative rule.	4 hours	Candidate information bulletin located at https://urlz.com/UzdVt
6	Open book/memory	MN Statute 326B.33 Subd. 20, & NERA	Open book	Policy	Open book	SPS 305.09(4)(b) Set by policy and not an Administrative rule.	Open book	Candidate information bulletin located at https://urlz.com/UzdVt
7	Minimum score	MN Statute 326B.33 Subd. 20, & NERA	70%	Policy	70%	SPS 305.09(6)(a)	70%	16 Texas Administrative Code 73.21 ("An individual applicant must achieve a passing score on an examination approved by the executive director of the Texas Department of Licensing and Regulation.")
8	Qualifying experience to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	All hours can be obtained in new installation of light, heat, power in any occupancy type	MN Rule 3800.3520, MN Statute 326B.33	Experience in installing, maintaining, or repairing electrical wiring. Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring	WI statute 101.87(1)	Hours may be gained if under the supervision of a master electrician; must be performing "electrical work" as defined by statute and rule	Texas Occupations Code 1305.002(11); Texas Occupations Code 1305.155(1); 16 Texas Administrative Code 73.10(21)
9	Qualifying experience to qualify to examine (years/hours)	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	8000/4 years OJT	MN Rule 3800.3520, MN Statute 326B.33	8000 hrs. and 4 years OJT or Completion of a construction electrician apprenticeship program in installing, repairing, and maintaining electrical wiring that has a duration of at least 3 years and that is approved by the U.S. department of labor or by the department of workforce development	WI statute 101.87(1)	8,000 hours of on-the-job training under the supervision of a master electrician	Texas Occupations Code 1305.155

**Electrical License Reciprocity Comparison
Minnesota/Wisconsin/Texas**

Attachment A

JOURNEYWORKER								
Sort	Subject	Reciprocity Similarities	Minnesota		Wisconsin		Texas	
				Citation		Citation		Citation
10	Hours granted for the successful completion of a 2 year technical college electrical course	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520, NM statute 326B.33 Subd. 2	2000	MN Rule 3800.3520, MN Statute 326B.33	2000	WI statute 101.87(2m)	n/a	n/a
11	Out of state experience accepted	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	Yes, as long as it is comparable to experience gained in Minnesota	MN Rule 3800.3520	Yes.	WI statute 101.87(1)	Yes, as long as it is comparable to experience gained in Texas	Texas Occupations Code 1305.164; Texas Occupations Code 51.4041(b)
12	Minimum education requirements to qualify to examine	MN Statute 326B.33 Subd. 20, & NERA, & MN Rule 3800.3520	2 hours CE per year for Minnesota registered unlicensed electricians. No apprenticeship education required. No education requirements for individuals who gained experience in other states	MN Rule 3800.3520, MN Statute 326B.33	None.		No education or apprenticeship is required to take the examination; however, electrical apprentices are required to take 12 hours per year of CE.	16 Texas Administrative Code 73.25
13	Military experience accepted	MN Rule 3800.3520	Yes. Must provide DD214 and MOS must be for electrical	MN Rule 3800.3520	Yes, if the experience is in installing, maintaining, or repairing electrical wiring.	WI statute 101.87(1)	Yes. Must provide DD214 and MOS must be for electrical work.	Texas Occupations Code 1305.1645
14	Duration of journeyworker license	Policy	2 years	Policy	4 years	SPS 305.06	1 year	16 Texas Administrative Code 73.22
15	Continuing education content required to renew journeyworker license	MN Rule 3800.3602	12 hours code 4 hours statute, rules, technical	MN Rule 3800.3602	Content not specified, but has to relate to the skills and knowledge of the license category. Classes must be state approved.	SPS 305.08(1)(a) and (d)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
16	Continuing education hours required to renew journeyworker license	MN Rule 3800.3602	16 hours prior to renewal - 2 year cycle	MN Rule 3800.3602	24 hours. Classes must be state approved.	SPS 305.44(6)(b) and 305.08(1)(a)	12 hours annually - 4 hours NEC, 4 hours statute and rules, and 4 hours safety (NFPA 70E)	16 Texas Administrative Code 73.25
17	NERA Member		Yes		Yes		Yes	
18	Reciprocal States		Alaska, Arkansas, Colorado, Iowa, Montana, Nebraska, North Dakota, South Dakota, Wyoming		New Hampshire, Iowa		Alaska (pending), Arkansas, Idaho, Iowa (pending) Louisiana (master only), Montana, Nebraska, New Mexico, North Carolina, Oklahoma (pending), South Dakota, Wyoming	
19	Code Cycle	MN Rule 1315.0200	2017	MN Rule 1315.0200	1 and 2 family dwellings are on 2011 until January 1, 2020 when they go to 2017. Everything else is on 2017		2017	Texas Occupations Code 1305.101; 16 Texas Administrative Code 73.100

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

Meeting was called to order on August 13, 2019 at 8:00 am. There were representatives from 16 of the 18 NERA states present. Representatives from North Dakota and New Mexico were not present. James Schmidt of North Dakota had a conflict in his schedule and was unable to attend but sent an update on his state that I have added in this report. Kelly Hunt is no longer the representative for New Mexico, and they have not replaced him yet. NERA is going to reach out to New Mexico. Brad Stevens was the chair.

There were three new NERA representatives this year:

- James McClain – Colorado
- Garry Krause – Wisconsin
- Jane Allred - Wyoming

Tim McClintock (NFPA) presented on the 2020 changes to the NEC

- New articles
- Space about electrical equipment
- GFCI expansion
- Load calculations
- Six disconnect rule
- Emergency disconnect requirements for one- and two-family dwellings
- Surge protection

Round table discussions on:

How to standardize CE requirements:

- One CE provider for all NERA states
 - This would be met with opposition from all the independent providers
- If a state is willing to accept a reciprocal license, why can't we accept reciprocal CE credits?
 - The differences in the states statutes and rules regarding what qualify's for CE credit prevents this

How can NERA help states reciprocate licenses in emergency situations?

- Prompt response sent to Nebraska
- Arkansas has issued temp license
- Iowa has issued temp apprentice license

Apprenticeship training courses

- Most states require 576 hours of education to qualify to examine
- Many states follow the federal department of labor (DOL) requirements

Professional proctors for exams and a standard NERA journeyman/journeyworker exam

- PSI, Prove, ICC
 - Prove will allow the state they are proctoring for to own the exams

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- NERA exam bank of questions
 - Average pass rate – 42% to 48%
 - This would allow for states to proctor their own exams, or utilize other proctors
 - Who will own the questions?
 - Who will oversee creating of the bank?
 - All NERA states to submit questions
 - What will be in the bank of questions?
 - Code and theory
 - Statute's, Rule's, and amendments would be up to each state to add them to their exam
- Bylaws
 - Who is allowed to be a voting member of NERA?
 - A letter from the state must be sent to the secretary stating who the voting member is
 - Alternate is by proxy
 - Joe (Oklahoma) proposed to change the NERA chair from a one-year term to a two-year term to make sure the hosting state is no longer the chair due to the extra work load of both hosting and being the chair. This passed.
- Seven NERA states conduct background checks prior to issuing a license. They will not issue a license to anyone with a felony

Alaska

- 2,087 licenses issued
- 682 trainees
- New reciprocal agreement with Iowa, and working on becoming reciprocal with Texas
- Number of issued licenses has declined
- Work is slowing
- No major changes, but licensing is being scrutinized by legislation.

Arkansas

- Solar is strong
- Solar is exempt on farms
- No major changes
- All licenses were evaluated by legislation with no changes. There is a sunset clause of three years at which time all licenses will be re-evaluated. There were no changes to licensing because they are a member of NERA and already have reciprocity
- 4000 hours experience on large commercial and industrial projects in order to qualify to examine

Colorado

- 8758 Journeyworker

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- 5000 master
- 886 Residential
- 12000 Helpers
- 3896 Contractors
- Solar licensing requirements:
 - Must be NABCEP certified for the DC side
 - Licensed electrical contractor required for the AC side

Idaho

- New Governor asked for each agency to provide information to prove why they are needed
- All proposed rule changes did not pass. Working under pending emergency rules
- Rule making process according to the Governor is for every new rule added, they must remove two rules.
- New provisional Journeyworker license. They will issue a provisional license to anyone who is licensed as a journeyworker in any other state. This license is good for one year.
- Removed the education requirement in order to qualify to examine
 - 8000 hours with 576 education hours to qualify
 - 16000 hours without education
 - 24 hours of CE required if not in an apprenticeship program with 576 hours of education
- Ratio can be adjusted according to the amount of education of the apprentice
- Looking at creating all new exams due to the high number of contested questions
- Looking at reciprocity with all state licenses, without a reciprocal agreement

Iowa

- Things have been quiet
- Will issue a license to individuals with felonies that did not harm others
- Preapproval by the Board is required to be allowed to start a DOL apprentice program
- Looking at raising the ratio for licensed to unlicensed individuals

Maine

- No education required for a helper. Background checks required
- A helper can stay a helper for as long as they wish
- 576 hours of education and 8000 hours of experience (in any category) required to qualify to examine
- Correspondence courses are allowed
- 15 hours of CE required prior to renewal
- Language change in their statute states: comparable experience or training that is acceptable to the Board. This will allow individuals to qualify to examine easier.
- Looking at adjusting solar fees
- Looking into licensing changes for the racking on large scale solar

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- Trying to become reciprocal with more states
- Legislation pushing for less regulation

Montana

- Adoption of language change for reciprocity from “may reciprocate” to “shall reciprocate with states that are substantially equivalent”
 - Legislation looked closely at licensing, and since Montana was a member of NERA, they only changed the wording from may to shall.
- Five organizations over the past few years
- Jason reached out to Washington state in order to attempt to have them join NERA. Washington has not responded.
- Failed exam
 - First time they can reapply
 - Second time they must wait six months
 - Third time they must go back for more education

Oklahoma

- 1-3 ratio was implemented
- New statute states, an electrical contractors license can be issued if the individual has taken an equivalent exam whether they are reciprocal with that state or not.
- 16000 registered and licensed individuals
- 4000 hours experience on large commercial and industrial projects in order to qualify to examine

Nebraska

- Legislation is looking into reciprocity with every state
- Legislation is attempting to reduce licensing by removing background checks
- The restricted journeyworker license, anyone with a state journeyworker license will qualify to examine. The restricted license is nonreciprocal
- Irrigation license may be re-instated
- No license required for agricultural work

New Hampshire

- 63% of all licensee's are over 50 years old, 1/3 of them are over 60
- 1800 apprentices
- License is not required for technology circuits or systems
- 1-year credit allowed for an approved high school program. This 1 year is towards the required education component
- NERA membership has helped to keep legislation from forcing more reciprocity
- The NEC cannot be adopted until it has been in publication for at least two years

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- If an apprentice fails the exam ten times, they are required to repeat the course

North Dakota

- Was not in attendance but sent an update.
- Creates and proctors their own exams
- Looking for a program to replace LXR
- Added power limited technicians license
- Tentative 2020 NEC adoption-April 1, 2020

South Dakota

- Introduced listing and labeling requirements for industrial machinery. They used Minnesota Rule 3801.3620 as a guide
- Legislation has expanded their Board to oversee licensing
- No big changes

Texas

- Petition to remove the 2000 hour per year cap but will keep the 4-year requirement for experience hours to qualify to examine. If someone submits over 2500 hours in one year will trigger an investigation
- Over 5000 have taken the journeyworkers exam last year
- 18%-20% pass rate for the master
- An individual can re-examine until they pass
- Working with Arizona to help implement state licensing in Arizona
- Background checks required
- Fines for unlicensed electrical work can be as high as \$5000 per day

Utah

- Follow the NEC for commercial work, and the IRC for residential
- 1-3 ratio on residential. 1-1 ratio on commercial and industrial, but may change to 1-2.
- 2000 hour cap per year is under scrutiny
- 10% of all licenses per year must be reviewed
- Eliminating the categories from experience hours required
- Practical, hands on is required on the exam

Wisconsin

- January 2020, mandatory commercial inspections increase
- Looking for more inspectors
- Municipalities must adopt statutes in their entirety
- No Board
- Many new solar sites

NERA 2019 Midvale Utah

(National Electrical Reciprocal Alliance)

- Implementing more training
- Use eSLA to track licensing
- Looking at a possible license fee reduction
- Discussion on adopting the 2020 NEC. Looking into rapid adoption
- Working to reciprocate with Minnesota and Texas

Wyoming

- Licensing and permitting is all electronic
- Plan review required for solar and wind
- 8 state inspectors
- Permits are required for electrical work, but only random inspections are required
- Work has increased by 5% and is projected to increase to 12%

Exhibit H: Comparison Outline of Recent Building Code Rulemaking

Comparison Outline of Recent Building Code Rulemaking

Prepared By: Nicholas Erickson
 Director of Research and Regulatory Affairs
 Housing First Minnesota

	Electrical Code	Plumbing Code	Building Code Administration	Residential Building Code	Residential Energy Code
Rulemaking Authority	Minnesota Board of Electricity	Minnesota Plumbing Board	Commissioner, Dept. of Labor and Industry	Commissioner, Dept. of Labor and Industry	Commissioner, Dept. of Labor and Industry
Model Code (Publishers)	National Electrical Code (National Fire Protection Association)	Uniform Plumbing Code (International Association of Plumbing and Mechanical Officials)	International Building Code, Administrative Portions (International Code Council)	International Residential Code (International Code Council)	International Energy Conservation Code, Residential Portion (International Code Council)
Edition Considered	2020	2018	2018	2018	2018
Model Code Certification or Publication Date	Aug. 26, 2019	January 2018	Aug. 31, 2017	Aug. 31, 2017	Aug. 31, 2017
Technical Review Timeframe	Sept. 12-Oct. 8, 2019	Nov. 21, 2017-June 17, 2019	January 26 – March 16, 2018	January 24 – March 23, 2018	January 19 – March 28, 2018
Technical Review Meetings	2	16	4	5	6
Code Adopted / Approved	Oct. 8, 2019	March 16, 2020*	Sept. 30, 2019	Dec. 3, 2019	Rulemaking Has Not Opened ^
Days Between Final Technical Review and Adoption	NONE (Concurrent Meetings, Oct. 8, 2019)	273 Days	563 Days	620 Days	Rulemaking Has Not Opened ^
Time Elapsed Between Code Certification and Adoption	44 Days	805 Days	760 Days	824 Days	Rulemaking Not Yet Open ^

*Plumbing Code initially approved on March 16, 2020 and was reapproved in July 2020 after inconsistent terminology and language were discovered. The initial March date has been used in calculations.

^A decision to open rulemaking on the Residential Energy Code has not yet been reached.

Exhibits From Housing First Minnesota Comments Re: Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-4632

OAH Docket No. 82-9001-36673

The Board of Electricity fails to undertake the rigorous technical review seen in every other building and construction code adoption process in the State of Minnesota. As noted above, the Plumbing Board has been working on the adoption of the latest plumbing code for two years. The state's building codes, save for the residential energy code, underwent a three-month technical review, followed by nearly two years process before publishing, adoption and final implementation. This effort was preceded by months of preparatory work behind the scenes by the expert technical staff. The Department of Health's lead paint and remodeling rules have been four years in the making, with no conclusive date anticipated.

These stand in stark comparison to the Board of Electricity, which took less than two months from the publishing of the proposed 2020 National Electric Code to the action of voting to adopt without amendment.

As noted in my oral comments during the Aug. 19 hearing, all interested parties understood what the outcome of the code adoption process would be even before it even began. In fact, at the board's July 9, 2019 meeting, the board considered a motion that would have adopted the 2020 NEC without amendments and without stakeholder feedback even before the 2020 National Electric Code was considered final, published or approved for adoption.

The Board appears to have been more concerned with hitting a July 1, 2020, effective date than a thorough technical review. As noted in the minutes from the Oct. 8, 2019, board meeting, a July 1 adoption was apparently "necessary" for consistency with past practices (i.e. the customary July 1 effective date). From the Oct. 8, 2019 meeting minutes:

"A motion was made by Williamson, seconded by Givens, to establish an effective date of July 1, 2020, because the Board finds that an earlier effective date than that provided for in Minn. Stat. 326B.13, subd. 8, is necessary to protect the public's health and safety after considering among other things, training time needed for enforcement and compliance with the new Code, **the need for uniformity with past practice** and among the several states participating in reciprocity, and general business continuity. The vote was unanimous with 12 votes in favor of the motion; the motion carried."

It should be noted that during the Technical Review Committee meeting held only moments before the adoption of the code, the Technical Review Committee moved forward with the code despite a member raising legitimate concerns of safety and effectiveness. From the NEC Adoption Committee Minutes on Oct. 8, 2019 (emphasis added):

"Kurdi said he has concerns with nuisance tripping. The challenge is when the equipment is hard-wired, would the leakage-current threshold be low enough to allow the GFCI to continue to operate – specifically air conditioning units. **He can see this becoming a hazard in the future because homeowners will take it upon themselves to remove the GFCI breaker. However, he clarified that he didn't feel the code needed to be amended and that this could be reviewed during the next 2023 NEC code cycle, if necessary.** Lebowski reminded the Committee that the Board could adopt the 2020 NEC code as is and do rulemaking afterwards if there were issues that needed to be addressed. In addition, he added that the Board could also address any unintended issues by opening emergency rulemaking to fix any code issues and that the Board also has interpretive authority to fine-tune the code on a case-by-case basis, if necessary. Therefore, the Board would not have to wait until the next code cycle to address any issues with adopting the 2020 NEC without Minnesota Amendments."

As the Board does not by practice accept amendments, the fact that a member would note this issue raises serious concerns to the thoroughness of any technical review. The Board and the NEC Adoption Committee at this moment had the opportunity and reason to slow down the rulemaking process due to a potential hazard issue, but it chose not to. This decision alone is problematic, and it is compounded by the board's simultaneous final technical review on Oct. 8 and the vote to adopt without amendment. This sequencing fails to allow ample time for public input on the proposed rules.

Further, the minutes of the Jan. 14, 2020 meeting of the suggest that this isn't the only instance of the Board of Electricity muddying its obligations on rulemaking. The board's counsel highlighted the need to follow a different practice than it had previously. From the Jan. 14, 2020 meeting minutes:

“Lebowski said there are things that should be done differently this time – the Board needs to discuss costs. During current rulemaking, the Board reviewed the updated NEC thoroughly and five areas of concern were identified in the SONAR that would increase costs, all related to GFCI, emergency shutoff, and surge protection. A cost savings for agricultural buildings was also identified in the SONAR. The impact on agriculture was not addressed during previous rulemaking.”

Finally, I want to address comments made during the Aug. 19 hearing in which a representative of the board defended this compressed timeline by noting that Minnesotans participate in the model code development process nationally administered by the National Fire Protection Association and that should be considered sufficient.

1. Minnesotans participate in all model code development for all building codes, and as noted above, these other code adoption processes still undertake appropriate rigorous technical review and offer multiple opportunities for the public and interested parties to weigh in on the proposed codes.
2. These model code development hearings, managed by private organizations, are not recognized by as a public meeting or hearing under Minnesota Law.

To interested parties, such as Housing First Minnesota, it is unclear if the Board of Electricity is simply unaware of its statutory obligations when undertaking rulemaking, or if the manner in which the Board operates is purposefully intended to inhibit public comments.

Exhibits A, D, E, F & G provide all requisite documentation of the Board's activities related to this analysis. The documentation from the rulemaking actions of the Plumbing Board and the Department of Labor and Industry are publicly available from the Department of Labor and Industry.

Exhibit I: Minutes of Oct. 18, 2019, Plumbing Board Meeting

Meeting Minutes: Plumbing Board

Date: October 15, 2019
Time: 9:30 a.m.
Minutes by: Lyndy Logan
Location: Minnesota Room, Department of Labor and Industry
443 Lafayette Road No., St. Paul, MN 55117-4344

Members

Michael Dryke – via teleconference
Kent Erickson
John Flagg (Vice Chair)
Mike Herman (Secretary) – via teleconference
Rick Jacobs (Chair)
Justin Parizek
Phillip Sterner
Cathy Tran (DLI Commissioner’s Designee)
David Weum (DOH Commissioner’s Designee)

Members Absent

Richard Becker
Jeff Brown
David Wagner

DLI Staff & Visitors

Suzanne Todnem (Gen. Counsel, DLI)
Lyndy Logan (DLI)
Jim Peterson (DLI)
Jim Lungstrom (DLI)
Brad Jensen (DLI)
John Roehl (DLI)
Matt Marciniak (IAPMO)
Adam Hanson (ABC)
Mike Johnson (J-Berd)
Gary Thaden (MMCA)
Scott Thompson (My Plumbing Training)
Jennifer Schaff (County Materials Corp)
Chris Soderholm (Water Control Corp)
John Parizek (ASSE International)
Nick Erickson (Housing First MN)
Tim Power (MNLA)
Jim Grothaus (Hancock Concrete)
Kirk Ellis (Speedway LLC)
Dan Olson (Speedway counsel)
Jeff Hill (MWQA)
Jason Kruger (MN Concrete Pipe Assoc.)

1. Call to Order

The meeting was called to order by Chair Jacobs at 9:44 a.m. Roll call was taken by John Flagg; a quorum was declared with 7 of 11 voting members, and one non-voting member, present in person or via teleconference. (Phil Sterner joined the meeting at 10:11 a.m. resulting in 8 of 11 members present in person or via teleconference).

2. Approval of meeting agenda

A motion was made by Herman, seconded by Erickson, to approve the agenda as presented. The roll call vote was unanimous with 7 votes in favor; the motion carried.

3. Approval of previous meeting minutes

A motion was made by Flagg, seconded by Erickson, to approve the August 29, 2019, special meeting minutes with a correction to Larry Justin to read (MN FASPE) and to add "Attachment A" to pages 3 to 22, as presented. The roll call vote was unanimous with 7 votes in favor; the motion carried.

4. Regular Business

Approval of expense reports – Jacobs approved the expenses as presented.

5. Committee Reports

A. Department Updates

None

B. Executive Committee

The Committee met this morning and advised the Chair on the Board's agenda.

C. Construction Codes Advisory Council

The CCAC's next meeting is October 21, 2019 @ 9:30 a.m.

Representative: Mike Herman

Alternate: John Flagg

6. Special Business

A. Request for Final Interpretation (RFI) – PB0141 – Daniel R. Olson – section 709.1 – See Attachment A

Phil Sterner joined the meeting at 10:11 a.m. during the following discussion, resulting in 8 of 11 members present in person or via teleconference.

Kirk Ellis, Sr. Project Manager, Speedway LLC and Dan Olson, Legal Counsel, Bassford Remele, P.A., introduced themselves and Mr. Olson addressed the Board.

Mr. Olson summarized Speedway's RFI and position to the Board including their interpretation of "where practicable" in section 709.1, which considers factors such as comparative cost of installing a gravity system versus installing a pump system and safety of the surrounding area during installation of a gravity system. Mr. Olson described their situation which involves single-cup brewing machines that have a cleaning function that would drain 4-5 gallons of waste a day and Speedway would like to use a pump system instead of adding a gravity system that involves cutting into the floor to trench the gravity drain. Speedway's position is that because a pump system is a safe and less expensive alternative to a gravity drain, gravity drainage is not "practicable." Mr. Olson offered to respond to any questions of Board members. Tran clarified that Speedway is proposing a standpipe receptor that would receive waste indirectly from the coffee machine; the issue is how the proposed standpipe is being connected to the building drainage system, a pump system rather than gravity flow. The Department advised Speedway that the code requires this standpipe to drain by gravity but Speedway disagrees and has submitted this RFI to the Board. Discussion followed regarding the intent of the code, what factors are appropriate to consider

when determining when gravity drainage is “practicable,” who makes that determination, and outcomes of the different interpretations offered by Speedway and the Department.

Concern was raised that if pumps were allowed for one fixture, it could lead to multiple fixtures using pumps for any remodel work, and therefore multiple pumps will be installed when gravity is available. Pumps are not the preferred drainage method; gravity is and the code reflects this. Pumps are mechanical equipment and can fail and result in much higher costs than installing gravity drainage. The Board was reminded by Todnem that they are not approving or disapproving any particular product, configuration, or construction plan, and the Board should focus on interpreting the selected code language. Whether Speedway’s specific circumstances renders gravity drainage practicable or not practicable is an enforcement determination and the Board does not have enforcement authority.

The Board discussed extensively what factors determine whether gravity drainage is “practicable” or not in the code. Such a determination must be made on a case-by-case basis by the Authority Having Jurisdiction. Acceptable factors to be considered in determining whether gravity drainage is “practicable” include geological conditions, structural integrity of the building, and compliance with other regulations. Safety of the construction site is the contractor’s responsibility and should not be used to determine if gravity drainage is “practicable.” Sometimes it will be necessary to move things to install gravity drainage, such as cabinets and other obstacles to get to the plumbing system; the AHJ determines at what point it is no longer “practicable” to move things and require gravity drainage. Section 710 of the Plumbing Code offers relevant context for section 709. Section 710 provides requirements for when pump systems are used and limits pump use to fixtures that are below the crown level of the main sewer. Where gravity drainage is available, gravity drainage should be used. Under section 709.1, a sump pump system would be allowed when gravity is available but on a limited basis.

Jacobs said he has never believed a pump to be a good idea unless there were no other options. “Where practicable” means if it can happen, then it should happen. Herman said it needs to be a gravity drain feature due to the way the code is written. The current code does not allow for pumps when gravity is available.

Tran asked if section 709.1 allows for sump pump systems when gravity flow is available, and Jacobs replied no – when gravity is available it flows by gravity. Weum replied “rarely.” Tran added that section 709.1 of the Plumbing Code should be interpreted on a case by case basis, as determined by the AHJ but the code requires gravity. Jacobs reiterated that if it can flow by gravity, it must flow by gravity, as it pertains to the plumbing system. Jacobs agreed with Tran – section 709 indicates a case by case basis as determined by the AHJ.

Parizek said only the plumbing system is in question to define practicable, not the plans. The code said if a fixture must be drained by gravity then it must be drained by gravity and any other approved fixture must be approved by the AHJ.

The primary factor in whether gravity drainage is “practicable” or “reasonably capable of being accomplished” is the plumbing system capabilities, while recognizing there are other factors to consider. The determination must be made by the AHJ with the assumption that gravity drainage should be used. The Board considered what was asked in the RFI. Because the Board does not have enforcement authority, the question in the RFI was modified to be limited to code interpretation and not take an enforcement position regarding Speedway’s circumstances.

The Board answered the following question stated in the Request for Interpretation:

Question: **Given that the definition of "practicable" is "reasonably capable of being accomplished," does the Plumbing Code require drainage by gravity system where such an installation is unreasonably expensive to the landowner and avoidably dangerous to patrons when a safe, sanitary, proven alternative exists?**

Answer: **Yes. Plumbing fixtures that can flow by gravity must flow by gravity. Section 709.1 offers an alternative on a case by case basis. Code conformance for existing buildings is described in Chapter 4714.0101, Subp. 3.**

A motion made by Flagg, seconded by Sterner, to authorize the Chair to prepare a Final Interpretation, as described above, and include a memorandum explaining the Board’s decision. The roll call vote was unanimous with 8 votes in favor; the motion carried.

B. Review Plumbing Board Bylaws and proposed amendments – See Attachment B
A motion was made by Sterner, seconded by Flagg, to accept proposed amendments. The roll call vote was unanimous with 8 votes in favor; the motion carried. **[Executive Committee was dissolved]**

C. Discuss 2018 Uniform Plumbing Code: Review “Ad Hoc Code Review and Rulemaking Committee 2018 UPC Recommendations to the Board” (Attachment C) and “Board Review of 2018 UPC RFAs” (Attachment D) documents and related RFAs; Board to consider granting rulemaking authorization to Chair

A motion was made by Flagg, seconded by Erickson, to authorize the Board Chair to open rulemaking of possible amendments to chapter 4714 to adopt the 2018 UPC with amendments accepted by the Board. The roll call vote was unanimous with 8 votes in favor; the motion carried.

D. **Training: Open Meeting Law, Data Practices, and Records Retention – This was tabled until Jan. 21, 2020.**

7. Complaints

Nothing to report.

8. Open Forum

9. Correspondence

10. Board Discussion

None

11. Announcements

Next regularly scheduled meeting in 2020 – all meetings will be held at 9:30 a.m. in the Minnesota Room. The Board accepted the amendment in the Bylaws to dissolve the Executive Committee.

A. January 21, 2020

12. Adjournment

A motion was made by Sterner, seconded by Flagg, to adjourn the meeting at 2:43 p.m. The roll call vote was unanimous with 8 votes in favor of the motion; the motion passed.

Respectfully submitted,

Mike Herman

Mike Herman, Board Secretary

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 Interpretation

PRINT IN INK or TYPE

NAME OF SUBMITTER Speedway LLC	Rule(s) to be interpreted (e.g., 4714.0330) 709.1
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The Minnesota Plumbing Code (MN Rules, Chapter 4714) is available at www.dli.mn.gov/CCLD/PlumbingCode.asp

Has a request for interpretation been submitted to Department of Labor and Industry (DLI) staff, either as a verbal request or a written request? ☒ Yes ☐ No

If "No," contact DLI staff at 651-284-5187. The DLI is responsible for administration and interpretation of the Minnesota Plumbing Code, and all requests must be processed and provided a DLI interpretation before being referred to the Plumbing Board. This form is intended to be used to request an interpretation from the Plumbing Board only as a resolution of dispute with DLI interpretation.

Code/Rule to be interpreted: 709.1	Name of DLI employee gave interpretation: Cathy Tran	Date interpretation originally requested: 8/27/2019
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Provide a copy of the DLI interpretation with this request (a copy must be provided as reference).

Is there a local dispute with an Inspector of other official? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If Yes, state the name or type of official N/A
--	--

State the circumstances of the initial dispute:

Please see the attached letter from counsel.

Explain what you disagree with the interpretation given to you by DLI staff:

Please see the attached letter from counsel.

What is your interpretation of the language:

Please see the attached letter from counsel.

List any other information you would like the Board to consider:

Please see the attached letter from counsel.

Information regarding submitting this form:

- Submit any supporting documentation to be considered electronically to DLI.CCLDBOARDS@state.mn.us. Once your Request For Interpretation form has been received, it will be assigned a file number. Please reference this file number on any correspondence and supplemental submissions.

Information for presentation to the Committee:

- You will be notified with the date of the Committee Meeting in which your Request For Interpretation will be heard.
- Limit presentations to 5 minutes or less.
- Be prepared to answer questions regarding the Code, the circumstances that led to the dispute and please bring copies of any documentation.

What you can do if you disagree with the Board's determination:

- You may appeal the Board's determination pursuant to Minn. Stat. Chapter 14.

Office Use Only

RFI File No. PB0141	Date Received by DLI 9.13.2019	Dated Received by Board	Date of Board Meeting 10.15.2019
Title of RFI	By:		

This material can be made available in different forms, such as large print, Braille or on a tape. To request, call 1-800-342-5354 (DIAL-DLI).

Submitted by:

NAME		FIRM NAME	
Daniel R. Olson		Bassford Remele, P.A.	
ADDRESS		CITY	STATE ZIP CODE
100 South Fifth Street, Suite 1500		Minneapolis	MN 55402
PHONE	SIGNATURE (original or electronic)	DATE	
612-746-1095	/s/ Daniel R. Olson	9/13/2019	

For assistance or questions on completing this form, please call 651-284-5898 or 651-284-5889.

Mailing address:

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



BASSFORD REMELE

DANIEL R. OLSON
SHAREHOLDER
Licensed in MN and WI
T 612.746.1095
F 612.746.1295
DOLSON@BASSFORD.COM

September 13, 2019

VIA EMAIL AND U.S. MAIL

Minnesota Plumbing Board
c/o Minnesota Department of Labor and Industry
443 Lafayette Road North
St. Paul, MN 55155-4344
dli.ccldboard@state.mn.us

Re: *Request for Interpretation by Speedway LLC*
Our File No.: 5945-1

Dear Minnesota Plumbing Board:

Our office represents Speedway, LLC. We respectfully submit the following issue for interpretation:

Question:

Section 709.1 of the Plumbing Code provides that “Where practicable, plumbing fixtures shall be drained to the public sewer or private sewage disposal system by gravity.” Given that the definition of “practicable” is “reasonably capable of being accomplished,” does the Plumbing Code require drainage by gravity system where such an installation is unreasonably expensive to the landowner and avoidably dangerous to patrons and where a safe, sanitary, proven alternative exists?

Background:

On August 13, 2019, Speedway was informed by a plumbing inspector, Scott Sawyer, that the Department would not approve Speedway’s proposed plan to install Bean-to-Cup coffee machines in its convenience stores. Speedway’s plan featured designed drainage pumps that would clear out no more than five gallons of water and cleaning fluid per day from the machines at each store. These drainage pumps are safe and sanitary and have been approved and installed all across the country.

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The Department, however, rejected the proposed plan and has told Speedway that it will be required to dig trenches in all of its proposed Bean-to-Cup Stores to connect the machines to floor drains—all to flush out five gallons of water and cleaning fluid. Such an endeavor would significantly disrupt operations at Speedway's stores and would amount to a small remodel in certain locations. The process will take several months and require three different contractors, costing Speedway in upwards of \$1 million in project costs and lost sales. Importantly, the project would also pose significant safety concerns to Speedway's customers and employees as the stores would need to remain open during the construction phase.

The Department further informed Speedway that it could seek deviations from the Plumbing Code based on undue hardship, but would need to submit a separate deviation request for each of the dozens of individual stores in which the Bean-to-Cup machines are scheduled for install. Because the Department is incorrectly interpreting the Plumbing Code, Speedway seeks an interpretation before undertaking dozens of individual deviation requests.

Analysis:

The crux of the analysis here is necessarily based on basic tenets of statutory construction and interpretation. When a legislature or governing body includes certain words or phrases in some parts of the Code but not others, those words or phrases must be given ample consideration.

The specific section of the Plumbing Code at issue is Section 709.1, which provides: “**Where practicable**, plumbing fixtures shall be drained to the public sewer or private sewage disposal system by gravity.” (Emphasis added.) Significantly, the inclusion of the “where practicable” language differs from every other regulation and requirement set forth in Chapter 7, including commercial dishwashing machines and sinks (Section 704.3), cleanout locations (Section 707.4), sump construction (Section 710.8), and building sewer locations (Section 752.1). This is significant, as by including “[w]here practicable” in the original text of Section 709.1, the authors of the Code clearly intended to build in flexibility here without the requirement of a formal deviation process. Why else would it be included in this Section where it is conspicuously omitted in every other section? Enabling Speedway to install its Bean-to-Cup machines with a sanitary, safe, proven alternative would not be a deviation from this code provision, as it is not practicable to install the system any other way. The other Code sections do not have this built-in flexibility and require a deviation.

With regards to whether spending \$1 million and digging trenches at the peril of its employees and customers (or in the alternative completely shutting down the Stores and putting its employees who need a paycheck out of work) where there is a proven alternative is practicable, one must look at the definition of “practicable.” Notably, the Code does not define practicable.” But the Minnesota Court of Appeals has repeatedly relied on *Black's Law Dictionary* in interpreting “practicable” as meaning “**reasonably** capable of being accomplished.” See *In re Matter of Application of J.M.M. o/b/o Minors for a Change of Name*, No. A17-1730, 2018 WL 2470701, at

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*6 (Minn. Ct. App. June 4, 2018) (emphasis added) (citing *Black's Law Dictionary* 1361 (10th ed. 2014)), *review granted* (Sept. 18, 2018); *State v. Morse*, No. A14-1202, 2015 WL 3822833, at *4 (Minn. Ct. App. June 22, 2015), *rev'd on other grounds*, 878 N.W.2d 499 (Minn. 2016); *Abel v. Abel*, No. A06-1733, 2007 WL 2703035, at *3 (Minn. Ct. App. Sept. 18, 2007).

Here, connecting the Bean-to-Cup machines to a gravity drain is not “reasonably capable of being accomplished.” In fact, it is not reasonable by any definition of this word. Quite the opposite: Speedway will be forced to incur nearly \$1 million in costs and lost sales to install coffee machines and make the choice to either (1) put its employees and customers in danger or (2) completely shut down its stores, increasing the cost associated with the project exponentially and putting its hard-working employees out of work—where there is a proven safe and sanitary alternative used by numerous companies all over the country. This is inherently *unreasonable*.

Accordingly, Speedway respectfully requests the following interpretation of Section 709.1: No, Section 709.1 does not require plumbing fixtures to drained by a gravity system where the installation of such a system would be unreasonably burdensome and a proven safe and sanitary alternative is adopted.

Very truly yours,



Daniel R. Olson

DRO:vlc

cc: Erin A. Moosbrugger, Esq.

Bylaws of the Plumbing Board

Article I. Name

- A. The official name shall be “Plumbing Board.”

Article II. Purpose

- A. The purpose of the Plumbing Board shall be as identified in Minnesota Statutes, section 326B.435, subdivision 2. At the request of the Commissioner of Labor and Industry, the Board shall also provide information and documentation concerning any complaint referred by the Board to the commissioner, as provided in Minnesota Statutes, section 326B.435, subdivision 8.

Article III. Membership

- A. The membership of the Plumbing Board shall be as identified in Minnesota Statutes, section 326B.435, subdivision 1.

Article IV. Officers

- A. The Plumbing Board shall elect a chair, vice-chair, and secretary. All voting members of the Board are eligible to serve as officers.
 - a. Chair: The chair shall:
 - i. Preside at Board meetings;
 - ii. Appoint committees;
 - iii. Correspond on behalf of the Board;
 - iv. Develop meeting agenda; and
 - v. Act as the Board liaison with the Department of Labor and Industry regarding Board functions.
 - b. Vice-Chair: The vice-chair shall:
 - i. Assume the duties of the chair in the chair's absence; and
 - ii. Assume the duties of the secretary in the secretary's absence.
 - c. Secretary: The secretary shall:
 - i. Ensure that accurate notes of all Board meetings are taken and minutes are created and presented for Board approval at the next following meeting;
 - ii. Provide the presiding officer and membership with the exact wording of all motions;
 - iii. Record the official vote on all motions; and
 - iv. Maintain a record of all actions taken by the Board.

- B. The election of officers shall take place at the first meeting of the Plumbing Board and at each annual meeting thereafter.
 - a. The commissioner or the commissioner's designee shall preside over the election of all officers. The newly elected chair shall begin presiding over the meeting at the completion of elections.
 - b. Nominations for and election of each officer shall be independent of other officers.
 - c. Officers shall be elected in the following order: chair, vice-chair, secretary.
 - d. Nominations may be made by any voting member of the Board.
 - e. The number of nominees for each office is not limited.
 - f. Election shall be determined by majority of members voting.
 - i. Votes shall be cast by a raising of hands.
 - ii. Members shall vote for only one candidate at each ballot.
 - iii. Ballots shall be cast until one candidate receives a majority of votes cast.
- C. Vacancy
 - a. An election shall be held at the next regular meeting to fill a vacant office.
 - i. When an election results in creating a vacancy, an election to fill the vacancy shall be held at the same meeting until all positions are filled.
 - ii. The commissioner or the commissioner's designee shall preside over the election of vacant offices.
- D. Term
 - a. The term of all elected officers ends at the completion of election of officers at the annual meeting.

Article V. Meetings

- A. All meetings shall be held pursuant to Minnesota Statutes Chapter 13D.
- B. Location
 - a. Board meetings shall be held at the Department of Labor and Industry offices located at 443 Lafayette Road North, Saint Paul, Minnesota.
 - b. As provided in Minnesota Statutes, section 326B.435, subdivision 7, meetings employing telephone or other electronic means may be conducted.
- C. Annual meeting
 - a. The annual meeting of the Board shall be the first meeting each state fiscal year.
- D. Regular meetings
 - a. Regular Board meetings shall be held on a schedule determined by the Board.
 - i. The regular Board meeting schedule shall be maintained at 443 Lafayette Road North, Saint Paul, and on the Department of Labor and Industry website.
- E. Special meetings
 - a. Special Board meetings are meetings that are not regularly scheduled.

- i. Special Board meetings shall be called by the chair.
- ii. Unless the meeting is an emergency meeting, at least three days before the date of the meeting, notice of the special Board meeting shall be posted at 443 Lafayette Road North, Saint Paul, and mailed, e-mailed, or delivered to each person who has requested a notice of special meetings.
- iii. If the chair determines that circumstances require immediate consideration by the Board, the chair shall call an emergency meeting in accordance with Minnesota Statutes, section 13D.04, subdivision 3.

Article VI. Committees

- A. The chair may appoint a Board committee to address specific issues.
 - a. Committees shall report directly to the Board.
 - b. Unless dismissed by the appointing chair, the term of committee members ends with the election of a new chair.
 - c. Each Committee shall appoint a Secretary to record the meeting's Minutes.
- B. Parliamentary Authority for Committees
 - a. A quorum of the committee shall consist of the majority of members of the committee qualified to vote on the matter in question.
 - b. A meeting must not be called to order unless a quorum is present.
 - c. A meeting must be declared adjourned by the committee chair or other presiding committee member at any time it is apparent that a quorum is not present.
 - d. A vote on any issue is valid even though fewer than the quorum vote.

Article VII. Parliamentary authority for the Board

- A. Quorum
 - a. A quorum of the Board shall consist of the majority of members of the Board qualified to vote on the matter in question.
 - b. A meeting must not be called to order unless a quorum is present.
 - c. A meeting must be declared adjourned by the Board chair or other presiding officer at any time it is apparent that a quorum is not present.
 - d. A vote on any issue is valid even though fewer than the quorum vote.
- B. Majority
 - a. A majority of the membership is 7 voting members of the Board, except that if there is any vacancy in the voting members of the Board, a majority of the membership is more than half of the voting member positions on the Board that are filled. This number does not depend on the number of members present at a meeting or voting on a particular matter. An affirmative majority of the voting members is the same as a majority of the membership.
 - b. A simple majority, or a voting majority, is more than half of the members voting on a particular matter.
 - c. A two-thirds majority of the membership is 9 voting members of the Board, except that if there is any vacancy in the voting members of the Board, a two-thirds majority of the membership is two-thirds or more of

- the voting member positions on the Board that are filled. This number does not depend on the number of members present at a meeting or voting on a particular matter. A two-thirds majority of the voting members is the same as a two-thirds majority of the membership.
- d. A two-thirds voting majority is two-thirds or more of the members voting on a particular matter.
- C. Regular meeting order of business
- e. Call To Order
 - f. Approval of Meeting Agenda
 - g. Approval of Previous Meeting Minutes
 - h. Regular Business
 - i. Minnesota Plumbing Code
 - ii. Plumbing Licensure and Registration
 - i. Special Business
 - j. Committee Reports
 - k. Complaints
 - l. Open Forum
 - m. Board Discussion
 - n. Announcements
 - o. Adjournment
- E. Process for consideration of business agenda items and motions
- a. A business agenda item is presented by the chair or other Board member.
 - b. Any Board member, either a voting or nonvoting member, makes a motion to address the issue.
 - c. Another Board member, either a voting or nonvoting member, seconds the motion.
 - d. The issue and motion are discussed/debated.
 - e. After all members have had opportunity to speak on the issue the chair or presiding officer asks the secretary to read the motion and calls for a vote on the motion.
 - f. Other motions may be made and considered within this process as outlined in the following table.

F. RULES GOVERNING MOTIONS IN ORDER OF PRECEDENCE

Motion	Interrupt (Note 1)	Second	Debatable (Note 2)	Amendable (Note 3)	Vote to Pass
Adjourn	No	Yes	No	No	Voting Majority
Recess	No	Yes	Restricted	Restricted	Voting Majority
Postpone/Table (Note 4)	No	Yes	No	No	Voting Majority
Refer to Committee (Note 5)	No	Yes	Restricted	Yes	Voting Majority
Amend	No	Yes	Yes	Yes	Voting Majority
Main Motion	No	Yes	Yes	Yes	Voting Majority
Reconsider (Note 6)	Yes	Yes	Restricted	No	Voting Majority
Rescind (Note 7)	No	Yes	Yes	No	Membership Majority
Resume Consideration/ Remove from the Table	No	Yes	No	No	Voting Majority
Appeal (Note 8)	Yes	Yes	Yes	No	Voting Majority
Amend Bylaws	No	Yes	Yes	Yes	Membership Majority
Rules Amendment Except Plumbing Code Amendment	No	Yes	Yes	Yes	Membership Majority
End debate	Yes	Yes	No	No	Two-thirds Voting Majority
Plumbing Code Amendment	No	Yes	Yes	Yes	Two-Thirds Membership Majority

Notes to the table:

1. Interrupt – Can the maker of the motion interrupt another motion process?
2. Debatable – Can the motion be debated? Restricted – Debate is restricted to the motion being considered.
3. Amendable – Can the motion be amended? When restricted, an amendment must be germane to the motion to amend.
4. Postpone/Table – A motion postponed or tabled may be reconsidered within the same meeting as a result of motion to resume consideration. The motion postponed/tabled may be brought forward as a new motion at subsequent meetings without a motion to resume consideration. A motion to postpone/table ends debate of the motion to be postponed or tabled.
5. Refer to Committee – The debate on a motion to refer to a committee is restricted to the committee membership, assignment, meeting and reporting schedule.

6. Reconsider – A motion to reconsider can only be made during the same meeting the motion to be reconsidered was acted on. Debate is restricted to the motion to reconsider. Debate on the motion to be reconsidered can only occur after the motion to reconsider is passed. The use of the term “reconsider” in these bylaws is different from the use of the term “reconsider” in Minnesota Statutes, section 326B.435, subdivision 6, items (b), (d), (e) and (f). Nothing in these bylaws is intended to conflict with the statutory restrictions on the Board’s ability to “reconsider” plumbing code amendments and other proposed rules and rule amendments.
7. Rescind – A motion to rescind can only be made on motions that passed at previous meetings and then only if irreversible actions have not been carried forth. A motion to rescind must pass by a majority vote of the Board membership. A motion to rescind cannot be reconsidered or rescinded.
8. Appeal – Any member may make a motion to appeal a ruling or action of the chair or presiding officer.
9. End debate – Any member may make a motion to end discussion on the matter at hand.

Other actions or limits are at the discretion of the chair or other presiding officer, but are subject to appeal by another Board member.

Article VIII. Internal standards related to “day spent on Board business”

When authorized by the Board, members may be compensated at the rate of \$55 per diem for each day spent on Board activities in addition to being reimbursed for expenses as authorized by the commissioner’s plan adopted under Minnesota Statutes section 43A.18, subdivision 2. The Board defines a day spent on Board activities as any day members attend a regular or special Board meeting, or when specifically authorized by the Board to attend committee meetings or other meetings or activities or perform other duties on any day other than the day of a regular or special Board meeting.

In addition to the day of the Board activity and when a Board member’s primary residence is more than 250 miles from the location of the Board activity, an additional day for travel is allowed when the member incurs overnight lodging expense.

Article IX. Board Minutes

The Minutes for each meeting shall include the following:

1. A list of attendees.
2. The start time of the meeting.
3. Each topic description.
4. All motions made and the recorded vote.
5. Upcoming meeting dates and times.
6. Time of adjournment.

Article X. Amendment to bylaws

A majority of the membership must vote in the affirmative to adopt an amendment to these bylaws.

ADOPTED: November 16, 2007

AMENDED: February 19, 2008

PROPOSED AMENDMENT: April 21, 2009

PROPOSED AMENDMENT, ADOPTED: August 23, 2011

PROPOSED AMENDMENT: April 19, 2016

PROPOSED AMENDMENT, ADOPTED: July 19, 2016

Ad Hoc Code Review and Rulemaking Committee 2018 UPC Recommendations to the Board

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
1.	PB0097	RFA	Thomas Johnson	Chapter 1	Add chapter 1 of the UPC into the Plumbing Code	Proposal: add chapter 1 of the UPC to the Plumbing Code. Recommendation: do not add chapter 1 of the UPC because MN uses rule chapter 1300 for code administration.	8/29/19	The Board accepted the recommendation as presented.	Accept
2.	Letter	N/A	Jeff Quinn, Farr Plumbing and Heating		Letter to Board re: Dishwasher air gaps, venting floor drains, boiler water fill, for next rule cycle.	Addressed in RFAs below.	8/29/19	Items were addressed in RFA's submitted to the Ad Hoc Committee – no further discussion.	N/A
3.	PB0135	RFA (2018 UPC) Also see Final Interpretation at line #8	DLI	Chapter 2 definitions	Definition of "building supply" and registered design professional	Proposal: amend definitions of "building supply" and change term "Registered Professional Engineer" to "Registered Design Professional" Recommendation: amend the definitions of "building supply" and "Registered Professional Engineer" as proposed. See PB0135 .	8/29/19	The Board accepted the recommendation as presented to amend term "Registered Professional Engineer" to Registered Design Professional. The Board accepted the recommendation to amend the definition of "building supply" with one modification: Remove "is" as follows: "Building Supply. The pipe is carrying potable water from municipal water supply..."	1. Accept Registered Design Professional as presented 2. Accept building supply with modification (remove "is")
4.	PB0128	RFA (2018 UPC)	Scott Thompson	Chapter 2	Definition of "floor drain" and "floor drain – emergency"	Proposal: amend definition of "floor drain" and "floor drain – emergency" as proposed. Recommendation: define "floor drain – emergency" as "Floor drains that <u>DO NOT SERVE AS A RECEPTOR THAT</u> are located in restrooms, under emergency eyewash/shower equipment and in laundry rooms." No definition for "floor drain."	8/29/19	1. Floor drain: The Board agreed to keep the definition of floor drain with a modification to add language shown in ALL CAPS: Floor drains that DO NOT SERVE AS A RECEPTOR THAT are located in restrooms, under emergency eyewash/shower equipment and in laundry rooms."	1. Accept with modifications noted in ALL CAPS 2. Amend to emergenc

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)cccept (R)eject (M)odify
								<p>2. Floor drain – emergency: The Board agreed to amend to “emergency floor drain” in lieu of “floor drain – emergency.”</p> <p>The Board discussed whether the language should read “floor drain, emergency” or “emergency floor drain.” The language “floor drain, emergency” is used in Table 702.1; however, “emergency floor drain” is defined in the definitions; therefore, the Board agreed to accept the recommendation but amend to “emergency floor drain” in lieu of “floor drain – emergency.”</p>	y floor drain
5.	PB0137	RFA (2018 UPC)	MDH	Chapter 2	Definition of “potable water”	<p>Proposal: amend definition of “potable water” as proposed.</p> <p>Recommendation: leave definition of “potable water” as is in 2018 UPC.</p>	8/29/19	<p>The Board agreed with the recommendation as presented after discussion noted below.</p> <p>Weum read the definition of potable water. The Board discussed leaving “potable water” but defining “water for human consumption” The definition of Human Consumption in Section 604.2 of the 2018 UPC would affect the manufacturer’s lead content. Tran read Exception 2 of Section 604.2 of the 2018 UPC.</p>	Accept
6.	PB0129	RFA (2018 UPC)	Scott Thompson	Chapter 2	Definition of “quick-acting valve”	<p>Proposal: amend definition of “quick-acting valve” as proposed</p> <p>Recommendation: Full-board discussion</p>	8/29/19	<p>The Board rejected the proposal and accepted language to modify the 2018 UPC, Section 609.10 as follows: “Building water supply systems where <u>water hammer occurs</u> shall be provided with water hammer arrestors to absorb the <u>resulting</u> high pressures. Water hammer ...”</p>	Reject proposal. Amend 2018 UPC Section 609.10 as shown
7.	PB0083	Final Interpretation	Patrick Lorio, City of Minneapolis	2012 UPC, sections 414.3 & 807.4, MN	Air gap fittings and drainage from domestic dishwashers	<p>Question: May a domestic dishwasher be drained to a lower floor, without the installation of an approved air gap fitting with an indirect drain?</p>	N/A	<p>The Board agreed that no further discussion was needed at the 8/29/2019 meeting.</p> <p>5.11.2016: No, a domestic dishwasher cannot drain to a lower floor without the installation of</p>	

Line #	PB #	RFARFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
				Rule 4714.0050		Answer: No. The Minnesota Plumbing Board interprets UPC Sections 414.3 and 807.4 as incorporated into the Minnesota Plumbing Code by Minnesota Rule 4714.0050, to require a domestic dishwasher to discharge through a listed air gap fitting. The air gap fitting must be referenced in chapter 14 of the 2012 UPC as amended by Minnesota Rules chapter 4714.		an approved air gap fitting with an indirect drain. The air gap fitting must be referenced in chap 14 of the 2012 UIPC as amended by MN Rules chapter 4714	
8.	Definition of "Building Supply" See also PB0135	Final Interpretation	Gordon Granse, Polyethylene Technology	2012 UPC section 204.0, MN Rule 4714.0050	Definition of Building Supply	Question: Is the pipe supplying water to a water meter or pressure tank inside the building considered part of the building supply? Answer: Yes.	N/A	Final Interpretation issued (in response to a letter) May 11, 2016. Yes, the pipe supplying water to a water meter or pressure tank inside the building is considered part of the building supply.	
9.	PB0085 See also PB0135	Final Interpretation	David Henrich, Bergerson Caswell, Inc./MN Water Well Assoc	2012 UPC section 204, Table 604.1, and IS 7 (2.6.1), MN Rule, part 4714.0050	Use of polyethylene piping for building supply piping	Question: Based on the Plumbing Board's May 11, 2016, Final Interpretation, can polyethylene piping, when used for building supply, be installed inside and under buildings? Answer: Yes.	N/A	Final Interpretation issued June 15, 2016. Yes, polyethylene piping, when used for building supply, can be installed inside and under buildings	
10.	PB0088	Final Interpretation	Sean Flaherty, President MN Chapter of the NFSA	Sec. 603.5.15, part 4714.0050	Double Check backflow prevention assemblies (DC) and double check detector fire protection backflow prevention assemblies that are an integral	Question: Is additional backflow protection required if all of the following conditions are met: (1) an individual licensed under Minnesota Statutes chapter 299M installs a fire protection system; (2) the fire protection system includes as an integral component a double check backflow prevention assembly (DC) that meets ASSE 1015 and meets the requirements of NFPA 13, Parts 8.16.1.1.3.1 and 8.16.1.1.3.2 or a double check detector fire protection backflow prevention assembly that meets ASSE 1048	8/29/19	The Board agreed that no modifications were necessary following discussion below: Final interpretation issued March 20, 2017. Todnem asked the Board if there needed to be any further discussion and Peterson said this should be addressed in the Licensing rules, not the Plumbing Code. Minnesota Plumbing Code 603.5.15.1 (renumbered to 603.5.14) would not be affected. Backflow protector is part of the fire system per Tran.	No modifications necessary

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
					part of a fire protection system.	and meets the requirements of NFPA 13, Parts 8.16.1.1.3.1 and 8.16.1.1.3.2; and (3) neither a reduced pressure principle backflow prevention assembly nor a reduced pressure detector fire protection backflow prevention assembly is required by section 603.5.15.1 of the Minnesota Plumbing Code? Answer: No. Uniform Plumbing Code section 603.5.23, as adopted in the Minnesota Plumbing Code, Minn. R. parts 4716.0096 and 4716.0097, and Minn. Stat. § 326B.437 still apply to the backflow assembly			
11.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0301	chapters 3-5, various	(1) Proposal: Delete Minn. rule part 4714.0301 (default to use 2018 UPC) Recommendation: Delete Minn. rule part 4714.0301	6/17/19	The Board agreed to accept recommendation as presented. The Board previously determined that 4714 is the controlling document and the 2018 UPC would be adopted as the reference.	Accept
12.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	301.2.5	chapters 3-5, various	(2) Proposal: Delete 2018 UPC sec. 301.2.5 (Existing Buildings) in its entirety. Already addressed in Minn. rule 4714.0101, subparts 3 and 6. Recommendation: Delete 2018 UPC sec. 301.2.5 in its entirety.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
13.	N/A	N/A	Committee	312 and 313	Pipe expansion	Proposal: Becker to make tables to address ΔT 50 (conditioned space) and ΔT 100 (unconditioned space). Recommendation: Use proposed Table 313.3.1 as modified	8/29/19, 6/17/19	8/29/2019: Becker submitted Exhibit A and Jim Peterson and Zach Barnaal submitted Exhibits B and C on behalf of DLI. <ul style="list-style-type: none"> The Board agreed to accept Exhibit B with modifications. Modifications are shown on attached Exhibit B2. Add a footnote #6 to Table 313.3, at line "Schedule 40 PVC and ABS DWV" under column "Horizontal": For expansion loops, see Table 313.3.1 	8/29/19: Accept with modifications as noted on Exhibit B.1 . Modifications accepted with addition of 10 and 20 feet – See Exhibit B.2

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
								<ul style="list-style-type: none"> Table title change: <u>Schedule 40 PVC and ABS DWV and Storm Pipe Expansion Table</u> <p>6/17/19 Discussion: Installation shall compensate for thermal expansion and contraction. Expansion joints shall be utilized in vertical straight runs in excess of thirty (30) feet (9,144 mm) provided they are installed per manufacturer's installation instructions. Except piping buried below ground, horizontal and vertical piping must be installed with restraint fittings or a minimum twenty-four (24) inches (610 mm) 45 degree offset every thirty (30) feet (9144 mm) Becker said he would revise the tables to incorporate formulas for ABS and PVC and bring back to the Board at a later date.</p>	6/17/19: Modify
14.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	Table 313.3	chapters 3-5, various	(4) Proposal: Add footnote 6 to Table 313.3. Recommendation: DLI will bring recommendation to Board for discussion. See also Item 13 above as part of discussion	6/17/19	6/17/2019: Table 313.3 is connected to the above tables; therefore, it will be discussed when tables above are revised and brought back to Board.	See above 6/17/19: Modify
15.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0314	chapters 3-5, various	(3) Proposal: Delete Minn. rule 4714.0314 (default to use 2018 UPC for tunneling/trenching) Recommendation: Delete Minn. rule 4714.0314	6/17/19	The Board agreed to accept recommendation as presented.	Accept
16.	N/A	N/A	Committee	407.4	Transient Public Lavatories	Proposal: delete section 407.4 Transient Public Lavatories	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Recommendation: delete section 407.4 of 2018 UPC.			
17.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0409	chapters 3-5, various	(5) Proposal: Amend Minn. rule 4714.0409 Recommendation: Amend rule part 4714.0409 to reflect the additions of nationally recognized standards in the body of the code that are also referenced standards under Chapter 17 of the UPC 2018, strike IAPMO IGC 155 references (see PB0102)	6/17/19	The Board agreed to accept recommendation as presented.	Accept
18.	PB0090 PB0099 PB0101 PB0110	RFA	Multiple	4714.0414. 3	Redundancy - Dishwasher listed air gap device	Proposal: Delete “through an air gap fitting in accordance with Section 807.4 in section 414.3 and delete section 807.4.” Recommendation: add language to sections 414.3 and 807.3, “or run the discharge line as high as possible under the countertop, securely fastened.” (Section 807.3 of 2018 UPC renumbered section 807.4) See 1/14/19 Ad Hoc meeting minutes .	6/17/19	The Board agreed to accept recommendation as presented. Note: Tran noted that the recommendation as presented is correct. Marciniak previously confirmed that IGC 155 (2018 version) was superseded by ASME A112.19.7 (2012 version).	Accept
19.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0418	chapters 3-5, various	Proposal: Amend Minn. rule 4714.0418, regarding section 418.7, add a reference to other sections (1017, 1009.1, 1011.1, and 1017.1) Recommendation: Full Board review; committee recommends adding definitions for “open parking garage” and “enclosed parking garage.”	6/17/19	The Board agreed to accept recommendation as presented. Currently neither are defined; therefore, DLI references the building code for “open parking garage” and “enclosed parking garage” definitions.	Accept
20.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0421	chapters 3-5, various	Proposal: Use 2018 UPC language, delete Minn. rule 4714.0421, result: change temperature from 110 degrees F to 120 degrees F (relocated to section 407.3 in 2018 UPC).	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Recommendation: delete Minn. rule 4714.0421, result: change temperature from 110 degrees F to 120 degrees F.			
21.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0501	chapters 3-5, various	Proposal: Amend Minn. rule 4714.0501 to exclude chimneys, vents and their connectors because not plumbing. Recommendation: Amend Minn. rule 4714.0501 to exclude chimneys, vents and their connectors because not plumbing.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
22.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0504	chapters 3-5, various	Proposal: Amend Minn. rule 4714.0504, subp. 2, to add "Discharge piping shall be installed in accordance with Section 608.5." Recommendation: Amend Minn. rule 4714.0504, subp. 2, to add "Discharge piping shall be installed in accordance with Section 608.5." Delete "[NFPA 54: 10.25.5]" that is in the rule.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
23.	N/A	N/A	Committee	505.4.1	Single-wall heat exchanger	Discussion of the change for single-wall exchange in UPC 2018, Section 505.4.1, and current Minn. rule 603.5.4.1. Minn. Rule does not have a heat-transfer medium that is listed as a toxicity rating or Class of 1. No recommendation.	6/17/19	No recommendation	No Action
24.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0507	chapters 3-5, various	Proposal: Amend Minn. rule 4714.0507, subp. 2 regarding Relief Valve Discharge, to replace the Minnesota amendment and use 2018 UPC language. Recommendation: Amend Minn rule 4714.507, subp. 2 regarding Relief Valve Discharge, to replace the Minnesota amendment and use 2018 UPC language.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
25.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0508	chapters 3-5, various	Proposal: Amend Minn. rule 4714.0508 to effectively use 2018 UPC language for 508.4 Appliances in Attics and Under-Floor	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Spaces, and maintain deletion of sections 508.0 to 508.3.3. Recommendation: Amend Minn. rule 4714.0508 to effectively use 2018 UPC language for 508.4 Appliances in Attics and Under-Floor Spaces, and maintain deletion of sections 508.0 to 508.3.3.			
26.	PB0102	RFA (2018 UPC)	Cathy Tran, DLI	4714.0509	chapters 3-5, various	Proposal: Amend Minn. rule 4714.0509 to include deletion of UPC section 509.15, Venting of Appliances. Recommendation: delete section 509 in its entirety, including 509.15, of the 2018 UPC.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
27.	PB0104	RFA (2018 UPC)	Richard Becker	509-510.2.27	Delete those section in their entirety	Proposal: Delete UPC sections 509.0 through 510.2.27 in their entirety. Recommendation: Delete UPC sections 509.0 through 510.2.27; these deletions already covered in other recommendation or already in Minn. rule 4714.0510.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
28.	N/A			4714.0511	Delete 4714.0511	Proposal: Delete Minn. rule 4714.0511 because no section 511 in 2018 UPC. Recommendation: Delete 4714.0511.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
29.	PB0115	RFA (2018 UPC)	DLI	4714.0601	Various chapter 6 proposals (DLI)	Proposal: renumber section 601 (4714.0601) to 602, per 2018 UPC Recommendation: correct numbering	6/17/19	The Board agreed to accept recommendation as presented.	Accept
30.	PB0114	RFA (2018 UPC)	MDH	4714.0603	Various chapter 6 proposals (MDH)	Proposal: Keep the current Minnesota amendment in Minn. rule 4714.0603, subp. 1 as is. Recommendation: Keep the current Minnesota amendment in Minn. rule 4714.0603, subp. 1 as is. (No action necessary)	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
31.	PB0114	RFA (2018 UPC)	MDH	4714.0603	Various chapter 6 proposals (MDH)	Proposal: Keep the current Minnesota amendment in Minn. rule 4714.0603, subp. 5. Recommendation: Keep the current Minnesota amendment in Minn. rule 4714.0603, subp. 5. (No action necessary)	6/17/19	The Board agreed to accept recommendation as presented.	Accept
32.	PB0092	Final Interpretation	Douglas R. Morin	603.2	Double check assembly	Question 1: Can a backflow preventer approved to ASSE 1022 be installed on a domestic water line serving a combi-oven pursuant to Minnesota Plumbing Code section 603.2? Answer: No. Table 603.2 explicitly states that a backflow preventer approved to ASSE 1022 is appropriate for carbonated beverage machines or dispensers. A combi-oven is not a carbonated beverage machine or dispenser. UPC section 603.2, as adopted in chapter 4714, requires backflow prevention devices or assemblies to comply with Table 603.2. Question 2: Is a backflow preventer approved to ASSE 1012 a suitable device for the installation on a combi-oven under section 603.2 when approved by the Authority Having Jurisdiction? Answer: Yes. ASSE 1012 is not specifically listed in Table 603.2. Devices approved to ASSE 1012 are not explicitly addressed as approved devices in Table 603.2 so the Authority Having Jurisdiction must approve its use, including for use on a combi-oven.	6/17/19	No action necessary – clarification only	No action

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
33.	PB0098	Final Interpretation	Thomas Johnson	4714.0603.2 and table	Whether an AVP can have a valve downstream.	Pending litigation.		Final Interpretation issued 10/8/2018;	
34.	PB0100	RFA	Joel Hipp	Table 603.2	Table 603.2, Atmospheric Vacuum Breaker Installation	<p>Proposal: Amend Table 603.2 (and 1401) to replace “No valve downstream” with “have outlet open to atmospheric pressure” consistent with the 2017 edition of ASSE 1001.</p> <p>Recommendation: leave language as is in the code because proposed amendment would require updating reference to the 2017 edition of ASSE for consistency; concern that updating this referenced standard edition could lead to other referenced standard updates, which would defeat the purpose of adopting a model code.</p>	6/17/19	The Board agreed to accept recommendation as presented.	Accept
35.	PB0115	RFA (2018 UPC)	DLI	603.5.8	Various chapter 6 proposals (DLI)	<p>Proposal: renumber 603.5.18 to 603.5.17</p> <p>Recommendation: renumber</p>	6/17/19	The Board agreed to accept recommendation as presented.	Accept
36.	PB0105 PB0116	RFA (2018 UPC)	Scott Eggen, Steve Tiedman	603.5.10	Exception to Steam or Hot Water Boilers	<p>Proposal: Amend section 603.5.10 by adding an exception for 1- and 2-family dwellings.</p> <p>Recommendation: do not add an exception for 1- and 2-family homes; use 2018 UPC language as is.</p>	6/17/19	The Board agreed to accept recommendation as presented.	Accept
37.	PB0114	RFA (2018 UPC)	MDH	603.5.18	Various chapter 6 proposals (MDH)	<p>Proposal: Renumber section 603.5.18 to 603.5.17 to reflect 2018 UPC numbering.</p> <p>Recommendation: Renumber section 603.5.18 to 603.5.17.</p>	6/17/19	The Board agreed to accept recommendation as presented.	Accept
38.	PB0114	RFA (2018 UPC)	MDH	603.5.21	Various chapter 6 proposals (MDH)	Proposal: Section 603.5.21 is new to the 2018 UPC, keep it incorporated as is.	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Recommendation: Incorporate (new) 2018 UPC section 603.5.21 as is. (No action necessary)			
39.	PB0114 PB0115	RFA (2018 UPC)	DLI	4714.0604	Various chapter 6 proposals (DLI)	Proposal: repeal rule Minn. rule 4714.0604 in its entirety. Recommendation: repeal Minn. rule 4714.0604. Use 2018 UPC language re: lead content (604.2)	6/17/19	The Board agreed to accept recommendation as presented.	Accept
40.	PB0137	RFA (2018 UPC)	MDH	604.2 (formerly 604.11)	Amend 2018 UPC language re: potable water and lead content	Proposal: amend 2018 UPC language regarding definition of potable water and Section 604.2 on lead content by revising “water for human consumption” to “potable water” (Committee recommends deleting MN amendment) Recommendation: do not amend; use 2018 UPC language.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
41.	PB0114	RFA (2018 UPC)	MDH	604.11	Various chapter 6 proposals (MDH)	Proposal: Do not amend Minn. rule section 604.11, keep the 2018 UPC language. Recommendation: Do not amend section 604.11, keep the 2018 UPC language (604.2). (No action necessary)	6/17/19	The Board agreed to accept recommendation as presented.	Accept
42.	PB0118	RFA (2018 UPC)	Rich Olson	Table 604.1, chapter 14	Add NSF SE 17304 to the Referenced Standards Fittings column for CPVC fittings in Table 604.1	Proposal: Amend Table 604.1 and add NSF SE 17304 to the Referenced Standards chapter. Recommendation: do not amend Table 604.1 to add NSF SE 17304.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
43.	PB0114	RFA (2018 UPC)	MDH	604.10	Various chapter 6 proposals (MDH)	Proposal: Renumber Minn. rule 604.10 to 604.9 to reflect 2018 UPC numbering. Recommendation: Renumber 604.10 to 604.9	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
44.	PB0114	RFA (2018 UPC)	MDH	607.3	Drinking water protection	Proposal: Amend 2018 UPC section 607.3 for potable water tanks Recommendation: Amend 2018 UPC section 607.3 as written in the RFA.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
45.	PB0114	RFA (2018 UPC)	MDH	607.4	Tanks used in commercial settings	Proposal: Amend 2018 UPC section 607.4 Recommendation: Amend 2018 UPC section 607.4 as written in RFA except last sentence of RFA language should read: "Overflow pipe shall discharge through an air gap."	6/17/19	The Board agreed to accept recommendation as presented in chart – The word "No" is removed from the last sentence as shown in PB0114. "No – Overflow may be connected directly to any drain, sanitary sewer, or storm sewer"	Accept
46.	PB0115	RFA (2018 UPC)	DLI	4714.0608	Various chapter 6 proposals (DLI)	Proposal: repeal Minn. rule 4714.0608, use 2018 UPC language. Recommendation: repeal part 4714.0608	6/17/19	The Board modified the proposal and recommendation as shown below and accepted the modified recommendation. MODIFIED Proposal: Amend Minn. rule 4714.0608, use 2018 UPC language. MODIFIED Recommendation: Amend MN Rule 4714.0608, use the 2018 UPC but amend 608.5 and use the verbiage as presented in PB0115.	Accept modified language
47.	PB0103	RFA (2018 UPC)	Brent Marsolek, Dave Wagner	UPC 609.1, 312.6	UPC sec. 609.1. Installation	Proposal: amend 2018 UPC sections 312.6 , 609.1 Recommendation: Amend water pipe bury depth requirements: "Building supply and yard piping shall be not less than 12 inches (305 mm) below the maximum local frost depth in accordance with Section 312.6, or an alternative approved by the Authority Having Jurisdiction." PB to define "maximum frost depth" or find a published source of maximum frost depth.	6/17/19	The recommendation matches NFPA 24 and the Board agreed to accept the recommendation with <i>no need for the PB to define "maximum frost depth" or find a published source of maximum frost depth.</i> Wagner and Tran no longer need to review and bring a revised recommendation back to the Board as discussed earlier.	Accept as modified
48.	PB0113	RFA	Brent Marsolek, Dave Wagner	4714. 609	Meter location, section 609.11	Proposal: amend Minn. rule 4714.0609.11 to require water meters be located as close as possible to the point of entrance of the potable water supply pipe.	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Recommendation: amend Minn. rule 4714.0609.11 as drafted in RFA.			
49.	PB0114	RFA (2018 UPC)	MDH	609.6 and 611.0 through 611.3	Various chapter 6 proposals (MDH)	Proposal: Maintain Minnesota amendments in rule chapter 4714 to sections 609.6 and 611.0 through 611.3. Recommendation: Maintain Minnesota amendments to sections 609.6 and 611.0 through 611.3.	6/17/19	The Board agreed to accept recommendation as presented.	Accept
50.	PB0106 PB0129	RFA (2018 UPC)	Multiple	609.10	Quick acting valves, water hammer, section 609.10	Proposal: define “quick-acting valve” as used in section 609.10. Recommendation: Full-board discussion	6/17/19	The Board agreed that it would be too difficult to define “quick-acting valve” and after much discussion agreed to table this item.	Table
51.	PB0114	RFA (2018 UPC)	MDH	609.11 to 609.12	Various chapter 6 proposals (MDH)	Proposal: Renumber in Minn. rule, section 609.11 to 609.12, keep Minnesota amendment. Recommendation: Renumber in Minn. rule, section 609.11 to 609.12, keep Minnesota amendment.	6/17/19	The Board rejected the recommendation as presented because section 609.11 would be replaced. Pipe insulation removed.	Reject
52.	PB0115	RFA (2018 UPC)	DLI	611.3.1	Various chapter 6 proposals (DLI)	Proposal: add subsection 611.3.1 to Minn. rule 4714.0611 Recommendation: add subsection 611.3.1 as proposed. See RFA PB0115 .	6/17/19	The Board agreed to accept modified proposal and recommendation as shown below. MODIFIED Proposal: add subsection 611.5 to Minn. rule 4714.0611 MODIFIED Recommendation: add subsection 611.5 as proposed. See RFA PB0115 .	Accept as modified
53.	PB0119	RFA (2018 UPC)	Jason Kruger	Table 701.2	Amend Table 701.1 to allow the use of reinforced concrete pipe as described in ASTM C76	Proposal: Amend Table 701.2 of Chapter 7 to add ASTM C76 reinforced concrete pipes and ASTM C443 as proposed Recommendation: amend as proposed with addition of footnote stating, “**For storm sewer application only”	6/17/19	The Board agreed to accept recommendation as presented.	Accept
54.	PB0121	RFA (2018 UPC)	DLI	701.1	chapter 7, various	Proposal: minor corrections and renumbering to coordinate with numbering changes in the 2018 UPC	6/17/19	The Board agreed to accept recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Recommendation: amend as proposed. See 3/11/19 meeting minutes .			
55.	PB0107	RFA (2018 UPC)	Aaron Ganson	Table(s) 701.1 (and 1701.1)	polypropylene pipe per ASTM F2764, Table 701.1 and Table 1701.1 (referenced standards)	Proposal: Add polypropylene pipe per ASTM F2736 and ASTM F2764 to Tables 701.1 and 1701.1 for sanitary building sewers. See 3/11/19 meeting minutes . Recommendation: add the ASTM standards, and joints and connections section as proposed (with updated numbering per the UPC 2018).	10/15/19 (added language: add deflection test) 6/17/19	MODIFIED recommendation: <ul style="list-style-type: none"> Add footnote *** With no change in direction and deflection test. Add the ASTM standards with updated numbering per the UPC 2018 under building sewer pipe and fittings. No directional changes. If good enough for sanitary sewer use then acceptable for storm use. Storm use would have cheaper pipe options available that could be used.	Accept as modified (and deflection test was added at the 10.15.19 Board meeting).
56.	PB0133	RFA (2018 UPC)	Robert G Moore	Table 701.1	Add ASTM F2562 to Table 701.1	Proposal: add ASTM F2562 standard to Table 701.1 (renumbered Table 701.2) Recommendation: do nothing, do not add ASTM F2562 to Table 701.1.	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
57.	PB0121	RFA (2018 UPC)	DLI	705.10.2 Expansion Joints	chapter 7, various	Proposal: delete Minnesota rule amendment and use the 2018 UPC language Recommendation: amend as proposed (use the 2018 UPC language)	8/29/19, 7/16/19	8/29/2019: The Board agreed with their decision to Accept the recommendation on 7/16/2019. 7/16/2019: The Board agreed to accept the recommendation as presented.	Accept
58.	PB0121 PB0108 PB0109	RFA (2018 UPC)	DLI	707.4.1	chapter 7, various	Proposal: eliminate the cleanout requirement for back-to-back (or common) vertical fixture drains installed at same level by deleting Section 707.4.1 Recommendation: delete section 707.4.1	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
59.	PB0121	RFA (2018 UPC)	DLI	707.4	chapter 7, various	Proposal: delete exception #3 of Section 707.4 Recommendation: keep exception #3 (DLI can review the RFA and resubmit)	7/16/19	The Board agreed to accept the recommendation as re-submitted using the 2021 UPC preprint language as follows: Exceptions: (3) Excepting the building drain, its horizontal branches, kitchen sinks, and urinals, a cleanout	Accept as modified

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
								shall not be required on a pipe or piping that is above the floor level of the lowest floor of the building.	
60.	PB0121	RFA (2018 UPC)	DLI	710.10	chapter 7, various	Proposal: add an exception to Section 710.10 for vents serving elevator sumps and pool sumps to not terminate through the roof Recommendation: amend as proposed, add an exception.	7/16/19	The Board agreed to accept the recommendation as presented. Exception: <u>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.</u>	Accept
61.	PB0096	Final Interpretation	Peter Daniels, PE	710.10 and 906.4	Do Plumbing Code sections 710.10 and 906.4 apply to exterior sumps and receiving tanks?	Final Interpretation: Yes, if the sump and receiving tank are located within the property lines and not covered by a utility easement. If the sump and receiving tank are covered by a utility easement, then the Plumbing Code does not apply.	7/16/19	Final Interpretation issued on 8/29/2018 The board agreed to take no action.	No Action
62.	PB0127	RFA (2018 UPC)	Scott Thompson	Sec. 712.1	Amend section 712.1 [and 4714.0712, subp. 1]	Proposal: repeal MN amendment to section 712.1 and use 2018 UPC 712.1 language. Recommendation: keep current MN amendment in Minn. rule part 4714.0712 .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
63.	PB0121	RFA (2018 UPC)	DLI	715 - CIPP	chapter 7, various	Proposal: amend Minn. rule 4714.0715 regarding section 715.3 to reflect the language of UPC 2018 Recommendation: full board should have a full discussion and make a decision on this proposed change. See 3/11/19 ad hoc meeting minutes for discussion notes.	7/16/19	The Board agreed to reject the recommendation as presented.	Reject
64.	PB0121	RFA (2018 UPC)	DLI	717.1, Table 717.1	chapter 7, various	Proposal: add language to provide an option for the AHJ 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: "Loadings less than the listed minimums must be approved by the Authority Having Jurisdiction."	7/16/19	The Board agreed to accept the recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Recommendation: add language as proposed. See RFA PB0121 .			
65.	PB0121	RFA (2018 UPC)	DLI	719.6	chapter 7, various	Proposal: add an additional option to join pipe to manholes and similar structures to provide a water tight connection Recommendation: amend as proposed. See 3/11/19 meeting minutes .	7/16/19	The Board agreed to accept the recommendation as presented but noted that the word “follow” should be “follows” as shown below. <u>Connections to manhole and similar structures must be provided as follows:</u> add “s” to follow	Accept w-amendment (adding “s” to follow)
66.	PB0136	RFA (2018 UPC)	DLI	4714.0724	Add a table to section 724, Recreational Vehicle, drainage pipe sizes	Proposal: amend section 724.1 as proposed Recommendation: Amend section 724.1 as proposed in PB0136 .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
67.	PB0131	RFA (2018 UPC)	Cathy Tran, DLI	810.1	Chapter 8, various	Proposal: Amend 810.1 Steam and Hot Water Drainage Condensers and Sumps and delete sections 810.1 (remaining) to 814.1 (see RFA PB0131) Recommendation: amend as proposed. See 3/29/19 meeting minutes .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
68.	PB0131	RFA (2018 UPC)	Cathy Tran, DLI	4714.0813	Chapter 8, various	Proposal: amend current Minn. rule 4714.0813 SWIMMING POOLS Recommendation: amend as proposed. See 3/29/19 meeting minutes .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
69.	PB0130	RFA (2018 UPC)	Scott Thompson	905.3	Adopt 2018 UPC section 905.3 in its entirety	Proposal: adopt Section 905.3 of the 2018 UPC in its entirety, delete MN amendment to section 905.3 in Minn. rule 4714.0905 Recommendation: no recommendation, full board to consider the proposal. See 3/29/19 meeting minutes .	7/16/19	The proposal was rejected.	Rejected
70.	PB0117	RFA (2018 UPC)	Dennis Anderson	908.2	delete 908.2	Proposal: delete section 908.2 in its entirety (Horizontal Wet Venting for a Bathroom Group)	7/16/19	The Board agreed to accept the recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
						Recommendation: keep section 908.2 in its entirety.			
71.	PB0122	RFA (2018 UPC)	Richard Blaylock	911	add/keep section 911.0 through 911.5	Proposal: adopt circuit venting method under 2018 UPC Recommendation: adopt circuit venting method (no action necessary to include)	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
72.	PB0089	RFA	Cathy Tran, DLI	1002.2 Fixture traps	Chapter 10	Proposal: add an exception to 1002.2: "Exception: Emergency floor drains, tell tail floor drains, and floor drains not used as waste receptors installed within 25 feet of a vented branch or main." Recommendation: Amend as modified, see 3/29/19 meeting minutes .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
73.	PB0089	RFA	Cathy Tran, DLI	1006.1	Chapter 10	Proposal: Add an exception to the end of 1006.1: "Exception: Floor drains or trench drains which connect to sand interceptors or oil and flammable liquid interceptors do not need to be trapped." Recommendation: Amend as modified, see 3/29/19 meeting minutes .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
74.	PB0089	RFA	Cathy Tran, DLI	1016.4	Chapter 10	Proposal: Amend section 1016.4 Recommendation: Amend as modified, see 3/29/19 meeting minutes .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
75.	PB0089	RFA	Cathy Tran, DLI	1017.1	Chapter 10	Proposal: Amend section 1017.1 Recommendation: Amend as modified, see 3/29/19 meeting minutes .	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
76.	PB0111	RFA (2018 UPC)	Ken Loucks	1014.2.2	Exception to section 1014.2.2 vents	Proposal: Add an exception to Section 1014.2.2 Vent Recommendation: do not add exception, leave 2018 UPC language as is.	7/16/19	The Board agreed to accept the recommendation as presented.	Accept

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
77.	PB0112	RFA (2018 UPC)	Mike Johnson	1017.2	Design of interceptors, section 1017.2	<p>Proposal: Establish set sizing for garages used for storage with 10 or more vehicles</p> <p>Recommendation: amend section 1017.2 and add subsection 1017.2.1, to read as stated in 3/29/19 meeting minutes.</p>	7/16/19	The Board agreed to accept the recommendation as presented.	Accept
78.	PB0123	RFA (2018 UPC)	Aaron Ganson	Table 1101.4.5	Add materials and standards to Building Storm Sewers, create Table 1101.4.5	<p>Proposal: create a table in chapter 11 and add referenced standards to the table, or add the referenced standards to Table 701.2.</p> <p>10/15/2019: Recommendation: Do not create table in Chapter 11. Include F2306 and F2881 standards for storm sewer use only, include F2648 and add footnote #1 for yard drainage only, to Table 701.2, add proposed joints language, to section 1101.4.5 and referenced standards 1701.1. Add joints and connections section as proposed (with updated numbering per the UPC 2018). Add Footnote #2 to require deflection testing for pipes 12" and larger. Note: Reference PB0142 to renumber.</p> <p>7/16/19: Recommendation: Do not create table in Chapter 11. Include F2306 and F2881 standards for storm sewer use only, include F2648 for yard drainage only, to Table 701.2, add proposed joints language, to section 1101.4.5 and referenced standards 1701.1. Add joints and connections section as proposed (with updated numbering per the UPC 2018)</p>	10/15/19 (modified) 7/16/19	<p>10/15/19 – The board made modifications as shown in recommendation.</p> <p>7/16/19: After the discussion below, the Board agreed to accept the recommendation with a modification to replace ASTM C1628 with ASTM C443 in Section 1101.2.1 Mechanical Joints.</p> <p>Riley Dvorak, Forterra Pipe and Precast, and Jennifer Schaff, County Materials Corp, addressed the Board after Jason Kruger's email regarding Line #78 of PB0123 was read aloud by the Chair (see Correspondence section of the 7.16.2019 minutes).</p> <p>Dvorak said there are two standards C443 and C1628 – both will have the same performance requirements, both are required to meet 13 PSI. There is one major difference in that C1628 requires additional tolerance requirements. Their standard product meets the performance criteria of C443, but the joint tolerances are slightly different.</p> <p>Schaff said that through this process she found that C1628 was created for a sanitary sewer mechanism for a joint. C443 is standard for storm sewer applications which is what is being discussed. The federal standard referenced in the submittal is C443 as well, therefore, Schaff said if the intention is for storm sewer use only, then refer just to C443. If using for sanitary</p>	Accept as modified on 10/15/19 and 7/16/19

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
								sewer application, then that would be something different.	
79.	PB0125	RFA (2018 UPC)	Cathy Tran, DLI	1101.11.2.1 and 1101.11.2.2	Chapter 11, various	Proposal: add subsections 1101.11.2.1 Location and 1101.11.2.2 Engineered System. Recommendation: amend as submitted. See PB0125 .	8/29/19	The Board reviewed the 4/22/2019 Ad Hoc Committee meeting minutes for modifications that the Committee made to PB0125, item 1, page 3, and the Board accepted the modifications. The Committee's recommendation includes clarity to adding secondary roof drains. The Board agreed to accept the recommendation as modified in the 4/22/2019 Committee minutes. (4/22/2019 minutes, page 3 of 5, PB0125, item 1 should read 1101.11.2.1 not 1101.2.1)	Accept as modified in 4/22 Ad Hoc minutes
80.	PB0125	RFA (2018 UPC)	Cathy Tran, DLI	Chapter 11	Chapter 11, various	Proposal: amend sections 1103.1 and 1103.2 (renumbered from 1106). Add to both sections. Recommendation: amend as submitted. See PB0125 .	8/29/19	The Board reviewed the 4/22/2019 Ad Hoc Committee meeting minutes for modifications that the Committee made to PB0125, item 2, page 3, and the Board accepted the modifications.	Accept as modified in 4/22 Ad Hoc minutes
81.	PB0132	RFA (2018 UPC)	Arthur Schwidder	1106	Add a new section 1106.5 Sump Manhole/Catch Basin with Vertical Baffle	Proposal: require a minimum of 18 inches between nearest inlet pipe and a vertical baffle Recommendation: take no action, do not require a minimum of 18 inches.	8/29/19	The Board this could restrict the use of products. The Board agreed to take no action as recommended by the Committee.	Accept
82.	PB0124	RFA (2018 UPC)	MDH	Chapter 15	Do not adopt chapter 15	Proposal: Do not adopt chapter 15 Recommendation: do not incorporate chapter 15.	8/29/19	The Board agreed to accept the recommendation as presented.	Accept
83.	PB0124	RFA (2018 UPC)	MDH	Table 1702.9.4	Update Table 1702.9.4	Proposal: Amend Table 1702.9.4 as proposed. Recommendation: amend Table 1702.9.4 as proposed in PB0124 .	8/29/19	The Board reviewed the 5/31/2019 Ad Hoc Committee minutes for modifications made to PB0124 and accepted these modifications.	Accept as modified in 5/31 Ad Hoc minutes

Line #	PB #	RFA/RFI	Submitter	Rules affected	Brief Title	Proposal and Committee recommendation	Date reviewed by PB	PB action	(A)ccept (R)eject (M)odify
84.	N/A	N/A	Committee	Chapts. 16, 17	Chpts. 16, 17	Proposal: Keep current chapter 17 regarding rainwater catchment systems (renumber as appropriate for consistency with 2018 UPC), with RFA proposals recommended	8/29/19	The Board agreed to accept the proposal as noted with the change to Table 1702.9.4 as amended above.	Accept proposal as presented
85.	N/A	N/A	Committee	App. E	App. E	Proposal: do not include Appendix E in the Minnesota Plumbing Code Recommendation: do not include Appendix E in the Minnesota Plumbing Code	8/29/19	The Board agreed to accept the recommendation as presented.	Accept

PB = Minnesota Plumbing Board

Accept, Reject, Deny column = in reference to the Board’s determination in regard to the committee’s recommendation

Some PB numbers are not included for a variety of reasons (e.g., RFA was withdrawn, RFA/RFI was incomplete, was for the plumber licensing chapter, etc.).

All UPC section and table numbers that have changed in the 2018 UPC will be adjusted as necessary, even if not indicated on this table. The substantive change is addressed here and renumbering corrections will be made as necessary for any proposed rules stemming from this document.

Board Review of 2018 UPC RFAs

Line #	PB #	Submitter	Rules affected	Brief Title	Proposal in RFA	Date reviewed by PB	PB Action	(A)ccept (R)eject (M)odify
1.	PB0140	Cathy Tran	408.7, 4xx.x, 1009.4	Lining for showers and receptors; trench drains; relief vent	Proposal: #1: Add language to 408.7 Lining for Showers and Receptors: <u>Unless the shower receptor is poured on the ground as part of a slab, an approved shower liner must be provided in accordance with the requirements of this section.</u> #2: Add language as follows: <u>4xx.x Trench Drains Trench Drains shall comply with ASME A1 12.6.3, ASME A1 12.3.I. or be constructed of watertight material, watertight joint and be tested for watertightness by filling with water to the level of the flood rim of the trench drain.</u> #3: Add language as follows: 1009.4 Relief Vent: <u>Interceptor (clarifier) and neutralization tank vent ports must be located above the highest liquid flow level.</u>	8/29/19	The Board agreed with proposed amendments as follows: 1. Section 408.7 – The Board agreed with proposed amendment 1 as presented. 2. Section 4XX.X (Trench Drains) – The Board agreed with proposed amendment 2 as presented. 3. Section 1009.4 (Relief Vent) – The Board agreed with proposed amendment 3 as presented.	Accept
2.	PB0142	Jason Kruger	1107.2	Thermoplastic piping materials requirements, add section 1107.2	Proposal: The proposed change would add deflection testing requirements to Chapter 11, Storm Drainage. Thermoplastic piping materials deflect in response to loading. Such deflection is by design and proper installation is necessary to ensure the pipe has not deflected more than 5%, typical, as compared to the actual inside diameter of the pipe. If deflection exceeds 5%, structural concerns can include shear cracking and buckling deflection, the point at which the pipe no longer sustains increasing or constant load without increasing deflection. The requirement needs to be explicitly defined apart from the thermoplastic pipe ASTM standard references.	10/15/19	The Board accepted the proposal with the following modification to D. Inspection Reporting, item #1: “Provide a copy of the documented inspection to the <u>administrative authority engineer and municipal official</u> upon ...” Discussion: Tran said the RFA is specific to storm drainage. Jennifer Shaff addressed the Board. The market has changed and there are many more types of piping that are less stiff. If there is a stiff pipe there is good compaction around smaller pipes. Tran	Modify

Line #	PB #	Submitter	Rules affected	Brief Title	Proposal in RFA	Date reviewed by PB	PB Action	(A)ccept (R)eject (M)odify
							added that this adds to the integrity of the pipe. Jacobs clarified that this would apply to outside of the building. Erickson said that this falls under the jurisdiction of the Plumbing Code to the property line. Weum said that MnDOT's language says "C. Retest 7 days ..." The Board decided to leave at 30 days as presented.	
3.	PB0143	Jason Shank	417.6, 214.0	hot and cold water dispensers	Proposal: 1. 417.6: Add language 2. 214.0 -L: Add language 3. Table 1401.1: (Move from 1 st table to 2 nd table) Standard Number: ASSE 1023- 2019 1979 Standard Title: <u>Electrically Heated or Cooled Water Dispensers</u> Hot Water Dispensers Household Storage Type Electrical Referenced Section: 301.1.2, 301.2 417.6	10/15/19	Discussion: John Parizek addressed the Board (president of ASSE International). IAPMO will be publishing the 2020 at the beginning of 2020. The reason the RFAs were presented is because product standards and references will be in the new UPC but the Plumbing Board may not look at amending these sections until 2024. The products would be left by the wayside. He has concerns. The standards have been vetted through the ASSE process, will be in the national UPC, and he would like to see them included in MN amendments. There isn't a proper definition for low pressure water dispensers. It isn't referenced in the code. 417.6 would reference the standard. Todnem said the Board could accept the proposal now but remove from rulemaking if IAPMO does not approve. The Board accepted the proposal as presented.	Accept
4.	PB0144	Jason Shank	421.2, Table 1401.1	Temperature limiting devices for public lavatories	Proposal: Devices that conform to ASSE 1070/ASME A 112.1070/CSA B125. 70 or water heaters that conform to ASSE 1084 are appropriate for lavatory	10/15/19	Parizek addressed the Board. This could be an alternate for a 1070 or 1084 water heater. This language will be in the 2021 UPC. The language presented directly	Accept

Line #	PB #	Submitter	Rules affected	Brief Title	Proposal in RFA	Date reviewed by PB	PB Action	(A)ccept (R)eject (M)odify
					applications. ASSE 1084 requires water heaters to have appropriate Class B or Class C electric control protective measures per UL 607301 to control the output temperature for point of use applications. This limits the water temperature when set to 110°F (43 °C) from the default of 120°F (49 °C), just as one would set an ASSE 1070 mixing valve. Also, CSA 8125.3 was harmonized into ASSE 1070 for temperature limiting devices. The text now shows the appropriate reference.		reflects language that will be in the 2021 UPC. The Board accepted the proposal as presented.	
5.	PB0145	Jason Shank	611.1.2, chpt. 2, Table 1401.1	Add ASSE 1087 - 2018, update various water conditioning NSF standards	Proposal: 1. 611.1.2 Manufacture and Assembly 2. Table 611.1.2 3. 203.0 -C- 4. 218.0 -P- 5. Table 1401.1	10/15/19	John Parizek retracted the RFA and said he would re-submit with modifications.	Retracted
6.	PB0146	Jason Shank	611.1.1, chpt. 2	Move and modify section 611.1.1 to chapter 2	Proposal: The language is correct but is located in the wrong section. Proposed change moves it into Chapter 2 with the rest of the definitions.	10/15/19	John Parizek addressed the Board and the proposal was accepted as presented.	Accept
7.	PB0147	Jason Shank	Table 1401.1	Add ASSE 1082 - 2018, water heater standard	Proposal: The 2018 UPC separated standards that are referenced in the body of the code from those that are accepted but not referenced. In anticipation of that adoption, this proposed change follows suit. ASSE 1082 is a new standard for water heaters that have safe and sufficient controls that control the output water temperature. The standard was developed with the output temperature and flow tolerances found in ASSE 1017 for distribution mixing valves. It is not appropriate to use a water heater that conforms with ASSE 1082 for point-of-use applications, but it is appropriate to use it for an entire premises or	10/15/19	John Parizek addressed the Board. Not acceptable for plumbing use but for water temperature in the building. Developed a standard that will allow water heaters to control temperature. He wants to include the standard. It is not point of use. Include in the second table. The Board accepted the proposal as presented.	Accept

Line #	PB #	Submitter	Rules affected	Brief Title	Proposal in RFA	Date reviewed by PB	PB Action	(A)ccept (R)ect (M)odify
					when distributing to multiple fixtures and appurtenances. The purpose of this standard is to eliminate the need for competing control devices in a plumbing system when the temperature output can be appropriately controlled by these types of water heaters.			
8.	PB0148	Jason Shank	408.3, Table 1401.1	Tub and shower combination temperature control valve	Proposal: The temperature limiting function does not necessarily need to be performed by the same device that controls the water temperature from a showerhead. Rather than having to adjust each control valve, this gives installers and designers the option of using other devices for that function. Devices that conform to ASSE 1070/ASME A 112.1070/CSA B125.70 or water heaters that conform to ASSE 1084 are appropriate for bidet applications. ASSE 1084 requires water heaters to have appropriate Class B or Class C electric control protective measures per UL 607301 to control the output temperature for point of use applications. This limits the water temperature when set to 110°F (43 °C) from the default of 120°F (49 °C), just as one would set an ASSE 1070 mixing valve.	10/15/19	John Parizek said proposal reflects language that will be present in the UPC 2021. The Board accepted the proposal as presented.	Accept
9.	PB0149	Jason Shank	409.4, Table 1401.1	Water temperature control to bathtubs	Proposal: Devices that conform to ASSE 1070/ASME A112.1070/CSA 8125.70 or CSA B125.3, or water heaters that conform to ASSE 1084 are appropriate for point of use bathtub or whirlpool bathtub applications. ASSE 1084 requires water heaters to have appropriate Class B or Class C electric control protective measures per UL 607301 to control the output temperature for point of use applications. This limits the water temperature to 120°F (49 °C), or the setpoint whichever is lower.	10/15/19	John Parizek said proposal reflects language that will be present in the UPC 2021. The Board accepted the proposal as presented.	Accept

Line #	PB #	Submitter	Rules affected	Brief Title	Proposal in RFA	Date reviewed by PB	PB Action	(A)ccept (R)eject (M)odify
10.	PB0150	Jason Shank	410.3, Table 1401.1	Water temperature control to bidets	Proposal: Devices that conform to ASSE 1070/ASME A112.1070/CSA B125.70 or water heaters that conform to ASSE 1084 are appropriate for bidet applications. ASSE 1084 requires water heaters to have appropriate Class B or Class C electric control protective measures per UL 607301 to control the output temperature for point of use applications. This limits the water temperature when set to 110°F (43 °C) from the default of 120°F (49 °C), just as one would set an ASSE 1070 mixing valve. Also, CSA B125.3 was harmonized into ASSE 1070 for temperature limiting devices. The text now shows the appropriate reference.	10/15/19	John Parizek said proposal reflects language that will be present in the UPC 2021. The Board accepted the proposal as presented.	Accept
11.	PB0151	Jason Shank	416.2, Table 1401.1	Emergency eyewash and shower equipment water temperature control	Proposal: There is a new ASSE standard for water heater serving emergency fixtures, ASSE 1085. This standard requires the water heater to control the temperature to a tepid range as required for emergency fixtures. ASSE 1085 water heater provide the equivalent level of protection as an ASSE 1071 thermostatic mixing valve. ASSE 1071 valves are commonly used to prevent scalding and provide comfort to users of emergency fixtures. The valves and water heaters provide a fail-safe mechanism to still provide cold water if either the hot water flow fails or if the heating element fails. ASSE 1071 devices are required to be installed by the model codes. This updates the MN Code to the current safe plumbing practices.	10/15/19	John Parizek addressed the Board and the proposal was accepted as presented.	Accept

Exhibit J: Oral Comments, Aug. 19, 2020, Hearing: David Siegel, Housing First Minnesota

Aug. 19, 2020 OAH Testimony, As Delivered
David Siegel, Housing First Minnesota

Thank you your honor.

My name is David Siegel, D-A-V-I-D S-I-E-G-E-L, executive director of Housing First Minnesota, a trade association representing more than 1,100 member firms engaged in all segments of the housing industry throughout Minnesota.

We are here today because Housing First Minnesota and its members believe that the Board of Electricity's unamended adoption of the 2020 National Electric Code did not follow a proper process. Specifically:

- The process to adopt them was flawed, rushed and the outcome predetermined.
- The code includes changes that are unnecessary,
- And the result is a code proposal that unnecessarily exacerbates the state's housing challenges relating to affordability, supply, and equity.

Not only has the Board erred in advancing this iteration of the code, but the Board's long-standing practice and culture of rubber-stamping the model National Electric Code as presented bypasses the critical balancing act between mandate and affordability that statute requires for all regulations, and especially those that drive up cost and therefore impact Minnesotans attempting to become homeowners.

As proposed, the Board's adoption process perpetuates and cements Minnesota's regrettable place as the state with the highest base-level housing costs in the Midwest, the lowest available housing inventory in the nation and the widest gaps in homeownership between whites and communities of color in the nation.

We are concerned that the regulatory process unduly benefits companies and manufacturers through code mandates requiring their products and services, while harming homeowners. The code review process exists to protect the homeowners who are required to incorporate these mandates and pay these costs – and their voice, along with the voice of contractors required to conduct this work, was completely absent in this effort, as it has been in past NEC adoptions, and will continue to be without substantial changes in process.

As it relates to the 2020 NEC adoption specifically, there several areas in which the Board of Electricity failed to follow a proper process in two respects:

1. It failed to meet its burden of providing an adequate and informative Statement of Need and Reasonableness, and;
2. It failed To consider the additional costs that the adoption of the 2020 NEC will have on the already distressed affordable housing market.

There are several other members and staff from Housing First Minnesota with me today to share more specifics.

Thank you for your time and for the opportunity to be here today.

Exhibits From Housing First Minnesota Comments Re: Proposed Rules Governing Adoption of the 2020 National Electrical Code, Minnesota Rules, Part 1315.0200; Revisor's ID Number R-4632

Exhibit K: Oral Comments, Aug. 19, 2020, Hearing: Tony Wiener, Cardinal Homebuilders

**Aug. 19, 2020 OAH Testimony, As Delivered
Tony Wiener, Cardinal Homebuilders**

My name is Tony Wiener, T-O-N-Y W-I-E-N-E-R and I am a home builder with Cardinal Homebuilders.

Thank you, your honor for the opportunity to address you today.

As Mr. Siegel stated, the board's action will take housing costs in the wrong direction.

As a homebuilder, I have direct interaction with electricians and homebuyers. Myself and these groups make up the most affected groups by these rules. Interestingly, none of my customers want the new mandates the board wants to add to their new home. The electrical board's actions will cause an 11-15% increase in electrical contractor costs. This is at a time that all other state bodies regulating housing have been working to NOT increase housing costs.

One type of home we specialize in is a villa style with one level living and a finished basement, targeted at the empty nester / move down market. Some of my buyers spend significant time elsewhere, traveling to see their grandchildren or spending a few months in the winter in a much warmer environment. The owners that I have talked to have significant concerns over the exterior disconnect and surge protection requirements that would be installed on their home, given the increased temptation for a potential burglar to cut the power to the home or a group of teenagers "being teenagers"

For our buyers, they will pay just under \$1,000 in increased cost for their home as a result of this code increase. \$817 of that is direct cost, which is then placed into a standard pricing formula that includes overhead, margin, and commissions.

The rulemaking process focuses on the costs to a builder, but these costs, like all regulatory and material costs, are always paid by homebuyer.

I think that is who is missing from this process: the focus on the homebuyer. This is rulemaking by electricians, for electricians. But not all electricians support the board's continuous rubber stamping of the NEC. I consulted an electrical contractor that I know and trust before coming here today and he explained to me that much of what has been added over the more recent years is unnecessary and in the case of arc fault interruption, knowingly problematic. With people working at home more and more these days I have been receiving many more complaints of nuisance tripping of their AFCI breakers.

One recent buyer had a particularly troubling story about their AFCI breaker. She uses a CPAP machine and that because of the known issues with the AFCI her breaker was tripping. My electrician informed her that one of the fixes would be to get a new CPAP machine. Of course, that would be at her own expense or risk worrying that the breaker may trip at night.

When I asked the electrician if he would join me here, the response was not a yes or no, but “Are you nuts?” It was explained to me that no electrical contractor who wants to stay in business or keep working efficiently would testify against a rule that is up for adoption . You see, the electrical boards authority over rulemaking, as well as licensing, reciprocity, and interpretations. With the same body having oversight over all these areas, contractors fear opposing the board’s actions, no matter how problematic.

This process was rushed with the outcome predetermined: adoption of the NEC without any amendments.

Thank you for your time.