

**ND State Electrical Board**  
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**Find us at**  
**www.ndseb.com**

## A Message From the Executive Director:



**Hello, everyone!**

We are pleased to announce North Dakota has now signed a Journeyman Electrician Reciprocity Agreement with Iowa.

North Dakota has Journeyman reciprocal licensing with 12 states and Master reciprocal licensing with two. Our Board and staff carefully review the license requirements of other states to ensure they meet our North Dakota standards before entering into a reciprocity agreement. This ensures the safety of our residents. See our website for details.

We continue working on depleting the "undertaking fund" as we know it as directed from the last legislative session. We have been addressing the abandoned correction violations left behind by past (rouge) contractors by sending out letters to the property owners of these electrical

installations stating these violations need to be corrected. If you receive calls from property owners stating they received our letter and have questions, please ask them give our office a call.

The Board has started the administrative rules process. The main goal of this year's rules process is the reorganization of the N.D. Laws, Rules and Wiring Standards. This is a major undertaking but with the help of a committee made up of inspectors and office staff, we'll get through it. The goal is to organize the administrative rules portion into categories of like information and eliminate any redundant code articles that the NEC may already have. The end result is to follow along with the NEC but will be more user-friendly. Time will tell.....

We still have a few 2014 NEC Books for sale if you are in need. They are \$70

each (plus \$5 shipping, if mailed). Either stop by or give us a call and we'll get one shipped out.

We also like to hear from you so send me questions and I'll do my best to answer them and as always we want your comments too.

To keep your information in our files accurate, please keep us informed about your most current address as well as an e-mail address.

I hope you are having a great winter - remember, spring is just around the corner!

Be safe out there,  
 James Schmidt



Ensuring Public Safety Since 1917

# Connections

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## 2016 NDSEB CEU Class Schedule Changes Slightly Including Some Venues

**The** NDSEB will again offer 16 CEU classes around the state for those electricians interested in keeping their license requirements up to date. Due to popular demand, Scott Halle will be presenting the classes, and be on the ND Wiring Standards and the 2014 NEC, including Special Occupancies and Soares Grounding.

The 2016 classes will begin in June, 2016 and finish up in January, 2017.

More information and registration will very soon be updated at [www.ndseb.com](http://www.ndseb.com), so please watch for it.. Also, some of the venues (place held for classes) will be changing, so make sure you show up at the correct venue. To guarantee your spot, you need to register early.

The NDSEB website also lists several other approved CEU classes from other providers ☺



CEU classes are offered all around the state, but register early because space is limited.

### 2016 CEU Class Schedule

#### June 2016

June 9: Bismarck  
 June 10: Fargo

#### July 2016

July 14: Dickinson  
 July 15: Williston

#### August 2016

August 11: Devils Lake  
 August 12: Jamestown

#### September 2016

September 15: Minot  
 September 16: Bismarck

#### October 2016

October 13: Fargo  
 October 14: Grand Forks

#### November 2016

November 17: Williston  
 November 18: Dickinson

#### December 2016

December 8: Bismarck  
 December 9: Minot

#### January 2017

January 12, 2017: Grand Forks  
 January 13, 2017: Fargo

### NDSEB Mission Statement:

Ensure safety and protect life, health, and property in the daily use of electricity.

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## News & Notes from NDSEB

- **If you are an active Journeyman, your license will expire March 31, 2016** (unless you were first licensed or renewed after January 1, 2016). Journeyman renewal notices were mailed in January, 2016. We continue to encourage online renewal at [www.ndseb.com](http://www.ndseb.com).
- **If you are an active Master or Class B electrician, your license will expire on April 30, 2016** (unless you were first licensed or renewed after January 1, 2016). Master and Class B renewal notices are scheduled to be mailed the first week of March, 2016.
- **Requirements to renew a "Contracting" Master or Class B license, and the reasons a license may be placed on "hold" status**
  - ◇ **from renewing:**
    - ◇ Must meet acceptable continuing education - eight hours (50% based on 2014 NEC).
    - ◇ Certificate of Liability Insurance must be current and on file.
    - ◇ Past Due Violations:
      - ◆ Any outstanding past due corrections must be made and submitted.
      - ◆ Corrections are typically due within 30 days of an inspection, unless other arrangements have been made.
    - ◇ Late Certificate Violations:
      - ◆ Any job that was inspected and we are now awaiting final paperwork and inspection fees.
      - ◆ Administrative rules indicate that within 15 days of completion, use or occupancy, the final paperwork and inspection fees must be submitted.
  - ◇ Must verify that any individual working under your supervision doing electrical work in North Dakota maintains a current registration or license and has renewed for the next renewal period. You will also attest that any future individuals hired and working under your supervision will also maintain a current registration or license.
    - ◆ We have recently come across more apprentices who have lost time/experience credit due to not being renewed on time. This is not only their responsibility to make sure they stay registered, but also you are attesting that your

## Proper Equipment Grounding Essential to Safety

As the picture at the right illustrates, care must be taken when installing electrical equipment to be sure all grounding and bonding requirements are met for electrical safety.

In the photo provided, no equipment grounding conductor has been installed in the EMT raceway, and the locknut on the left raceway has not been properly tightened creating a poor connection and a high impedance ground fault current path.

NEC Article 250.118 provides us with a list of permitted equipment grounding conductors, and the raceway or conductor used as an equipment grounding conductor must be suitable for the purpose and installed so that it provides a low impedance ground fault current path. The equipment grounding conductor is the return path to source for fault current, and it needs to be installed properly to ensure proper and quick operation of the overcurrent device for the circuit.

Wire type equipment grounding conductors are sized according to Table 250.122, and are selected according to the size of the overcurrent device

installed at the origin of the circuit. For example, with a 100 amp overcurrent device protecting the circuit, a #8 copper or #6 aluminum equipment grounding conductor would be required to be installed.

Be sure to remember that where ungrounded conductors are increased in size from the minimum size that has sufficient ampacity for the intended installation, wire type equipment grounding conductors shall be increased in size proportionately according to the circular mil area of the ungrounded conductors.

Also occasionally overlooked are the requirements for motor circuits, where the overcurrent device is increased in size to accommodate starting current, then the equipment grounding conductor typically is sized to that device according to the requirements of 250.122(D)(1) and (D)(2).

Taking care when selecting and installing equipment grounding conductors ensures that these



important parts of the circuit will be ready to do their job when called upon in a safe and reliable manner. Tightening lock nuts and set screws, installing wires properly in terminals, and properly splicing wires with the correct fastener for the application will ensure that these connections will be able to do their job safely and effectively if they are needed for a fault condition.

As the picture shows, one bad connection can impair the ground fault current path, which could result in hazardous consequences. ☹

employees have renewed and are current.

Please review your file and make sure you are in compliance. If you have any questions or concerns, please contact us.

- **Verifying that the equipment you connect is listed continues to be an issue.** Air compressors seem to be the main culprit. Recently we have received letters from engineers from C-Aire, Castair, and FS Curtis certifying these products meet or exceed UL 1450 (listing for air compressors). We have also seen "commercial smoke houses" come into North Dakota which are not listed and they must comply with UL 197.

We just want to remind all electricians to be sure to verify equipment is listed before

connecting the power to it. If you have the opportunity to advise your customer before they make the purchase, tell them to ask the sales person if it is a listed piece of equipment. Once the purchase is made, it is often too late. Our website has contact information for testing laboratories if needed.

- **Continuing Education:** We are receiving a lot of phone calls concerning available continuing education classes and/or "How many credits do I have on file?" Feel free to check out our web site at [www.ndseb.com](http://www.ndseb.com), under "Lookup Your Continuing Education Credits on File" for available continuing education credits you have on file with this office, but keep in mind that on June 30th of every year we do discard all CEUs that will be over two years old for the next renewal period. This information is

also printed on the address label of our newsletters and your license renewal letter.

Also, under "Other CEU Providers and Courses", we have provided a list of approved North Dakota providers, including online and correspondence courses. For any classes taught out-of-state, those are reviewed and/or accepted on a case-by-case basis.

- **Corrections and Final Paperwork:** Upon a final inspection, a correction report may be written that contains an item to submit "final paperwork and fees." We have been seeing an increase of correction reports (paper and online) being submitted without the final paperwork and fees. You may be seeing these correction reports getting returned/sent back to you. We cannot receive a correction report if this is an item and we are not in receipt of it. Before a correction is signed and submitted, please verify that you have submitted and paid the inspection fees pertaining to that wiring certificate listed on the correction report.

- **Review Your Business Plan.** Owners of electrical companies need to review their business plan on what provisions are in place when the Master or Class B electrician leaves or passes away. In reviewing the law with the Board's attorney, there are no provisions that allow any electrical work to continue without a Master or Class B electrician on record with the NDSEB. The NDSEB asks that each company review their business plan to avoid ceasing electrical work if you are faced with a situation of losing a Master or Class B electrician. If you have any questions, feel free to contact the NDSEB.

Also, under Section 24-02-01-02(3) a contracting electrician shall notify the North Dakota State Electrical Board immediately upon either changing from contracting status to non-contracting status or prior to leaving a firm they represented. ☹

## Making A Connection:

### District 7 Inspector Mike Lund

**District 7** Electrical Inspector Mike Lund has been with the NDSEB for close to six years. District 7 includes six counties in north central North Dakota. Prior to working for the NDSEB he worked for a local electrical contractor in Bismarck. Mike attended the North Dakota State College of Science in Wahpeton, concentrating on the electrical trade.

Mike has a soon-to-be 3 year-old daughter Taylor and enjoys time with his girlfriend Aundrea.

**Did you or do you have a mentor or a person that inspired you?** One person that inspired me a lot, is an old instructor by the name of Don Kruckenberg. He was a mentor/teacher that was very knowledgeable on electrical theory and knew all there was to know on motors and how to rewind/rebuild them from the ground up. Without electrical theory, one would not be successful in the electrical industry.

**What are your hobbies?** Fishing in my spare time and spending quality

time with my family.

**The best thing about North Dakota is . . . ?**

The season changes, and if you don't like the weather conditions wait awhile, as it will always change.

**What would be your dream vacation?** To someday go to Alaska to go King Crab fishing in the fall of the year. A very dangerous



adventure, but it would be an adrenaline rush! ☹