



Underground Electrical Cable Burial Depths

In order to protect the public and prevent damage to underground electrical infrastructure the California Electrical Code prescribes burial depths for underground cable/wire installations. Burial depths vary depending on the location and type of conductors installed. The following table provides information on the required depth of cover for underground electrical installations under the 2016 ed. of the California Electrical Code.

Table 300.5 Minimum Cover Requirements for Buried Conductors – 0-1000 Volts, Nominal										
Type of Wiring Method or Circuit										
Location of wiring or circuit	Column 1 Direct burial cable or conductors		Column 2 Rigid metal conduit or intermediate metal conduit		Column 3 Nonmetallic raceways listed for direct burial without concrete encasement or other approved raceways		Column 4 Residential branch circuits rated 120 volts or less with GFCI protection and maximum overcurrent protection of 20 amps		Column 5 Circuits for control of irrigation and landscape lighting limited to not more than 30 volts and installed with type UF or in other identified cable or raceway	
	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.
All locations not specified below	600	24	150	6	450	18	300	12	150	6
In trench below 50 mm (2 in.) thick concrete or equivalent	450	18	150	6	300	12	150	6	150	6
Under a building	0	0	0	0	0	0	0	0	0	0
	(in raceway or Type MC or Type MI cable identified for direct burial)						(in raceway or Type MC or Type MI cable identified for direct burial)		(in raceway or Type MC or Type MI cable identified for direct burial)	
Under a minimum of 102 mm (4 in.) thick concrete exterior slab with no vehicular traffic and the slab extending not less than 152 mm (6 in.) beyond the underground installation	450	18	100	4	100	4	150	6	150	6
							(direct burial)		(direct burial)	
							100	4	100	4
							(in raceway)		(in raceway)	
Under streets, highways, roads, alleys, driveways, and parking lots	600	24	600	24	600	24	600	24	600	24
One- and two- family dwelling driveways and outdoor parking areas, and used only for dwelling-related purposes	450	18	450	18	450	18	300	12	450	18
In or under airport runways, including adjacent areas where trespassing is prohibited	450	18	450	18	450	18	450	18	450	18

Notes:

1. Cover is defined as the shortest distance in millimeters (inches) measured between a point on the top surface of any direct-burial conductor, cable, conduit, or other raceway and the top surface of finished grade, concrete, or similar cover.
2. Raceways approved for burial only where concrete encased shall require concrete envelope not less than 50 mm (2 in.) thick.
3. Lesser depths shall be permitted where cables and conductors rise for terminations or splices or where access is otherwise required.
4. Where one of the wiring method types listed in Columns 1 through 3 is used for one of the circuit types in Columns 4 and 5, the shallowest depth of burial shall be permitted.

5. Where solid rock prevents compliance with the cover depths specified in this table, the wiring shall be installed in metal or non-metallic raceway permitted for direct burial. The raceways shall be covered by a minimum of 50 mm (2" in.) of concrete extending down to rock.

