



This Month's Question of the Month – A child was born in Boston, Massachusetts, to parents who were born in Boston, Massachusetts. But, the child was not a US citizen. How is this possible? – See the correct answer on page 2.

● **Note From The Chief**

The Electrical Program's online permitting and inspection system has reached record levels of usage. 95% of all contractor permits and 44% of all property owner permits are now purchased online. 78% of contractor and 26% of property owner inspection requests are now made online. If you have not made the move to online permitting and inspection requests, you are losing out on the savings in time and money that are available to you. Speed up your projects by going online for your permitting, inspection, and license renewal needs.

● **Study Before You Test**

Everyone wanting to take an electrician examination must be prepared. It is the individual's and the contractor's responsibility to ensure that the individual gets the training necessary to become a quality electrician. Electrician exam results show this is not happening on a consistent basis. Electrician candidates had an overall 50% pass rate. This may sound low, but, almost 2/3rds of all 01 journeyman candidates passed their examinations.

Of primary concern are specialty electrician candidates. Specialty candidates had a very low pass rate of 38%. All specialty contractors and candidates should make a better effort to ensure the candidate receives appropriate training. Quality electricians will improve the safety of electrical installations for consumers and will save the contractors they work for time and money by doing better work that does not require call backs for repairs.

● **LED Street & Area Lighting Retrofits**

Because of energy conservation measures and new technology, local governments and developers are retrofitting existing street and area pole lights with LED technology. LED's provide extremely long lamp life and use much less electricity to operate.

Many existing installations utilize heavy-duty lamp holders in the luminaire. National Electrical Code (NEC) 210.23(B) & (C) allows non-residential fixed lighting units to be supplied by 30, 40, or 50 ampere branch circuits when the luminaire uses a heavy-duty lamp holder. This creates a problem, with LED retrofits, where an existing 30, 40, or 50 ampere branch circuit is installed. The new LED lamps do not use heavy-duty lamp holders. When a standard lamp holder is used, NEC 210.23(A) limits the branch circuit size to 15 or 20 amperes.

In order to accommodate the changing technology and provide an appropriate level of safety, L&I will allow the use of existing 30, 40, and 50 ampere branch circuits on non-residential street and area lighting LED retrofits when all the following conditions are met:

- The LED replacement luminaire must be listed or a listed or a classified LED retrofit kit must be used;
- The branch circuit's overcurrent protection device must have ground fault circuit interrupter protection for personnel;
- There must be supplementary overcurrent protection for each ungrounded conductor at the base of each lighting pole or adjacent junction box;
- The supplementary overcurrent protection device must be no larger than 125% of the calculated continuous ampere load for the lighting on that pole;
- The supplementary overcurrent protection device must be capable of being removed without exposing any live parts; and

Safety Tip of the Month!

During a typical year in the U.S.A., home electrical wiring problems account for 67,800 fires, 485 deaths, and \$868 million in property losses.

Home electrical wiring causes twice as many fires as electrical appliances (U.S. Fire Administration).

Get your electrical work permitted and inspected!

- At the access point to each supplementary overcurrent protection device, a label must be installed that says that access to the supplementary overcurrent protection device is limited only to certified electricians or linemen as allowed in RCW 19.28.261(6)(b).

This variance will allow LED retrofits to occur without changing the underground wiring for the branch circuit. Meeting these minimum installation requirements will maintain the safety of the installation at a level that meets the intent of the NEC and will allow the continued use of most existing lighting branch circuits.

● **(06) or (09) Licensing & Certification?**

We have been asked to clarify which specialties are allowed to do work associated with various technologies used in the installation of telecommunications type equipment.

During the development of the telecommunications bill in the 2000 legislative session, telecom industry representatives agreed that telecom workers would only install voice, data, video, and limited audio cables at signal levels well below the level of limited energy (typically Class 2) power conductors. For this concession, telecommunications workers were not required to have individual certification. The installation and maintenance of limited energy power conductors, including all power over Ethernet (POE) circuits, remained exclusive to the (06) limited energy specialty scope requiring (06) contractor licensing and (06) electrician certification.

RCW 129.28.400(13)(b), allows “*other limited-energy interconnections associated with telecommunications systems or appliances.*” This exception allows the installation of local plug-in Class 2 power to supply fixed telecommunications equipment (e.g. plug-in power supply to phone equipment or wireless alarm panel, etc.).

Below are some examples of some possible licensing and certification scenarios:

Example:	License Type
1. Power over Ethernet – where the power for the equipment is superimposed over the data cable supplying the equipment.	06
2. Separate low voltage and data cable(s) supply equipment.	06
3. Equipment is powered using a listed Class 2 power supply/transformer plugged into a local electrical outlet, installed by an electrician, where there is no external power feed (i.e. data only) from the equipment to other remote equipment/device.	09 or 06
4. Cable only installation (excluding coaxial only or fiber optical cable)	06
5. Cable only installation (including only coaxial only or fiber optical cable)	09 or 06

● **What Questions Are Allowed To Be Answered By An Electrical Inspector**

Electrical inspectors are faced with many different types of questions from consumers, contractors, and electricians. WAC 296-46B-010(2) ensures a level playing field by placing limits on the types of questions an inspector may answer. Inspectors cannot “*lay out work or act as consultants for contractors, owners, or users.*” Inspectors are only allowed to answer specific code questions.

Many people call to ask if they “*can just run something by*” the inspector. Inspectors are not allowed to enter into discussions about project bidding or design or other “*what if*” scenarios. It is not the Inspector’s role to choose or even make recommendations between design or installation options for the installer. The installer is responsible for the entire decision making process from bidding, to permit fees, to installation.

If you have a specific question about a code interpretation or would like to discuss corrections you have been issued, the inspector or the supervisor is available to get you an answer. If you need to arrange inspection access, take advantage of your ability to communicate directly to the inspector by entering detailed access instructions in the comments field on your inspection request. If access conditions change at the last minute, our customer service staff is available to assist you.

● **Answer to This Month’s Question of the Month:**

D) The child was born before 1776.