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A Message From the Executive Director:



Hello, everyone! I hope everyone is enjoying their summer!

What a year thus far!! COVID-19 shut us down from conducting exams but we're back at it again. We started back by conducting exams at our office but starting in July we will go back to conducting them at a hotel conference room where we can facilitate more individuals. See our website for details.

I've been writing about the power limited electrician license in the past few newsletters and I've been getting lots of calls on it. To update you on the progress of this; he board approved the proposed rules and they were recently approved by the attorney general office. Next the proposed rules were submitted to the Legislative Administrative Rules Committee for review and on June 9, 2020, we testified on our proposed rules to the committee. After over an hour of discussion, the committee decided to hold the NDSEB proposed rules until their

September 15th meeting for further review. This means implementation of the 2020 NEC, updated 2020 exams, CEU classes, defining PLE licensure requirements in areas NEC 500-517, education committee appointments along with other things will be put on hold for now.

Our original thought was to have these rules effective July 1, 2020, but now all of that is being delayed or may not be approved. If you'd like to watch the June 9th testimony, you can find it on the administrative rules committee website. Keep in mind the new PLE license rolling out for the first time may not be perfect but I was assured by the legislature that if there are problems with the licensure process, they would be more than willing to work with us to address these problems during their next legislative session.

We sent out a special newsletter in May with bullet points of the PLE licensing and for the current electrical contractors on where they will need inspections etc.

If you have questions about any of this give me a call.

The board is also pursuing "promoting" the electrical industry by working with different entities and getting in front of school age students to demonstrate to them what an electrician does. Hopefully this will encourage some of them to eventually get into the trade as we all know the average age of an electrician keeps climbing ever year.

If you have more ideas on areas we can improve, we encourage your input on electrical happenings in ND. If you have questions or comments please send an email or give me a call as I'd like to visit with you!

Check out our website often for new information: www.ndseb.com, email us at electric@nd.gov or send regular mail to the return address above.

Hope you are having a great summer and be safe out there!!

- James Schmidt

Electrical Safety On the Job = Our Responsibility

May was recognized as National Electrical Safety Month by the Electrical Safety Foundation International (ESFI) and by many other organizations as well, so we wanted to review some safety topics in this newsletter in recognition of safety month.

Our newsletter is going out to the electricians in the State of North Dakota, and as the majority of us work in the construction industry, it is important to note that according to data compiled by ESFI between 2003 and 2017, *54% of fatal electrical injuries occurred in the construction industry.* We all need to be responsible for our own safety and the safety of the people we work with every day, and while electrical hazards are not the leading cause of on the job injuries and fatalities, they are disproportionately fatal and costly.

As electricians we understand the hazards of electricity, so we need to watch for hazards that others may not be aware of and correct them, as well as being careful to avoid becoming complacent ourselves to electrical hazards. When we perform the same tasks repetitively, we start to take them for granted and that can lead to bad habits and improper usage which can have dangerous consequences for you and your coworkers.

When working on electrical circuits,

the safest way to work on them is while they are de-energized, and it is very important that you test all circuits and verify they are off before touching any components. Be sure to verify your equipment is functioning properly before using it to test that components are de-energized, and be sure you understand how the test equipment works, and that it is rated and set to function for the ranges of voltage you may encounter. Verify all energy sources that supply the equipment that is being serviced have been properly locked out/tagged out, and that you have all personnel protective equipment (PPE) necessary for the job before you begin the project.

Ground Fault Circuit Interrupters (GFCI) are a mainstay for electrical safety and they have been required in the NEC since the early 1970's starting with swimming pool lighting. Since then the locations requiring GFCI have expanded many times to where they are today.

There can be no argument that GFCI's save lives - studies have documented the decrease in electrical fatalities in the years since GFCI's have been required. Testing and maintaining GFCI's is important for ensuring they are functioning properly. Newer versions will self-test and provide an indication of when the device is no longer functioning, but the older versions do not have this function built

in and can fail with no indication, making regular testing important.

One of the changes to the 2020 NEC was a new requirement to provide a surge protective device for all services supplying dwelling units, and a major factor the code panel cited was the number of electronic life safety devices found in dwellings that could be impaired by a surge, such as GFCI's, AFCI's, smoke detectors, and other equipment.

Extension cords are another commonly used item on the jobsite that can be a safety hazard if not properly maintained. They see a lot of abuse from being drug around and walked on during use. Be sure to regularly check your cords for loose connectors, cuts or abrasions to the jacket or conductors, and damaged ground prongs and blades, and repair or replace the cord as necessary. Also be sure to choose an extension cord with the correct rating for the job you will be performing, and that the cord length is reasonable for your requirements. A cord that is too small or too long will cause overheating of the cord and the tool you are using.

Safety is everybody's business, and as electrical professionals we have the additional responsibility to recognize and correct electrical safety issues that others may not be aware of. Always take the time to be sure you are doing your job safely, and be aware of your surroundings to be sure there are no hazards to you and the people around you. We all want to go home safe at the end of the day. ☺

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Don Offerdahl, 65, Bismarck, ND, passed January 21, 2020. In 1996, Don became the Executive Director of the State Electrical Board in Bismarck and served in this capacity until his retirement in 2011. Prior to that, he was a State Electrical Inspector. We wish to express our deepest sympathy to his wife, Pat, family and friends.



News & Notes from NDSEB

Thomas Paulson reappointment: We want to congratulate and thank Mr. Paulson for his past 5 years of service to the North Dakota State Electrical Board and welcome him to another 5 years as he was reappointed to the Consumer Member board position by Governor Burgum this past month. Learn more about this board member in our Making a Connection article on the right!

Possible Flooding: We want you to be aware of the ND State Electrical Board Laws, Rules and Wiring Standards of North Dakota articles regarding water damaged electrical equipment.

24.1-06-01-20. Water damaged electrical equipment.

Water-damaged electrical equipment wiring and equipment exposed to water damage shall comply with the following:

1. All breaker panel boards, breakers, fuses, disconnect switches, controllers, receptacles, switches, light fixtures, and electric heaters that have been submerged or exposed to water damage shall be replaced or all electrical equipment, switchgear, motor control centers, boilers and boiler controls, electric motors, transformers, and other similar equipment such as appliances, water heaters, dishwashers, ovens, and ranges that have been submerged shall be reconditioned by the original manufacturer or by its approved representative or replaced.

2. Electrical wiring may require replacement depending on the type of wire or cable and what application it was listed for.

3. Splices and terminations shall be checked to make sure they comply with article 110.14, 2017 edition, National Electrical Code.

4. Energized electrical panels that have been submerged need to be de-energized to prevent loss of life and property.

Other recommendations can be found in "Guidelines for Handling Water Damaged Electrical Equipment" published by the national electrical manufacturers association (NEMA).

New Roaming Inspectors: Welcome our newly hired inspectors to help keep up with the electrical inspection needs in ND. Josh Dahl and Marty Ekren have

joined our team and will be covering areas where the currently assigned districts are busy. If you check out our district map on our website, you will see all the state inspection districts along with their contact information. Give them a call whenever you have a question or concern and they will be happy to assist.

Scholarship Opportunities: The board approved two scholarship opportunities for apprentices. The first is with the North Dakota College of Science - their financial aid office has the forms and information. The student can receive up to \$500 per semester for books and tuition. The second is for NDSEB-approved apprenticeship programs in North Dakota. That, too, is not to exceed \$500 per student per semester for NDSEB approved apprenticeship programs. Talk to your provider for details.

Discontinuance of Paper Wiring Certificates: As stated in our Laws, Rules & Wiring Standards 24.1-05-01-01(4), electrical (paper) wiring certificates are only available until August 31, 2020. As a result, in December, 2019, letters were mailed to 132 active electrical contractors who were not yet on the North Dakota State Electrical Board's e-Cert system and still using paper wiring certificates. The e-Cert system has been in existence since 2003, and is designed to allow contractors to enter certificates, view

existing certificates, pay for certificates, view correction reports and submit correction reports through this system.

As of June 26, 2020, 72 of those 132 electrical contractors have signed up. The Board currently has 948 active contracting Master and Class B electricians, so we still have some that need to get signed up very soon as August 31, 2020 will be here before you know it. To apply, please complete the e-Cert application on our website. Once we have processed the application, you will receive a login ID and password to start using the e-Cert system. You can also find instructions to the e-Cert system on our website.

For further information, please contact our office and we will be happy to assist you.

Electrical Exams: Electrical exams were postponed in March and April due to COVID-19. Exams resumed in May, at our office, with limited availability due to the ND Smart Restart Plan. Around 100 individuals were examined in May and June.

We are excited to get back to our regular testing facility to conduct exams with more availability; however, proper spacing and safety guidelines will still be followed.

The exams are still on the 2017 NEC. Please check the website for available dates and further updates.

NDSEB STATE-SPONSORED CEU CLASSES:

The North Dakota State Electrical Board is providing eight (8) hours of continuing education starting July 2020 through January 2021. Classes will be on 2020 NEC Analysis of Changes. Online registration has started at www.ndseb.com, and are scheduled as follows:

July, 2020

July 9, 2020 – Bismarck, ND
July 10, 2020 – Dickinson, ND

August, 2020

August 6, 2020 – Jamestown, ND
August 7, 2020 – Devils Lake, ND

September, 2020

September 10, 2020 – Bismarck, ND
September 11, 2020 – Minot, ND

October, 2020

October 1, 2020 – Fargo, ND
October 2, 2020 – Grand Forks, ND

November, 2020

Nov. 19, 2020 – Dickinson, ND
Nov. 20, 2020 – Williston, ND
(Pending)

December, 2020

Dec. 10, 2020 – Minot, ND
Dec. 11, 2020 – Bismarck, ND

January, 2021

Jan. 7, 2021 – Grand Forks, ND
Jan. 8, 2021 – Fargo, ND

A Word from the Director of Inspections . . .

It's been quite a beginning to 2020 due to COVID-19 and I hope you and your families are safe and healthy. Throughout the pandemic and today electrical inspectors remain ready and available to perform inspections, although our process has changed a bit to protect you and our inspectors. New inspection protocols include maintaining social distancing, wearing masks when required and implementing sanitization guidelines.

To assist us in scheduling onsite inspections, we request that electricians call to schedule the inspection when you are close to completing the project. Our goal is to have inspectors schedule the final inspection while you are still on site. We usually need a couple of days notice, and we will do our best to accommodate your scheduling needs. Scheduling inspections with the electrician on site promotes efficiency and communication for your project completion and could help prevent return trips to make any corrections we may find.

Our inspectors would also appreciate hearing from you for rough-in inspections on residential and commercial projects. Again, I recommend calling to schedule the inspection a couple of days in advance. Thank you for your partnership and assistance with pre-planning inspections, we do appreciate the calls.

I would also like to talk a little bit about Adjustable Speed Drives. We have been seeing an increasing number of drives being installed for irrigation pivots, drain tile pumps, pump jacks on oil sites, grain dryers and bin fans. Please make sure you read NEC 430.120 before you make your installation.

NEC 430.122 states that you need to size the branch circuit conductors to 125% of the rated input current of the power conversion equipment and not the motor. If you over size the drive, this could affect the wire size significantly. As per NEC 430.128 the disconnect on the incoming line side of the conversion equipment needs to be sized at 115% of the rated input, so this could be an issue if you upsize the drive as well.

For questions regarding your installation, give your local inspector a call and talk it over.

Thanks, and have a great summer.

- Doug Grinde

Making A Connection: Board Member Tom Paulson

Tom Paulson was first appointed to the ND State Electrical Board in the summer of 2015 as the Consumer Member. He was recently re-appointed for a second term beginning in July of 2020.

Originally from Larimore, North Dakota, Paulson enlisted in the U.S. Navy after graduating high school and served from 1973 to 1977 as a shipboard electrician aboard a destroyer during the Vietnam War. He then attended NDSU and Moorhead State, receiving a Bachelors degree in Business Finance and a minor in Economics.

He and his wife Jody have two children and one grandson.

Tell us about your career. *I retired from Blue Cross Blue Shield of North Dakota in January 2015. At the time I retired, I was the Manager of Actuarial Services and had been in the health insurance industry for 30 years. My staff and I were tasked with the risk analysis and financial projections for the company and various lines of health insurance. These analyses encompassed in excess of \$1 billion insurance premium per year.*

Why did you want to serve on the board? *Although I had a limited knowledge of the electrical field, I felt my experience as an electrician in the Navy and managerial experience gave me the tools to use my judgement in making sound, non-discriminatory decisions for the benefit of all while serving on the Board.*

What is your favorite part of serving on the Board? *The unexpected issues that come before the Board and the*

human interaction with various individuals. It never ceases to amaze me what people will do, both good and bad.

What is the hardest part of serving on the Board? *The political aspect. There are individuals who see the board as an obstacle and serve to dismantle all the good we do to keep our industry and the public safe. Standing against that self interest and being able to express the position and goals of the board in support of the industry and safety is sometimes difficult.*

What are your hobbies? *My wife, Jody, is still working and although she could retire, she loves her work. As a result, I do a lot of cooking, which I love. Good or bad, the rule at grandpa's house is that you eat what he cooks. I also love dogs, a nice yard, fishing for walleye, and Bison Football.*

Do you have any advice for new electricians in the state? *When I was in high school, I took an aptitude test that determined I should be a minister or counselor, and I just shook my head in disbelief. I wish the test would have said to be an electrician because it's an exciting, dynamic field with endless opportunities. The field is so wide open at all levels, not just residential and industrial, but high tech and Ag related. So get your Journeyman and Masters, be honest, work for an honest employer who respects you and your work, work with quality people you trust and look for opportunity. It's all around you. ☺*

