

SECTION 16140
WIRING DEVICES

PART 1 - GENERAL

1.01 PROVISIONS INCLUDED

- A. The general provisions of the Contract, including General and Supplementary General Conditions, and Division 1 General Requirements, apply to work specified in this Section.
- B. Requirements of Section 16050, "Basic Electrical Materials and Methods," apply to this Section.

1.02 SUMMARY

- A. This Section specifies the furnishing and installation of wiring devices. Furnish wiring devices of each type in quantities sufficient for a complete installation as indicated on the drawings and in these specifications. Wiring devices are defined to include the following:
 - 1. Duplex receptacles.
 - 2. Toggle switches.
 - 3. Special purpose receptacles.
 - 4. Device plates.
- B. Related Work Specified in Other Sections:
 - 1. Grounding, Section 16060.
 - 2. Electrical Identification, Section 16075.
 - 3. Wireways and Surface Raceways, Section 16132.
 - 4. Outlet boxes, Section 16135.

1.03 REFERENCES

- A. National Fire Protection Association: NFPA 70, National Electrical Code (NEC).
- B. National Electrical Manufacturers Association (NEMA):
 - 1. NEMA WD1, "General Requirements for Wiring Devices."
 - 2. NEMA WD6, "Wiring Devices - Dimensional Requirements."
- C. Federal Specifications (FS):
 - 1. FS W-C-596, Plug, Receptacle and Cable Outlet, Electrical Power.
 - 2. FS W-S-896, Switches, Toggle, Flush Mounted.
- D. Underwriters Laboratories (UL):
 - 1. UL 20, General Use Snap Switches.
 - 2. UL 498, Electrical Attachment Plugs and Receptacles.
 - 3. UL 943, Ground-Fault Circuit Interrupters.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturers catalog cuts for each type wiring device provided for this project. Where various sizes, capacities, types or options are listed by manufacturer, mark product data to clearly show which sizes, capacities, types or options are being provided for each application.

1.05 QUALITY ASSURANCE

- A. "Listed and Labeled": As defined in the referenced Electrical Code, Article 100.
- B. Sole Source: Furnish all wiring devices from a single manufacturer, unless Contract Documents give specific instructions to the contrary.
- C. Installer: Company specializing in performing the work of this section with minimum three years experience.

1.06 COORDINATION

- A. Coordinate the work specified in this section with other work of the contract. Coordinate the placement of wiring devices with architectural and mechanical work prior to installation.
- B. Receptacles for Owner-furnished equipment: Match plug configurations

PART 2 - MATERIALS

2.01 MANUFACTURERS

- A. Furnish standard wiring devices and device plates manufactured by one of the following manufacturers:
 - 1. Hubbell
 - 2. Leviton
 - 3. General Electric
 - 4. Bryant.

2.02 GENERAL REQUIREMENTS FOR WIRING DEVICES

- A. Furnish all wiring devices, specification grade, complete with accessories shown on drawings or specified in this section..
- B. Color: to match existing.

2.03 DUPLEX RECEPTACLES

- A. Duplex Receptacles: Specification grade, straight-blade, 2 pole 3 wire grounding type, back and side wired, rated for 120 volts, 20 amperes. Hubbell No. 5362 (NEMA 5-20R) or equal.
- B. Ground fault interrupter (GFI) receptacles: Duplex receptacles conforming to UL 943, specification grade, feed-through type, rated for 120 volt, 20 amperes, NEMA 5-20R, GFI Class "A" with a sensitivity to leakage 5 milliamps. Hubbell No. GF5362 or equal.

2.04 TOGGLE SWITCHES

- A. Toggle switches: Furnish full size, heavy duty, side wire, AC type, rated for 120/277 volts, 20 amperes; equal to the following:
 - 1. Single Pole: Hubbell #1221
 - 2. Three-way: Hubbell #1223

2.05 SPECIAL PURPOSE RECEPTACLES

- A. Special purpose receptacles: Specification grade, back and side wired, U-ground; refer to drawings for catalog numbers.

2.06 DEVICE PLATES

- A. Plates: Single, combination type or multi-device to match corresponding wiring devices.
- B. Device plates for Finished Spaces: Type 302 stainless steel with a smooth finish.
- C. Device plates for exposed, surface mounted boxes: Galvanized steel.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Inspect job conditions and related work and report to the Architect conditions which may adversely affect the installation of wiring devices.

3.02 INSTALLATION OF WIRING DEVICES AND DEVICE PLATES

- A. Install work in accordance with the printed specifications and installation instructions of each of the manufacturers and with to the approved shop drawings. Installed work shall conform with applicable provisions of the codes and standards referenced in Part 1.
- B. Install wiring devices in appropriately sized outlet boxes. Where more than one switch or a duplex receptacle is indicated on the drawings, gang outlet boxes together to accept all devices at the same location.
- C. Mount duplex convenience and power receptacles vertically, unless otherwise indicated, with grounding posts at the top of the device. Where duplex receptacles are indicated to be mounted horizontally, locate the grounding post on the left as the outlet is viewed from the front.
- D. On finished walls, flush-mount switches. Where two or more switches are shown at one location, install them under a common wall plate. Mount switches on the knob side of doors, approximately 4 feet above the floor.
- E. Appropriately label each receptacle, either wall or raceway mounted, as specified in Section 16075; indicate the panel and circuit number from which the receptacle is served.
- F. Install toggle switches, except 3-way switches, so that posts are in the down position when lights are off.

G. Securely fasten wiring devices in place, plumb, level, and true to finished lines and surfaces.

3.03 TESTING

A. Test all switches to confirm that switching is properly installed, including dimmers.

B. Perform the following tests on all receptacles and wiring devices:

1. Check for proper polarity and grounding
2. Check for damaged or missing device plates.
3. Test and reset all GFI receptacles.

3.04 CLEANING AND ADJUSTING

A. At completion of the work, remove and dispose of construction debris and clean wiring devices and exposed device plates.

END OF SECTION 16140