

# Hopewell Township Supplemental Electrical Code Sheet #4 Hot Tub Requirements and Common Field Encountered Violations

Based on 2005 NEC



Dear Homeowner/Contractor,

This informational sheet is provided in order to help homeowner and contractors on some common questions and field-encountered violations. This list is not totally inclusive and is not intended for design purposes. The National Electrical Code Article 680 Swimming Pools, Fountains, and Similar installations is made up of twenty pages with links to Chapter one “General” Chapter Two “Wiring Method and Chapter Three “Wiring Methods and Materials”. When in doubt, obtain the services of a N.J. Licensed Electrical Contractor.

**Before you dig call: 1-800-272-1000 in order to locate Underground utilities**

## **Wiring Methods**

Wiring methods are generally in some type of approved raceways outdoors and may be in a approved cable assemble indoors. NM Cable meets this requirement (Romex) **Do not use NM or UF cable outdoors on house or under deck. Sleeveing through conduit generally exceeds the 40% cross diameter limitation of the conduit and will not be approved.**

Exception to above: Listed package units shall be permitted to be cord and plug-connected (twist lock) with a cord not longer than 15 feet long if protected with ground fault protection.

**Wiring size shall be in accordance with manufacture instructions.** Please read installation instructions and Listing on unit. Manufactures frequently oversize conductors for voltage drop considerations and other conditions.

Conduit installation under ground are required to be a **minimum 18 inches below grade for PVC** conduit and 6 inches for Ridged Steel conduit. Backfill should be clean with a maximum of 2-inch angular rocks. (Please use clean fill when possible.)

## **Controls**

Controls are required to be readily accessible. Provide three feet clearance in front of control panel and a minimum 30 inches wide for servicing. **DO NOT INSTALL CONTROLS FACING UNDER DECK WHEN INSTALLED OUTDOORS.**

**Overcurrent device:**

**Ground fault protection** is required for **branch circuit feeding Hot Tub**. (Generally 2 pole 240 volt breaker.

**Disconnecting means**

A disconnecting means is required within site of Hot tub. This disconnecting mean is required to be readily accessible in the event of a emergency and is required to maintain a **minimum of 5 feet from hot tub**.

**Receptacles & Switches**

All receptacles within 20 feet of hot tub are required to be ground fault protected. A **required convenience receptacle** shall be installed for use around the Hot tub and shall be installed to be **no closer than 5 feet from tub** and no further than 10 feet from hot tub for inside installations and **no closer than 10 feet and no further than 20 feet when install outdoors**.

Equipment and devices (receptacles) are not permitted to be supported with the use PVC Conduit only. Please support with a wood member, steel support, steel conduit or other approved recognized construction methods.

All switches are required to be a **minimum of five feet** from the Hot tub.

**Lighting fixtures, fans and Lighting outlets**

Any fixtures or fans located over Hot tub or area within 5 feet of hot tub are required to be a Minimum of 7ft 6 inches above the maximum water level and shall be protected by ground fault protection.

**Bonding**

All Metal conduits, fences, siding, metallic window frames and **other metal surfaces located within 5 feet of Hot tub shall be bonded** to Hot tub with a minimum #8 copper conductor with brass, bronze, copper or stainless steel lugs. The intention of the bonding requirement is to bring all metal parts near the Hot tub at the same equal potential (voltage) in order to significantly reduce shock hazards between metal parts.

**A Bonding Grid is required for any walkway around hot tub and must be tied to hot tub. This grid is required regardless if steel is used in the concrete deck or not.**

**Inspections**

Inspections are required for all concealed wiring (new work), trenches prior to backfill, bonding grid connections and final electrical inspection prior to using Hot tub.

Feel free to contact the Electrical Inspector at the Hopewell Township Construction Department @ 737-0612 (658) should you have any questions pertaining to these requirements