



SECTION 26 05 33
UNDERFLOOR RACEWAY ASSEMBLIES
Display hidden notes to specifier. (Don't know how? [Click Here](#))

Copyright 2008 - 2014 ARCAT, Inc. - All rights reserved

1 GENERAL

1.1 RELATED SECTIONS

- 1.1.1 Section 03 30 00 - Cast-in-Place Concrete: Rough-in of underfloor duct distribution system.
- 1.1.2 Section 05 30 00 - Metal Decking.
- 1.1.3 Section 09 69 19 - Stringerless Access Flooring.
- 1.1.4 Division 16 - Electrical: Electrical systems and components.
- 1.1.5 Division 16 - Communications: Communications systems and components.
- 1.1.6 Division 16 - Electronic Safety and Security: Security systems and components.
- 1.1.7 Division 16 - Electrical; specifications for electrical systems and components.

1.2 REFERENCES

- 1.2.1 American Concrete Institute (ACI) 301 - Concrete for Buildings.
- 1.2.2 American Concrete Institute (ACI) 318 - Building Code Requirements for Reinforced Concrete.
- 1.2.3 American Concrete Institute (ACI) 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.
- 1.2.4 National Electrical Code (NEC) Article 390 - Underfloor Raceways (NFPA No. 70).
- 1.2.5 NFPA 70 - National Electrical Code.
- 1.2.6 Underwriters Laboratories Inc. (UL 884) - Standard for Underfloor Raceways and Fittings.
- 1.2.7 Canadian Underwriters Laboratories (cUL) - Standard C22.2, No. 80.

1.3 SUBMITTALS

- 1.3.1 Submit under provisions of Section 01 30 00.
- 1.3.2 Product Data: Manufacturer's data sheets and descriptive literature for underfloor raceway components, fittings, and accessories indicated, including:
 - 1.3.2.1 Preparation instructions and recommendations.
 - 1.3.2.2 Storage and handling requirements and recommendations.
 - 1.3.2.3 Installation methods.
- 1.3.3 Submit manufacturer's specifications and installation instructions for each product specified. Include manufacturer's certification as required to show compliance with these

specifications. Indicate by transmittal form that a copy of each instruction has been distributed to the installer. Submit detailed drawings showing layout of all Walkerduct ducts, junction boxes and accessories as necessary for the proper installation of the infloor system.

- 1.3.4 Installation drawings shall be furnished showing the appropriate power layouts where the modular wiring system is to be used. All modular wiring system components in the installation shall be represented on the layout drawing in the form of a legend. The legend shall contain a catalog number and a description describing the components use.
- 1.3.5 Samples: Submit service fittings and outlet covers with required color and finish. Show standard color ranges available.
- 1.3.6 Test Reports: Certified reports from independent testing laboratory supporting compliance of raceway system to specified requirements.
- 1.3.7 Project Record Documents: If variations from approved shop drawings occur during installation of raceway system, submit final as-built drawings indicating such variations.

1.4 QUALITY ASSURANCE

- 1.4.1 Manufacturer Qualifications: Firms regularly engaged in manufacture of underfloor distribution systems of the types and sizes required, whose products have been in satisfactory use in similar service for not less than 10 years. Provide underfloor distribution systems produced by a manufacturer listed in this section.
- 1.4.2 Electrical Components, Devices, and Accessories: Comply with requirements of applicable local codes, NEC, UL, and NEMA Standards pertaining to underfloor distribution systems. Listed and labeled in accordance with NFPA 70, Article 100.
- 1.4.3 Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1.4.3.1 Finish areas designated by Architect.
 - 1.4.3.2 Do not proceed with remaining work until workmanship, appearance and performance are approved by Architect.
 - 1.4.3.3 Refinish mock-up area as required to produce acceptable work.

1.5 COORDINATION

- 1.5.1 Coordinate layout and installation of underfloor distribution system with cast-in-place concrete work and with floor finish work.
- 1.5.2 Coordinate layout and installation of underfloor distribution system with metal decking work and with floor finish work.
- 1.5.3 Coordinate layout and installation of underfloor distribution system with cast-in-place concrete work and with floor finish work.

1.6 DELIVERY, STORAGE, AND HANDLING

- 1.6.1 Deliver underfloor distribution systems in factory labeled packages.
- 1.6.2 Store and handle in strict compliance with manufacturer's written instructions and recommendations.
- 1.6.3 Protect from damage due to weather, excessive temperature, and construction operations.

1.7 PROJECT CONDITIONS

- 1.7.1 Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

2 PRODUCTS

2.1 MANUFACTURERS

- 2.1.1 Acceptable Manufacturer: Wiremold, which is located at: 60 Woodlawn St. ; West Hartford, CT 06110; Toll Free Tel: 877-295-3472; Tel: 860-233-6251; Fax: 860-232-2062; Email:customer.support-wm@legrand.us,technical.support-wm@legrand.us; Web: www.legrand.us/Wiremold.aspx
- 2.1.2 Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

3 EXECUTION

3.1 EXAMINATION

- 3.1.1 Examine conditions under which underfloor duct distribution systems are to be installed and substrate that will support systems. Do not proceed with work until unsatisfactory conditions have been corrected.
 - 3.1.1.1 Notify the Architect/Engineer in writing of conditions detrimental to proper completion of the work.
 - 3.1.1.2 Notify the Construction Manager in writing of conditions detrimental to proper completion of the work.
- 3.1.2 If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- 3.2.1 Acceptability of Concrete Work:
 - 3.2.1.1 Confirm that vapor barrier has been installed in slab-on-grade construction.
 - 3.2.1.2 Confirm that welded wire fabric or mesh has been installed in the top 1 inch of the concrete slab to limit cracks in the slab due to expansion and contraction from temperature variations.
 - 3.2.1.3 Concrete topping shall be as indicated on Drawings and as specified in Section 03 30 00 - Cast-in-Place Concrete.
 - 3.2.1.4 Reinforced concrete design shall be in accordance with American Concrete for Buildings (ACI301-72) and ACI Building Code Requirements for Reinforced Concrete (ACI318-83). Concrete placement shall follow proper and accepted industry practice and be in accordance with ACI Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete (ACI304-73).
 - 3.2.1.5 Vibrate concrete at all headers, junction boxes and duct to insure that the concrete completely fills underneath the duct system. Care shall be taken not to over vibrate. Shrinkage and temperature reinforcement above the duct systems shall be in accordance with ACI 318.
- 3.2.2 Confirm coordination of architectural and electrical drawings for dimensions prior to installation of duct system. Where conflicts exist between the architectural and electrical drawings, notify contract administrator.

3.3 INSTALLATION - GENERAL

- 3.3.1 Install in accordance with manufacturer's instructions for system components.

- 3.3.2 Install in accordance with complete system instruction sheets.
 - 3.3.3 Install enclosures to be mechanically continuous and connected to all electrical outlets, boxes, device mounting brackets, and cabinets, in accordance with manufacturer's installation sheets.
 - 3.3.4 Install enclosures to be electrically continuous and bonded in accordance with the National Electric Code for proper grounding.
- 3.4 CLEANING AND PROTECTION
- 3.4.1 Clean exposed surfaces using non-abrasive materials and methods recommended by manufacturer.
 - 3.4.2 Instruct Owner's personnel in proper maintenance procedures.
 - 3.4.3 Protect in-floor system from damage. Do not allow equipment or heavy traffic over duct during construction period, without first installing ramps over the duct. Design ramps so that imposed loads are not transferred to the duct.
 - 3.4.4 Replace system components that are damaged during construction at no additional cost to the Owner.

END OF SECTION