Permitting Requirements

All new electrical work requires a permit and may be done by either the home owner or an electrical contractor licensed by the Municipality of Anchorage. Electrical work done by the home owner on their personal residence does not require a licensed contractor, but does require a permit. Electrical service equipment must be inspected and approved before connection by the power company. Any inspection performed by Building Safety requires either a permit for new installation or a code compliance agreement for existing installations.

Electrical permits or code compliance agreements and other information about permits, fees, or payment methods may be obtained at the Building Safety permit counter located at 4700 Elmore Road or by calling the permit counter at 343-8211. Information about electrical codes should be directed to electrical plan review at 343-8333 or to electrical inspections at 343-8316.

Electrical Utility Service Standards

Electrical services in the Municipality are subject to the service standards of the electrical utility serving the home or project. The service standards show the utility’s requirements for the various types of services by drawings and written notes. They are available without cost from the customer service counters at the utility business offices. The specific requirements of a service may vary between power companies and may be more restrictive than the National Electrical Code adopted by the Municipality. It is very important that you obtain the correct standard for the utility serving your project. Anyone intending a project that includes or alters the electrical service should begin by contacting the utility concerning availability, scheduling, service location, or other questions that are specific to your project.

Electrical service requirements not shown on utility standards:
The utility service standards are intended to cover the portion of the electrical service that the utility has a direct interest in: the service riser or mast, the meter and main disconnect enclosure, and the ground rods. There may be additional requirements not shown on the utility standards that will need to be provided to comply with the electrical building code adopted by Anchorage. The Building Safety inspector will verify that the service complies with both utility standard and building code.

RESIDENTIAL SERVICE INSTALLATION: Additional requirements not shown on the utility standard.

1) Provide a grounding electrode conductor from the neutral/ground bar in the service disconnect to a pipe clamp installed on the cold water pipe. This conductor is usually a bare, hard drawn copper wire without splices and connects within 5’ of where the water pipe comes out of the ground and ahead of any valves or water pipe fittings. The wire size for a 200-amp service is #4 copper, a service less than 200 amps require #6 copper. If a ground connection (such as a rebar sticking out of a foundation footing) is present this needs to be tied into the electrode system with the same copper wire.

2) The portion of natural gas piping after the gas meter and before the appliances must be connected to the grounding electrode system. This is done by installing a pipe clamp on the gas pipe and connecting the other end to the grounding electrode conductor with a suitable type (i.e., split bolt) of splice connector or to the first five feet of water pipe entering the building with a pipe clamp.

3) Existing wiring from the service disconnect to the panel must have an insulated neutral conductor. Cables with a bare neutral or covered only with a sheath will have to be replaced with a 4-wire cable. This is done to prevent objectionable current flow over metallic paths such as water or gas piping, telephone, video cable, and such. Existing 3 wires cables will be acceptable if the neutral conductor is insulated, the neutral is grounded only at the main disconnect, and a grounding wire sized to the panel feeder overcurrent device is installed from an equipment grounding bar in the panelboard to the grounding electrode system. A #6 bare copper would be sufficient for all panels with this concern. Existing branch circuit wiring that has a bare neutral or is covered only with a sheath (i.e. old range or dyer cable) must be replaced.
4) All equipment grounds in the panelboard must be separated from the neutral bar and installed to an equipment grounding terminal bar. An equipment-grounding bar may have to be provided for older panels. Any bonding between the neutral bar and equipment must be removed and the neutral bar isolated from the enclosure.

5) New cable to an existing panel can usually be installed without causing the panel to be relocated to meet current codes. An example of exception to this would be a panel inaccessible due to permanent obstructions added later.

6) New or replaced circuit breaker panels must not be located inside a bathroom, closet or over stairs and shall have a level working space in front of the panel not smaller than 30" wide by 3 feet deep and 6 foot 6 inches high.

**Non-residential structures:** Services are installed by licensed electrical contractors usually working with electrical engineers. Any additional requirements not shown on the service standards are indicated on the building plans.

**Temporary services:** Ground fault current interruption protection must be provided for all 110 volt power receptacles of 15-, 20-, and 30-amp type. All other power receptacles must meet the requirements of Handout E.04, Assured Equipment Grounding Conductor Program, unless GFCl protection is provided.

**Remote services:** No additional requirements.

**INSPECTION PROCEDURES:**

**Service inspection of new structures** will be determined by the most efficient routing for inspectors. Requested times will be met as closely as routing allows.

**Commercial service inspections** are performed when the installation work for the line-side of the service up to and including the main disconnect or switch gear has been completed. Equipment must be protected from weather and from physical damage. Barriers for protection against accidental contact by workers and equipment must be provided during construction.

**Residential service inspections** are performed during the "wiring rough-in" inspection of the house. The building wiring, as well as the service, must be complete and pass inspection. Building Safety Handout AG.13 describes the inspection process and is available at the Building Safety Permit Counter.

**Service inspections for mobile homes** are performed when the mobile home is in place and connections have been made as per the mobile home setup handout available at the Building Safety Permit Counter. Mobile homes require a mobile home setup permit to connect to existing utilities. An additional permit would be required for a new service. Mobile homes built before 1973 that are being relocated must have a code compliance inspection before any permits will be issued. Contact code compliance and abatement at 343-8334 for further information.

**Service inspections of occupied structures:** Occupied structures undergoing repair or replacement of service equipment will receive inspection priority, and the inspector will attempt to schedule inspection times as requested. All electrical work is to be completed before the inspector will approve the service. The suggested procedure is to schedule a disconnect from the electrical utility company, add the estimated length of time needed to complete the work, and request the inspection for that time from Building Safety.

**Buildings disconnected for reasons other than work being performed** must be inspected by the Municipality before they can be reconnected. The customer may elect to have the service inspected for code compliance prior to hiring an electrical contractor. The structure wiring will be inspected for property and life safety violations. A service tag will be issued upon completion of the inspection if passed by the inspector. If the service or structure fails the inspection, a list of required changes will be provided. An electrical permit may be needed, and an electrical contractor may be needed depending on the changes to be made. The inspector will provide directions as to requirements. Arrangements for inspections will be scheduled by the permit counter staff and confirmed by the inspector.
Please note:

It is not the intention of Building Safety to go through your house or business looking for electrical violations; however, **we do have to inspect the panel and grounding connections to the gas and water piping wherever they may be.** If the inspector observes work being done without required permit or electrical situation that he considers an immediate fire and life safety hazard, he may refuse to issue approval for the service to be energized until the situation is corrected.

Robert Doehl, Building Official
DATE: December 9, 2019
(Ref. 00-04; 06-02; 06-05; 09-01)