



● **LAST CHANCE! For 03 or 03A “Grandfathering” Limited Plumbing Certificate for Pump Installers Without an Exam Plumber-Electrician or Electrical Administrator Certification Application Deadline Is December 31, 2006**

A new law requires electrical and plumber worker certifications for all pump installation work on domestic drinking water and irrigation water systems. This includes the placement of an electric pump motor into a well without proper worker electrical and plumbing certification.

The new law does not cover pumps in other water systems, within appliances, or when associated with pools, spas, hydronic heating, domestic system circulating pumps, waste water or septic systems, etc.

If you have domestic or irrigation pumping system experience, you should submit an electrician/plumber application and documentation of your experience no later than December 31, 2006. If you have 03 or 03A electrical certification and you also perform associated mechanical/piping (plumbing) as part of this work, you must now apply to receive plumber certification if you want to continue doing the plumbing work. Plumbing examples include: pumps, integral pump/motor units, piping, pressure tanks, valves, sensors or devices within the piping, etc. If you only work on the electrical equipment and do any plumbing work, you do not need plumbing certification.

Individuals who apply, but do not have the all the required experience will be able to get credit for the experience they have. If you have experience in the pumping industry, you should apply and get credit for your experience.

Individuals, working in the pumping industry, who do not apply before the December 31, 2006 deadline, must work for a registered contractor as an electrical/plumbing trainee under the supervision of certified electrician/plumber until the required hours are accumulated.

Details on qualifying for certification were published in the July 2006 edition of the *Electrical Currents*. You can get a copy on the electrical website at:

<http://listserv.wa.gov/archives/electrical.html>

Applications for contractors (F500-104-000), electrician-plumbers (F500-102-000), and pumping industry trainees (F500-103-000) are available online at the Forms & Publications link on our homepage at:

<http://www.lni.wa.gov/TradesLicensing/Electrical>

If you have other questions, you may email outreach@lni.wa.gov, call 1-800-706-5631, or if you have specific questions you may contact Roger Chick, Outreach Coordinator, until December 31st at: (360)-902-5249 (message line), 360-292-5825 (cell phone).

● **Temporary Fee Reductions Effective December 31, 2006**

The WAC revisions effective December 31, 2006, will include permanent and temporary fee schedules. The temporary fee schedules lower permit, licensing and certification fees by about 5%. The reduced permit fees are projected to be effective until December 31, 2007. The licensing reductions will remain in place long enough to allow all electricians an opportunity to use the reduction one time. We will monitor the electrical fund balance to make certain this reduction does not have a negative impact on the program.

● Electrical Program Customer Survey

All stakeholders are encouraged to take the time to fill out this very important annual Customer Service Survey regarding your interaction with the Labor and Industries Electrical Program. We need your help to be able to improve our service to you. The survey is easy to take, completely anonymous and will only take about five minutes of your time.

In order to reach as many people as possible, the survey is offered online. Links are available at several locations on the electrical website or you may directly use this link:

<http://www.surveymonkey.com/s.asp?u=531322969923>

● Reciprocity with Texas

We are pleased to announce that Texas has become the newest state to enter into a journeyman electrician reciprocal agreement with the State of Washington. Washington State has reciprocity agreements with Alaska, Arkansas, Colorado, Oklahoma, Massachusetts, Minnesota, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, South Dakota, Texas, Wyoming and Utah. All reciprocity agreements are limited to (01) general journeyman electricians.

Texas currently certifies 40,000 journeyman electricians. The department is in the process of sharing examinations with some of the reciprocal states in an attempt to create uniform electrician tests.

● What Electrical Contractors Need To Know About Townhouses, Apartments, and Condominiums—Part 2: Wiring Methods

Part 1 of this article established that townhouses are single-family dwellings. Though townhouses may appear similar to apartment or condominium buildings, they are not the same. Each townhouse is a separate building. Even though the building exterior walls may be in contact with each other, each townhouse's legal property lines separate it from adjacent townhouses.

Multifamily dwellings (apartments and condominiums) and two-family dwellings (duplexes) are single buildings with multiple occupancies within the same building. Since wiring methods for multifamily and two-family dwellings have been specifically covered in the NEC and electrical rules for many years, this article will not cover them. We will only address the wiring methods of townhouses.

NEC 230.2 requires a building "*shall be supplied by only one service*" and none of the permissions for more than one service in (A)-(D) may be applied to townhouses. NEC 230.70(A)(1) says, "*The service disconnecting means shall be installed at a readily accessible location outside of a building...or inside nearest the point of entrance of the service conductors.*" WAC 296-46B-230(12) clarifies "nearest the point of entrance" as 15' inside or outside the building.

The NEC does not allow a building's service disconnect to be located on another owner's building or property. NEC 230.3 prohibits service conductors to a building from passing through the interior of another building. NEC 230.6 allows conductors to be considered "outside" a building:

- Where they are installed under not less than 2" of concrete (slab) beneath a building,
- Where they are within a building, installed in a raceway surrounded on all sides with not less than 2" of concrete,
- Where they are within an electrical vault meeting the requirements of NEC 450, or
- Where they are installed in conduit and buried under not less than 18" of earth beneath a building.

If the serving utility wants to have grouped metering equipment for townhouses, contractors should be considering using a pedestal mounted service pack with separate feeders to each townhouse or some other method that does not include mounting the service equipment on an adjacent townhouse. Electrical utilities normally use easements from property owners to establish the access they need to reach the service point.

● Fall Stakeholder Meetings

Fall stakeholder meetings were held in 13 locations statewide during September, October and November. Stakeholder attendance was lower than in past years.

These annual meetings have proven to be an important tool in communicating with the electrical industry, and offer an opportunity for our customers to ask questions directly to the Electrical Program and get instant feedback. We encourage all our customers to stay involved and attend these important annual meetings.

● What To Do With Unlisted Industrial Utilization Equipment

If you have a piece of industrial utilization equipment that is not listed, the inspector will issue a correction requiring the equipment to be listed or otherwise approved for use in Washington. The correction will be for *WAC 296-46B-010(9)*, saying, *"In order to meet minimum electrical safety standards for installations, all materials, devices, appliances, and equipment, not exempted in chapter 19.28 RCW, must conform to applicable standards recognized by the department, be listed, or field evaluate."* If you or your customers get this correction, you have several ways to clear this correction and be compliant with the law and rules.

WAC 296-46B-030 has clear definitions of what "industrial utilization equipment" is. In general terms, it is equipment located in a manufacturing facility that is directly used in a manufacturing process to make or process a raw product into a finished product for sale. Specific definitions for industrial utilization equipment are located in *WAC 296-46B-030 (1)*.

Option One: A Field Evaluation may be performed on the equipment. Only a Washington approved product testing lab can do a field evaluation. The laboratory doing the field evaluation must request permission from the Chief Electrical Inspector before performing the evaluation. After the laboratory has approved the equipment, they will forward the evaluation results to their customer, the local inspection office and the Chief's office. For a list of all currently approved testing labs visit:

<http://www.lni.wa.gov/TradesLicensing/Electrical/Install/ProdTest>.

Option Two: A Normal Department Inspection may be performed when all the electrical components used in the equipment have a listing mark from an approved laboratory and the equipment is wired in accordance to the National Electrical Code (NEC). Nearly all equipment manufacturers use "recognized" instead of "listed" components when manufacturing. This practice normally rules out the possibility of a normal department inspection.

Option Three: A Department Evaluation can be performed on the equipment. In order to perform a department evaluation the manufacturer must provide the equipment's owner a letter containing all eight items detailed in *WAC 296-46B-030(2)(c)(i)*. The owner of the equipment is responsible for obtaining the letter from the manufacturer. The owner must then submit the letter to the Chief Electrical Inspector's office for review and final approval. If the equipment has been modified since it was manufactured, this option cannot be used. The department charges an hourly rate for the review of the manufacturer's letter. If a visit to view the equipment is necessary, the time for the visit will also be charged at the hourly rate. If you have any questions or need assistance in determining if your equipment qualifies please contact David Myers at (360) 902-5967 or myee235@lni.wa.gov. The department will not offer this option after July 1, 2007.

Option Four: An Engineer, approved by the department can perform an **Engineering Evaluation** on the unlisted industrial utilization equipment. The engineering evaluation option was added in June 2006. An engineer approved by the department will be able to perform the same function as the department in evaluating the equipment and determining if the standard is appropriate and the equipment can be approved. The engineer can accelerate the review process by working directly with the manufacturer. If the equipment has been modified, the engineer may require additional inspection or documentation before approving the equipment.

● Class B Permit Clarifications Concerning Low Voltage and HVAC/R Controls

We continue to receive questions pertaining to when a Class B permit may be used in place of a general permit. The Class B permit was created to be used in place of a standard permit. It is a way to reduce the cost of installations without jeopardizing public safety. Recognizing that the type of work covered under the Class B requires minimal electrical circuit modifications or has limited exposure hazards, a random inspection process is used. WAC 296-46B-110(6) through 110(10) contains the rules regarding the application of Class B permits.

Regarding low voltage installations a HVAC/R contractor asks: "I understand that I can replace a 24 volt Class 2 or 3 control panel utilizing a Class B permit. Can I also use a Class B permit for the installation of an HVAC/R thermostat and its associated wiring on the same job?"

The answer is "YES" a Class B permit may be used so long as the work is done at the same time. WAC 296-46B-110(10)(a)(iii)(C) allows for the installation of any one or all items included in the Class B allowed list.

Another contractor asks: "Can I use a Class B permit for the installation of Class 2 or 3 smoke/fire damper actuators, and other associated Class 2 or 3 low voltage controls in a required fire alarm/control system?"

The answer is "NO". WAC 296-46B-110(10)(b)(iv) does not include allow Class B permits for any work in: Fire alarm, nurse call, lighting control, industrial automation/control, or energy management systems. However, if the fire alarm inputs or outputs are not part of a "required" fire alarm system (i.e. optional to a dwelling's low voltage security system) these installations would be eligible for the Class B permit. Refer to December 2005 *Electrical Currents* for more information. Because of the life safety issues surrounding fire alarm, nurse call, lighting control, industrial automation/control or hazards associated with energy management systems, the random inspection process cannot be employed. It is essential to insure that these systems are inspected.

● Electrical Question of the Month

This Month's Question: Control circuit transformers rated less than ____ volt-amperes (VA) and that are an integral part of the motor controller and located within the motor controller enclosure shall be permitted to be protected by primary overcurrent devices, impedance limiting means, or other inherent protective means.

A) 50, B) 75, C) 100, D) 250.

Last Month's Question: Disregarding exceptions, overcurrent protection for conductors 14 AWG and larger in a Class 1 Circuit shall be provided in accordance with the conductor ampacity, without applying the derating factors of NEC 310.15 to the ampacity calculation. Overcurrent protection shall not exceed ____ amperes for 18 AWG conductors and ____ amperes for 16 AWG. **A) 6 and 8, B) 7 and 10, C) 7.5 and 10, D) 14 and 18** The answer is: **B) [NEC 725.23].**