

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

## A Message From the Executive Director:



### Happy Spring!

We continue to educate with our 2015 CEU classes, note the schedule on page 2 of this newsletter. Scott Halle has put together

an excellent class so sign up early. We usually have lower attendance in the early classes (May, June, and July) so sign up early and take advantage of the nearly "one-on-one" attention from our instructor and inspectors!

Please remember the last of the 16 classes will be offered in December and we will not hold classes in January of 2016.

The schedule was to have the new software for our reporting system (the program that you log into for the e-Cert system or doing an online inquiry about your CEU hours) implemented at the end of 2014. The program developers ran

into several obstacles and now we're shooting for July 1st. One of the major changes will be the ability for contractors to pay for wiring certificates online using a few selected credit card companies. We are presently working with our bank and interviewing merchants that could provide this service. Remember the e-Cert system is very simple to use and a great way to manage your wiring certificates without the hassle of misplacing a paper copy.

**Do any of you remember your first job as an electrician when you were an apprentice?** I got my first job on a phone interview right before the 4th of July, 1979, and I was fresh out of college. I showed up at a shop on the next Monday morning full of you-know-what.....and continued to work there for several years, which included the oil boom of the late 70's early 80's. I don't think I ever truly thanked my two employers for hiring me and taking the

time to mentor me. And now, of course, it's too late as they've both passed from this world, one recently and the other a few years ago. If you have read my past articles you may remember I wrote about being a good mentor to apprentices..... well, in the same sense, don't forget to remember and thank your mentors, too. I know it's late, but thanks, Skip and Laddie.

In this same vein, we would like to acknowledge electricians that have passed away. At the end of each year, we will have a memorial insert page listing names, license number, home town, etc. of ND electricians that have passed away. We are relying on the public to inform us throughout the year as we are not always aware of someone's passing. So if you would like a special someone remembered, please let us know.

Be safe out there,  
 James Schmidt



Ensuring Public Safety Since 1917

# Connections

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## Undertaking Fund To Be Dissolved

A Bill to correct issues with the North Dakota State Electrical Board's (NDSEB) Undertaking Fund went through a series of amendments at the North Dakota Legislature this year before culminating in the elimination of the Undertaking Fund entirely.

The NDSEB's Undertaking Fund was created by an act of the ND State Legislature in 1983 to protect people and property when electrical projects are left unfinished or corrections are not completed by an electrical contractor as required. Money in the fund could be used by the NDSEB to hire a different contractor to bring projects up to code and make them safe.

Unfortunately, the authorities on the Undertaking Fund were outdated and it did not provide adequate monies for the NDSEB to handle issues.

*"The limits on the fund were \$5,000 per contractor,"* explains James Schmidt, Executive Director of the NDSEB. *"Since some*

*homes can have \$15,000-\$20,000 electrical systems and one contractor may abandon several projects all at once, it became clear that we are severely limited in our ability to help bring projects up to code."*

In order to address this issue, the NDSEB proposed House Bill 1229 to the 2015 ND Legislature. The Bill would dissolve the Undertaking Fund and have electrical contractors/ companies provide the NDSEB with a \$35,000 surety bond (or similar means) to ensure outstanding corrections would be completed by abandoned contractors. This is similar to how the State of Minnesota handles the issue and was how North Dakota handled the issue up until the 1983 legislation.

The Bill passed the House, but modified in the Senate. The Senate amended the Bill to keep the Undertaking Fund, but proposed raising the fee that every electrical contractor must pay to \$100 (instead of the current \$50) and raised the amount that could be used for code violation corrections to \$35,000 for each negligent or rogue contractor.

The amended Bill went back to the House, but failed to pass so a Conference Committee was appointed with representatives from both chambers to hash out the differences. The Conference Committee first amended the Bill to keep the Undertaking Fund in place but raised the limits even further - to a \$150 annual fee and up to \$50,000 that could be expended per contractor.

The Bill, as amended, was rejected by the House on April 9th, so the Conference Committee met again.

The final amended Bill, which passed the House and Senate on April 17th, includes the following:

- Increases the amount of money that the NDSEB can use to complete abandoned code violations by Master electricians to \$25,000 and Class B electricians to \$4,000;
- Beginning on July 1, 2016, it allows the NDSEB to use any remaining money from the fund to "inform and educate electricians".
- On August 1, 2017, the entire section regarding the Undertaking Fund is repealed.

Once the Bill is signed by Governor Dalrymple, it will go into effect on August 1, 2015.

*"The revised bill will dissolve the current Undertaking Fund,"* explained Schmidt. *"The Board will no longer play a role in funding the corrections left behind by absconding contractors."*

Schmidt encourages home and business owners to do their research before contracting with an electrician by making sure they are licensed in the State of North Dakota to do electrical work and by checking their references. ☺

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## Highlights from the February Inspectors' Meeting

The most notable topic from the February Inspectors' Meeting was the use of SE or SER cable installed in thermal insulation. Article 338.10(B)(4) in the 2014 NEC states: "Where installed in thermal insulation the ampacity shall be in accordance with the 60°C (140°F) conductor temperature rating."

Looking at 4/0 aluminum SER cable in Table 310.15(B)(16), it would be reduced to 150 amps by the 60 degree column. #2 Aluminum SER would be reduced to 75 amps. The best way to avoid this dilemma would be to keep the cable from contact with thermal insulation by strapping and supporting it away from the insulation.

There is an exception which can be found in 310.15(A)(2). "Exception: Where two different ampacities apply to adjacent portions of a circuit, the higher ampacity shall be permitted to be used beyond the point of transition, a distance equal to 3.0 m (10 ft) or 10 percent of

the circuit length figured at the higher ampacity, whichever is less."

We need to be careful of how we apply this exception. We have to do some math to determine what length of the cable can be in contact with the insulation. If a feeder circuit cable is 100 feet long, 10 percent of the cable length would be 10 feet and the max allowed would also be 10 feet, so we can use 10 feet. On a 110 foot cable 10 percent is 11 feet, but we have to use 10 feet because the exception says "whichever is less". Going the other direction, with a 90 foot feeder circuit cable, 10 percent is 9 feet, only 9 feet can be in contact with the insulation again because of the "whichever is less" statement in the exception.

For the purposes of using this exception, 10 feet would be the max ever allowed to be in contact with the insulation for cables 100 feet or longer and for cables less than 100 feet the

max is whatever the math tells you, which would always be less than 10 feet.

Article 338.10(B)(4) is not new to the code, but it is often overlooked. We hope this "heads up" keeps you out of trouble with this issue.



*"In the Spring, I have counted 136 different kinds of weather inside of 24 hours."*

- Mark Twain

## 2015 CEU Class Schedule - Register Online Early!

The 2015 NDSEB CEU class is entitled "2014 National Electrical Code Calculations".



Scott Halle is the NDSEB Training & Compliance Administrator.

This class is a review of various calculations performed in accordance with the 2014 NEC, including Load Calculations, Motor Calculations, Conduit and Box Fill Calculations, Conductor Sizing, and Grounding and Bonding Conductor Calculations. **You will be doing calculations during the class so be sure to bring:**

- A pen or pencil
- A calculator
- 2014 NEC code books

Other important things to know:

- Online-only pre-registration is required. Go to [www.ndseb.com](http://www.ndseb.com) and click on the Continuing Education tab entitled "2015 NDSEB

CEU Classes & Registration". **Registrations will not be accepted at the door, by phone, or by email!**

- Lunch is included in cost.
- There is an option to purchase a 2014 NEC Code Book with your registration (until they sell out).
- Deadline for registration for each class is a week prior or until full.

- Please plan to arrive between 7:15 and 7:45 a.m. on the day of the class for which you are registered.

More information on each class (total cost, location) is available on our website. Also on our website is a list of other provider classes, including online and correspondence classes that have been approved for NDSEB CEU credit.

### 2015 NDSEB CEU Class Schedule:

#### May 2015

May 7, 2015: Grand Forks  
May 8, 2015: Fargo

#### June 2015

June 11, 2015: Williston  
June 12, 2015: Dickinson

#### July 2015

July 9, 2015: Minot  
July 10, 2015: Bismarck

#### August 2015

August 6, 2015: Devils Lake  
August 7, 2015: Jamestown

#### September 2015

September 10, 2015: Grand Forks  
September 11, 2015: Fargo

#### October 2015

October 8, 2015: Dickinson  
October 9, 2015: Williston

#### November 2015

November 19, 2015: Minot  
November 20, 2015: Bismarck

#### December 2015

December 10, 2015: Grand Forks  
December 11, 2015: Fargo

## News & Notes from NDSEB

- **May is "Electrical Safety Month."** It is time to emphasize to the citizens of North Dakota what an important role electricity plays in our everyday needs. It is also essential to remember to keep safety in mind to help safeguard ourselves and loved ones year round. Be safe out there!



- The NDSEB is experiencing code violations not being addressed in a timely manner. In most cases, **code violations need to be corrected within thirty (30) days.**

Each correction report lists the inspector's name/phone number. We encourage you to review those reports when you get them and call the inspector if you have questions. If you need more time to correct, please contact this office for an extension before it goes past due.

- The NDSEB has been receiving signed and submitted correction reports indicating that code violations have been corrected when, in fact, they are not. A signed correction report indicates all violations have been corrected. When they are not, this is a violation of N.D.C.C. §43-09-15(7), and the Board has the right to deny, suspend, revoke or refuse to renew a license. State inspectors are performing more and more re-

inspections and finding some or all code violations not completed. This matter is being taken seriously by the Board and we have been addressing contractors individually. Please make sure that ALL code violations have been corrected before submitting a signed correction report!

- **Congratulations to the following NDSEB employees who celebrate milestone anniversaries this year!**

#### 2015 Service Award recipients:

- ◇ Mitch Feininger - 10 Years [District 3 Electrical Inspector]
- ◇ Michael Lund - 5 Years [District 7 Electrical Inspector]

- A Note from Scott Halle, Training & Compliance Administrator: Please remember that **raceways are required to be sealed** to prevent air circulation and the condensation it can cause. Article 230.8 requires all service raceways, including spares, entering a building or structure from an underground distribution system to be sealed with a sealant identified for use with the cable insulation, shield, or other components. Article 225.27 requires all branch circuits or feeders, including spares, entering a building or structure to be sealed in accordance with Article 300.5(G) and again, requires the sealant to be identified for use with the cable insulation, conductor insulation, bare conductor, shield, or other components. Article 300.5(G) requires underground raceways where moisture could contact live parts to be sealed or plugged at least on one end, and Article 300.7 (A) requires all raceways exposed to different temperatures to be filled with an approved material to prevent the circulation of air.

These requirements will include all raceways passing from the exterior to the interior of a building or structure, and raceways installed underground, as well as raceways entering coolers, freezers, and any other area with a difference in temperature between the spaces to be sealed with an approved material. ☺

## Making A Connection:

### Director of Inspections Lyle Wergeland



#### Originally

from Jamestown, North Dakota, Lyle Wergeland was a self-employed electrical contractor for 20 years before starting work with the NDSEB in May

of 2008 as an Electrical Inspector. He was appointed Director of Inspections in June of 2011 and currently supervises 16 state inspectors.

Lyle has been married to his wife Judy for 29 years. They have two grown daughters - Nicole, who lives in Hammond, Oregon, and Zoe, who lives in Bismarck.

**What projects are you currently working on?** *Intrinsically safe control systems in hazardous locations.*

**Do you have a favorite memory or experience while working for the Board?** *I enjoyed working in McKenzie County at the beginning of the oil boom, before the craziness that is*

*there now.*

**Did you or do you have a mentor or a person that inspired you?** *Really, the inspectors inspire me. We have a group of dedicated guys that work hard, live for electrical safety and work at keeping the playing field level for all.*

**What are your hobbies?** *Bird hunting and fishing.*

**What would be your dream vacation?** *Last summer we had relatives from Norway stay with us for a week. We took them around this part of the state, did the Medora thing, went horseback riding, etc. But the best part was just learning how similar their lives were to ours. They have the same concerns in life as we do: jobs, work, home, family, sports, recreation, politics (the very same problems as here), etc....*

**The best thing about North Dakota is ... ?** *The people and the open spaces.*