

Electrical Inspections – Marijuana Facilities Guidelines for Owners & Contractors

The following common electrical issues, but not limited to, shall be addressed prior to electrical inspections. All electrical installations shall meet the minimum requirements of the most current National Electrical Code (NEC) as adopted by the City and County of Denver.

A rough inspection shall be made before insulation, sheetrock or other materials cover any electrical wiring. When wiring is concealed before inspection, the person responsible for concealing the wiring shall also be responsible for all costs resulting from uncovering and replacing the uncovering materials.

All switches, receptacles, luminaires, all grounding conductors and other wiring in boxes shall be spliced and pigtailed for the rough inspection. The installer shall schedule a final inspection when the electrical work is completed prior to the wiring being utilized and the space occupied. Plants shall not be installed in rooms until either the full final or partial final signoff with inspector approval is obtained. No inspections in dark rooms.

Luminaires and other General Requirements:

1. Support of luminaires need to be listed/labeled for the application per *NEC 110.3(B), 110.2*.
2. For the proper support for ratcheting of luminaires, use uni-strut an equivalent per *NEC 110.3(B), 110.12*.
3. For proper support of all luminaires on rails, use uni-strut to support an equivalent shall be required per *NEC 300.11, 314.23, 410.36, 110.3(B), and 110.12*.
4. Proper support of light and ballast cords per *NEC 300.11, 410.136 and 110.3(B)*.
5. Proper support of luminaires, cables, and cords, as well as luminaires and ballast cords, shall be required, with all supports listed and labeled for the application per *NEC 110.3 (B)*.
6. List equipment cannot be modified per *NEC 110.3(A) and 110.3(B)*.
7. All luminaires shall be listed per *NEC 410.6*. Any existing luminaries that have been modified shall not be installed, and if installed, shall be removed prior to the final signoff per *NEC 110.3(B), 410.36*.
8. Luminaires shall be rated for wet/damp locations as applicable per *NEC 410.10 (A) and 410.6*.
9. All 120 volts outlets shall be GFCI protected (except outlets mounted above ceiling locations per *NEC 210.8 G.F.C.I. (Protection for personnel)*).
10. Need approved ratchet and cabling system to lower and raise luminaires. Rope is not an approved method for this environment and engineer's letter for the ratchet loading system shall be required per *NEC 110.3(B), 110.12*.
11. No cords shall be installed through holes, sleeves, ceilings, or where prohibited by *NEC 400.8*.
12. Ballasts cannot be remotely installed outside of rooms per *NEC 410.136*.

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Electrical Panels:

1. Refer to *NEC articles 110.16, 110.22, 210.4(B), 210.4(D), 210.5, 300.11.*
2. Working clearances for electrical equipment must be maintained and provided as required by *NEC 110.26 through 110.34.*
3. To protect exterior electrical equipment, install bollards per *NEC 110.27(B).*
4. “No storage” area outline on floor in front of panels is required per *NEC 110.26 through 110.34.*
5. Illumination above electrical panels shall be required per *NEC 110.26 (D).*

Electrical Wiring:

1. Care should be taken when installing electrical conduit with lighting circuitry with more than nine (9) current carrying conductors. Derating factors shall be applied if the quantity of conductors is greater than allowed before the derating factors per *NEC 310.15(B), (3), (A).*

Other Installation Issues:

1. Exit signs shall be green lettering on a contrasting field, or white lettering on a green field per *NEC 1011.4.1 Graphics.*
2. Exterior lighting and any equipment installed on roof will be inspected for a code compliant installation per *NEC 110.26(D).*
3. Electrical equipment on the roof shall be properly identified and labeled with the circuit numbers from the panels that they originate per *NEC 408.4.*
4. All equipment and devices shall be listed and labeled the equipment and devices by a Nationally Recognized Testing Laboratories per *NEC 110.3(B).* The label shall be visible on all listed equipment and devices during inspections.
5. All exterior outlets installed outside shall be a listed weather – resistant type – *NEC 406.8 (A), 406.8 (B) and 406.9(A), and (B).*
6. All electrical equipment shall have arc flash stickers per *NEC 110.16.*
7. Any changes or modifications to the approved electrical drawings by the City and County of Denver shall be submitted by the responsible electrical engineer to the Electrical Plan Review Engineer for review and approve. A new permit may be required.
8. When lighting controllers are specified for use, they shall be listed for permanent use and designed and integrated with individual overcurrent protection for each circuit and not with the main breaker only.
9. When industrial shelving is approved for use in growing facilities by the city, shelves shall be secured to the floor and ceiling above.