

## University of Houston Master Specification

<Insert Project Name>

<Insert U of H Proj #>

<Insert Issue Name>

<Insert Issue Date>

### SECTION 26 0535 ELECTRICAL GUTTERS AND WIREWAYS

Maintain Section format, including the UH master spec designation and version date in bold in the center columns of the header and footer. Complete the header and footer with Project information.

Revise this Section by deleting and inserting text to meet Project-specific requirements.

This Section uses the term "Engineer." Change this term to match that used to identify the design professional as defined in the General and Supplementary Conditions.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

Delete hidden text after this Section has been edited for the Project.

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. The Contractor's attention is specifically directed, but not limited, to the following documents for additional requirements:
  - 1. The current version of the *Uniform General Conditions for Construction Contracts*, State of Texas, available on the web site of the Texas Facilities Commission.
  - 2. The University of Houston's *Supplemental General Conditions and Special Conditions for Construction*.

##### 1.2 DESCRIPTION OF WORK

- A. Work Included: Provide electrical gutter and wireway work as shown, scheduled, indicated, and as specified.
- B. Types: The types of electrical gutters and wireways required for the project include, but are not limited to, the following:
  - 1. Electrical wiring gutters and wireways.
  - 2. Power and voice/data surface metal raceways.
  - 3. Surface overfloor metal raceway.

##### 1.3 STANDARDS

- A. Products shall be designed, manufactured, tested, and installed in compliance with the following standards:
  - 1. NEC Article 362 Wireways.
  - 2. NEC Article 374 Auxiliary Gutters.
  - 3. NEC Article 374 Multioutlet Assembly.

##### 1.4 QUALITY ASSURANCE

<Insert A/E Name>

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- A. Manufacturers: Provide products complying with these specifications and produced by one of the following:
  - 1. Gutters and Wireways:
    - a. ABB.
    - b. Hoffman Manufacturing Company.
    - c. Square D Company.
  - 2. Surface **[and Overfloor]** Raceways:
    - a. AT Power System, A Division of Airey-Thompson Co.
    - b. Legrand.
- B. UL Label: All gutters, wireways, and raceways used for power wiring shall be UL-labeled.

### 1.5 SUBMITTALS

- A. Shop Drawing submittals shall include, but not be limited to, the following:
  - 1. Cut sheets of surface-mounted and over floor raceways, gutters, wireways, fittings, connectors, associated accessories and mounting hardware.
  - 2. Additional information as required in Section 26 0001 "Electrical General Provisions."

### 1.6 STORAGE AND HANDLING

- A. Handle gutters, wireways and surface raceways carefully to avoid damage, breaking, denting, and scoring. Damaged equipment or materials shall not be installed.
- B. Store gutters, wireways, and surface raceways in a clean dry space and protect from the weather.

## PART 2 - PRODUCTS

### 2.1 ELECTRICAL GUTTERS AND WIREWAYS

- A. General: Provide galvanized steel electrical gutters and wireways in the types and sizes indicated, minimum 16 gauge thickness, with rounded edges and smooth surfaces; constructed in compliance with applicable standards; and with additional features as indicated or required. Provide hinged or removable cover on raceway where noted on the Drawings. All power wiring raceways shall have a cover. No stamped knock out's.
- B. Size: Provide size as indicated, where size is not indicated, construct in accordance with the NEC and other applicable standards.
- C. Accessories: Provide gutter and wireway accessories where indicated or required, constructed of same metal and finish as gutters or wireways.
- D. Supports: Provide gutter and wireway supports where indicated or required, conforming to the NEC, as recommended by the manufacturer.
- E. Fittings: Fittings shall be so constructed to continue the "lay-in" feature through the entire installation.
- F. Finish: Provide all sheet metal parts with rust inhibiting phosphatizing primer coating and finished in gray enamel. All hardware shall be silicone bronze or stainless (if all stainless steel hardware is used, anti-seize compound shall be utilized) to prevent corrosion.

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### 2.2 SURFACE METAL RACEWAY

- A. General: Surface metal raceway shall be two piece galvanized steel or aluminum with removable cover equal to Wiremold series indicated on the Drawings.
- B. Finish: All raceway system components shall be finished in a paint color as selected by the **[Engineer]** **[Architect.]**
- C. Accessories: Provide couplings, elbows, connectors, boxes, extension rings, end caps, outlet covers, and other required accessories specifically designed for use with each surface raceway system.

Retain paragraph below if required for Project.

- D. **[Voice/Data Outlets: Provide factory or punched openings in voice/data distribution raceway for installation of modular voice/data outlets in locations shown on the Drawings.]**

### 2.3 MULTIOUTLET SURFACE RACEWAY

- A. General: Multioutlet assembly shall be two piece sheet metal channel with removable cover equal to Wiremold series indicated on the Drawings.
- B. Receptacles: Provide NEMA 5-20R receptacles located as shown on Drawings.
- C. Finish: Raceway shall be finished [in a paint color as selected by the Architect.]
- D. Accessories: Provide couplings, elbows, outlet and device boxes, and connectors designed for use with multioutlet system.

### 2.4 OVERFLOOR SURFACE METAL RACEWAY

- A. General: Overfloor surface metal raceway shall be two piece galvanized steel or aluminum with removable cover equal to Wiremold series indicated on the Drawings.
- B. Finish: All metal raceway system components shall be finished [with the manufacturer's standard galvanized finish.] or [in a paint color as selected by the Architect.]
- C. Accessories: Provide couplings, elbows, outlet and device boxes, end caps, connectors, and other required accessories specifically designed for use with each overfloor raceway system.
- D. Receptacles: Refer to Section 26 2726 "Wiring Devices" for requirements for receptacles for use with overfloor surface metal raceway.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General: Install gutters, wireways and surface raceways where shown and comply with specifications, in accordance with the manufacturer's written instructions, NEC, NECA's "Standard of Installation", and with recognized industry practices to ensure that the gutters, wireways and surface raceways comply with the specified requirements and serve the intended purposes. Comply with requirements of NEMA and the NEC pertaining to installation of electrical gutters.
- B. Finishing: Remove burrs and sharp edges of gutters and wireways wherever these could possibly be cause damage to wiring insulation or jacket.
- C. Grounding: Electrically ground gutters and wireways to ensure continuous electrical conductivity. Refer to Section 26 0526 "Grounding and Bonding for Electrical Systems."

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### D. Cables:

1. Complete gutter and wireway installation before starting the installation of cables.
2. Provide sufficient space to permit access for installing, splicing, and maintaining the cables.
3. Provide slack in voice/data and power cables in raceways, where noted on the Drawings, to provide flexibility for future taps and modifications.
4. Provide retaining clips on minimum 5 feet on center where the raceway orientation will allow cables to shift or fall out when the cover is opened and removed.

### E. Mounting: Mount surface raceways in accordance with the manufacturer's UL-listed installation instructions and the requirements of the local Electrical Inspection Department, make accessible.

### 3.2 PROTECTION OF SURFACE RACEWAY RECEPTACLES

- A. General: Upon installation of multi-outlet surface raceways, advise Contractor regarding proper and cautious use of convenience outlets. At the time of Substantial Completion, replace those items which have been damaged, including those burned and scored by faulty plugs.

### 3.3 TESTING

- A. General: Prior to energization, check for continuity of circuits, for short circuits and check grounding connections. Verify that each individual raceway outlet is energized and that hot, neutral and ground conductors are properly connected.

### 3.4 IDENTIFICATION

- A. Identification: Refer to Section 26 0553 "Identification for Electrical Systems" for applicable painting and nameplates for gutters and wireways.

END OF SECTION 26 0535