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# Low EMF Home Electrical System

## Overview

**with Drawings,  
Labels, and Explanations**

Rex Funk - 2025.2.26

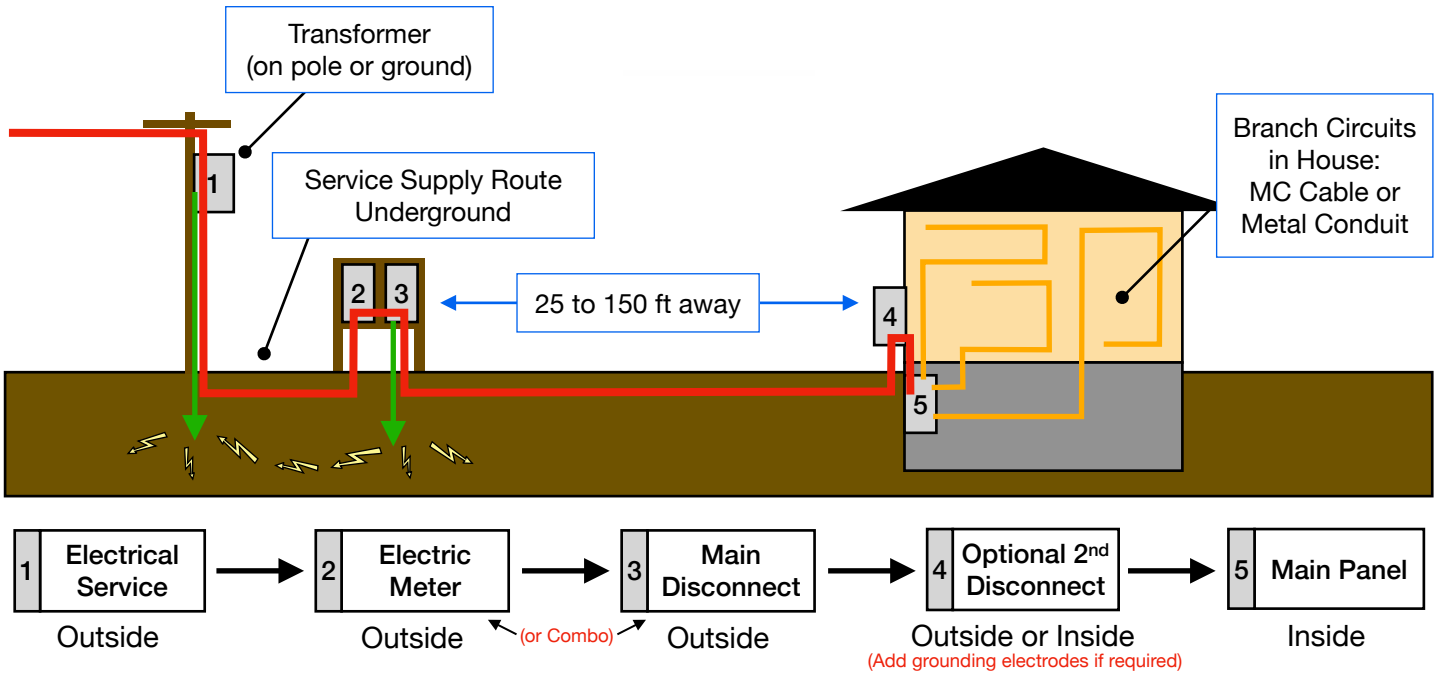
with help from my many mentors and colleagues





# Low EMF Home Electrical System Overview

Installer must ensure current Electric Code compliance



The **2023 National Electric Code** requires a **Main Service Disconnect** outside the home in new construction. This enables fire fighters to turn off the power before cutting open walls and entering the structure.

Fortunately this also helps us in our goal of having a **low EMF home electrical system** since it enables more separation between the Neutral and Ground conductors in the home, resulting in less voltage on the Ground wires and other bonded metal parts. The only place Neutral and Ground are allowed (and required) to touch is at the Main Disconnect.

**An additional step** we can take is to put the meter and disconnect (or combo) at least 25 feet away from the building. This moves the grounding point further from the foundation reducing stray voltage/current near the home. Putting it even further is even better.

If needed, a **second disconnect** can be put on, or near, the house making it easier for emergency workers to find.

All wiring in the home should be the **metal clad** type or be in **metal conduit**. This lowers the AC electric fields in the home **significantly**, and is essential to a low EMF home.

Placing the service entry cables **underground** helps reduce the AC magnetic and electric field they typically emit.