



City of Lancaster- Building Department

121 East Chestnut Street, Suite 102, Lancaster, Ohio 43130-3825
(740) 687-6649, Fax (740) 681-5030

Web site: www.ci.lancaster.oh.us/dept/building

Electrical Permits & Inspections

Revised 10/1/08

An electrical permit is required for any of the activities listed below:

- Anytime an electric meter is pulled such in cases when replacing the meter base, entrance cable, electric panel or during residing of a structure. This is considered a minor permit and normally is completed in one (1) inspection
- Electric service upgrades (increase in or equivalent amperage)
- When installing a new branch circuit(s) from an electrical panel to a device such as a light fixture, receptacle, fan, appliance or machinery either indoors or out.
- When installing ceiling fan(s) in locations where previously only light fixture(s) were installed.
- Any wiring that is "fished" in existing walls, ceilings or panels
- Any new construction of a building, addition of wall(s) or ceiling(s) in existing structures, room additions, addition of permanently wired appliance(s) or other apparatus.
- Illuminated billboard or sign installations
- Swimming pools, hot tubs and heated spas
- Finishing of basements, garages and attics or electric in accessory buildings
- Installation of parking lot lights, poles and underground wiring
- Re-wiring of tap conductors or branch panel installation
- Installation of generator transfer switch(s) and panel(s)
- During renovations or fire damage repairs
- As a result of occupancy inspection whereby code violations are noted and the owner is issued a "notice of violation" from the Building or Fire Department.
- In cases where a permit was not obtained prior to beginning work involving electric activities as listed above.

Procedure for replacing residential electrical service:

If you are a homeowner and have chosen to upgrade your electrical service yourself, please read carefully:

- Contact your electric utility service provider and request a meeting at your home with a customer service representative. Show and explain what type of work you wish to perform and if the utility provider has any special notes or request for the work you will be undertaking. Request a date the existing service can be disconnected to permit you to remove and install a new electrical service.
- Prior to the planned change-over date, contact the City Building Department and purchase an electrical permit for the service upgrade. No less than two days prior to the date, call (740) 687-6649 and request an inspection of your new electrical service before the power company lineman returns to re-connect the new electric service on your change-over date. **THE POWER PROVIDER WILL NOT RE-CONNECT YOUR ELECTRICAL SERVICE WITHOUT AN "APPROVED" TAG FROM THE BUILDING DEPARTMENT.**

Service Upgrades/ New Service

IT IS THE RESPONSIBILITY OF THE PERMIT HOLDER TO ACQUIRE FROM THE ELECTRIC UTILITY PROVIDER ALL METER INSTALLATION REQUIREMENTS. Please note it is highly recommended you verify from the electric provider that the requirements are current and there have been no recent revisions. For your reference, the “forms” section of our web site has downloadable typical electric service drawings for most all applications.

Important Notes:

In areas of heavy traffic or the possibility of physical damage, (driveways, patios, sidewalks and doorways) or installed less than 18 inches above grade, service conductors shall be protected in an approved raceway. The approved raceway must begin at the meter base and run continuously to the electric panel. Service conductors must be single conductors within the raceway. SERVICE ENTRANCE CABLE (TYPE SE & SER) IS NOT APPROVED TO BE CONTAINED IN CONDUIT.

Service Entrance Wire Size Table

Single Phase, Residential Service 100 to 200 ampere
Conductor Types and Sizes

RH-RHH-RHW-THHW-THW-THWN-THHN-XHHW-USE-USER

| Copper | Aluminum and CU-Clad AL. | Service Rating (amperes) |
|--------|--------------------------|--------------------------|
| 4 AWG | 2 AWG | 100 |
| 3 “ | 1 “ | 110 |
| 2 “ | 1/0 “ | 125 |
| 1 “ | 2/0 “ | 150 |
| 1/0 “ | 3/0 “ | 175 |
| 2/0 “ | 4/0 “ | 200 |

Grounding/bonding conductor for 100 amp service, #6 bare copper permitted
Grounding/bonding conductor for services above 100 amperes to 200 amperes, #4 bare copper required. Greater than 200 amperes refer to the proper tables in the National Electric Code.

Other code determinations:

- A weatherhead or gooseneck SHALL be installed no more than 24” above the service point of contact.
- Corrosion inhibitor shall be used on meter connections
- Entire ground rod is to be driven to minimum of grade level and left exposed until inspection has been performed. All clamps must be rated for direct burial.
- A PVC schedule 40 or rigid w/bushing nipple shall be installed through the exterior wall to pass the service entrance cable into the area the electric panel is installed. The ground wire shall enter using a separate hole through the wall.
- Where exposed, a grounding electrode conductor shall be securely fastened to the surface on which it is carried. A 4 AWG or larger shall be protected where exposed to potential physical damage.

- Service entrance cable shall be strapped to the building within 12 inches of the gooseneck or weatherhead and the electric meter. Additional straps are required maximum of 30 inches apart.
- The metal water supply pipe, within five (5) feet of entrance into the structure, must be bonded to the electrical service grounded point. (disconnect or panelboard) The internal water distribution piping system of the building must also be bonded to the service neutral/grounded point.
- Each water meter and hot water heater shall have a bonding jumper installed across the incoming and outgoing water pipes, if metallic.
- Back fed overcurrent devices used as a service disconnect shall be secured in place by an additional fastener.
- Electric panels shall not be installed in clothes closets, toilet rooms, bathrooms, or over steps of a stairway.
- Working space in front of electric panel shall not be designated for storage. Frontal clearance is 30 inches wide and 36 inches deep. No openings in the floor are permitted in this area, example: sump pump pit, trap doors, basement access covers.
- If service conductor length exceeds five (5) feet AFTER entering an exterior wall, an overcurrent disconnect shall be installed prior to the point of entry.
- If the overcurrent disconnect is used, **FOUR CONDUCTOR WIRE SHALL BE INSTALLED FROM THE DISCONNECT TO THE ELECTRICAL PANEL.** The mechanical ground is to be bonded to the electrical panel cabinet. Main neutral and all branch circuit neutral connections must be terminated on an insulated terminal strip isolated/insulated from the electric panelboard.
- The National Electrical Code requires a disconnecting means for all circuits to be located in all residential garages and outbuildings. This disconnecting means can be snap switches or sets of 3-way or 4-way snap switches that completely disconnects all branch circuits entering the garage or outbuilding. If snap switches are not used, than a circuit breaker equipped with a handle must be used. The following applies:
 - A) One-circuit disconnecting means- Rated at 15 amperes
 - B) Two-circuit disconnecting means- Rated at 30 amperes
 - C) All Others- disconnecting means-Rated at 60 amperes

For answers concerning other issues, consult the National Electrical Code book or a City registered electrician.