

**SECTION 260534 – BOXES**

- 1.0 All boxes shall conform to the latest edition of the National Electrical Code (NEC) NFPA70 and the applicable NEMA Standards. The boxes shall also be UL listed for the application, per UL 514A.
- 2.0 At a minimum, boxes shall be sized in accordance with the NEC for wire size, quantity and bending radius requirements, wiring device installation and shall take into consideration any future cables or wiring that is intended to be installed.
- 3.0 General:
- A Product Selection: Select boxes of types appropriate for each use and location:
    - 1. Select covers for boxes of types appropriate for each use and location.
    - 2. Provide gaskets for covers of boxes in damp or wet locations.
  - B Corrosion Resistance: Provide galvanized or other approved (by the University Engineering Department) corrosion resistant finish for all boxes, accessories and fittings. Galvanizing shall be performed after fabrication.
  - C Weatherproof Outlet Boxes: Provide corrosion-resistant cast-metal weatherproof outlet boxes, of types, shapes and sizes, including depth of boxes, with threaded conduit ends, cast-metal face plates and spring-hinged waterproof caps suitably configured for each application, including face plate gaskets and corrosion-resistant fasteners.
  - D Junction and Pull Boxes: Galvanized sheet steel junction and pull boxes shall be equipped with screw-on covers and of types, shapes and sizes, to suit each respective location and installation. Boxes and covers shall be installed with stainless steel nuts, bolts, screws, washers, etc. Boxes shall be galvanized after fabrication. Junction and pull boxes used in wet or corrosive locations shall meet NEMA 4X requirements.
  - E In general, floor boxes are not desired. If deemed necessary, proposed floor box installations shall be specifically approved by the University Engineering Department for each proposed instance.
  - F The preferred method for installing devices in above-grade floors is poke-through type boxes, which shall UL listed type and quantity of wiring devices to be installed and shall be listed for maintaining the fire rating integrity of the floor assembly. Poke-thru devices shall be University Engineering Department approved.
  - G Underground or in-ground boxes for outdoor lighting circuits or other outdoor branch circuit loads shall be polymer concrete (“Quazite”) with open bottom, 6” stone base, and minimum size of 10” x 10” x 6”. Boxes and covers shall be listed for the applicable traffic loading conditions in accordance with ANSI SCTE 77. Covers shall be fastened with stainless steel, tamper-proof hardware.
  - H Hazardous Locations: Provide outlet boxes conforming to UL 886 for hazardous locations and install in conformance with NFPA 70 Articles 500 through 510.
  - I Prohibited Work:
    - 1. Sectional (gangable) boxes.
    - 2. Device plates used as covers for boxes in exposed/surface mounted locations.

3. Round boxes where conduit must enter box through side of box, which would result in difficult and insecure connections when fastened with locknut or bushing on rounded surface.
  4. Back-to-back or through-wall boxes for outlets.
  5. More than one extension ring on an outlet box.
- J At the following locations use threaded hub type boxes with gasketed weatherproof covers:
1. Exterior locations.
  2. Where installed on unfinished walls, columns. Cover gaskets may be omitted in dry locations.
  3. Where exposed to moisture laden atmosphere.
  4. Any equipment with, or within 4 feet of, steam connections.
- K When concealed in nonaccessible walls or ceiling, mount pull boxes with the covers flush with the finished wall or ceiling.
- L Junction boxes shall not be installed in non-accessible walls or ceiling spaces.
- M Boxes shall not be abandoned in place.