CLOCK SYSTEM

General

Scope

For Central Campus projects, provide synchronous-wired clocks.

- The existing impulse signal type clock system is obsolete and can not be expanded.
- The existing power line carrier signal clock system is no longer reliable due to power system harmonics, and thus shall not be expanded.

For new North Campus projects, provide synchronous-wired clocks.

For North Campus renovation projects:

- Match the existing clocks if a synchronous-wired clock system already exists.
- Provide synchronous-wired clocks if the existing clocks are impulse signal type or power line carrier signal clocks.

When synchronized clocks are not required and the Owner agrees to pay the costs of resetting, maintaining and replacing stolen clocks, provide individual battery-powered clocks.

Related Sections

Refer to Design Guidelines Section 16050, "Basic Electrical Materials and Methods", for clock conduit requirements including conduit identification requirements.

Refer to Design Guidelines Section 16120, "Wires and Cables", for clock wiring requirements including wire color coding requirements.

Design Criteria

The University maintains two Simplex Model 6400 master time centers, one in the School of Education Building and the other in the G. G. Brown building. These units are synchronized to the Coordinated Universal Time Broadcast from Radio Station WWV in Fort Collins, Colorado. They output 24 volt DC binary coded decimal (BCD) signals for University clock synchronization.

Provide a building clock code converter to monitor the master time center and control all of the building clocks. Locate the clock code converter in the unit substation room.

Provide a telephone line connection from the nearest University master time center to the building clock code converter.

Provide one or more clock correction relays as necessary to monitor the clock code converter and produce a 120 volt AC synchronizing pulse for the building clocks. Locate the clock correction relays adjacent to the clock code converter.

Provide a three-wire with ground power and synchronizing circuit in conduit from the clock correction relays to each clock.

Products

Synchronous-Wired Clock System

Specify Simplex Model 2320-9007 clock code converters.

Specify Simplex Model 2080-9008 clock correction relays.

Specify synchronous-wired, analog, 12" round, 120 volt, 60 Hz, 3 wire connected clocks with black surface mount molded case, 12 hour Designer 1 face, Designer hands including a sweep second hand, Simplex Model 6310-9221 with Model 2310-9011 receptacle assembly.

Battery Powered Clocks

Specify battery powered, analog, 12” round clocks with a sweep second hand and capable of being reset by means of a stem that is accessible without removing the clock from the wall.

Execution

Dedicated conduits shall be provided for synchronous-wired clock system wiring.

Final connections and testing of a synchronous-wired clock system shall be performed by a manufacturer's representative.

Battery-powered clocks shall be fastened to the walls with screws to impede theft.

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