16730-H: MASTER CLOCKS

Applicability:
The information expressed herein is unique to UMHHC owned, operated, and leased facilities, and are intended to supplement the University of Michigan's Architecture, Engineering, and Construction (UMAEC), design guidelines 16730. Those UMAEC design guidelines are located on website [http://www.plantext.bf.umich.edu/for.archs/index.html](http://www.plantext.bf.umich.edu/for.archs/index.html). All information presented in the referenced UMAEC guideline applies to UMHHC facilities, unless explicitly stated otherwise below. Where differences and/or conflicts exist between the supplemental information noted below, and the information in the UMAEC guideline, this supplementary information shall take precedence.

The Design Professional (A/E) shall adhere to UMHHC Design Guidelines for all work at UMHHC facilities. Any requested deviations from these guidelines, shall be sent, in writing, to UMHHC’s Facilities Planning and Development (FP&D). Address the correspondence to the assigned FP&D engineer for the given project. The deviation shall not be incorporated into the construction documents until written approval of the deviation is received by the Design Professional.

The Design Professional is fully responsible for the professional quality, technical accuracy, code compliance, and overall coordination of the contract documents. Compliance with these guidelines shall not be construed so as to relieve the Design Professional of any of that responsibility.

All major new facilities shall have a master clock systems installed. Smaller facilities, when noted in program statement shall also have master clock systems. Existing clocks systems shall be extended/modified when renovations are done.

Standards:

System Type
The systems in existing buildings shall be hard-wired type. In new buildings hard-wired, or the wireless type noted in the campus guideline, may be considered. If considering use of wireless type, determine if coverage will be adequate. Do not, however, use carrier systems that rely upon power system wiring.

Battery powered clocks, because of higher maintenance costs, and lack of synchronization should be avoided. Battery powered clocks shall not be used in new inpatient buildings, outpatient surgery, and like occupancies.

Raceways
1. Hard-wired clock systems, as currently manufactured, are not power limited (as defined by NEC) and shall therefore not be routed in cable trays. Install all wiring in conduit. All raceways in finished area shall be recessed.
2. If power limited models become available consult UMHS Electrical Engineer.

Installed Systems
1. The University Hospital and Mott have a 24 volt Simplex hard wired system installed. It is a Simplex Model #2351. The master for this system is in the Facility Control Center in UH, Room 1A203. This master has been extended into the new Cancer Geriatrics Center.
2. The Taubman Health Center has a 120 volt Simplex hard-wired system installed. It is a Simplex Model #2350. The master is in the substation room on B1 of THC, Room B311E.
3. The MCHC Building and the THC Expansion Building have a National Time System installed. It is a Model # MC-400. The master is in the communication room on the first level of MCHC Room F1214C.
**System Expansion**

1. Either of the two Simplex masters may be extended into new buildings or additions on the main UMHS campus. Install amplifiers boosters and related equipment as necessary. Any such amplifiers, or boosters shall be in communication rooms.

2. If system loading, or physical distances, prevent use of either of these systems install a new Simplex system of similar design preferably the Model 2351, 24 volt system.

3. The National Time System shall be extended only within MCHC building and Taubman Expansion building.

**Master Clock Locations**

1. Specific locations to receive master clock will be noted in the program statement or will be defined during design development.

2. As a general guideline, for preliminary planning purposes, assume a clock will be installed in the rooms noted below:

<table>
<thead>
<tr>
<th>Locations:</th>
<th>Special Notes:</th>
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</thead>
<tbody>
<tr>
<td>Corridors and elevator lobbies</td>
<td>Placed as needed for convenient use by staff, patients and visitors.</td>
</tr>
<tr>
<td>Patient Rooms</td>
<td>One in view of all patients.</td>
</tr>
<tr>
<td>Treatment Rooms</td>
<td></td>
</tr>
<tr>
<td>Procedure/Diagnostic Rooms</td>
<td></td>
</tr>
<tr>
<td>Operating, Delivery, Emergency, and ICU type rooms</td>
<td>One wall mount unit. Digital elapsed time type clock may also be required, connect this timer to activate with Code Blue button (if one is present in room).</td>
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</tbody>
</table>

**Support Spaces such as:**

- Nurse stations
- Pharmacies
- Medication rooms
- Conference rooms
- Admitting/Discharge offices
- Staff lounges
- Shops
- Open area office suites
- Cafeteria/kitchens
- Auditoriums

**Clocks, typically will not be installed in the following rooms:**

- Private Offices
- Waiting rooms
- Mechanical or electrical rooms
- Stairwells

**Mounting**

1. All clocks will typically be wall mounted, recessed or semi-flush with wall surface. Double faced clocks for corridors are an exception to this rule.

2. Mount all clocks high enough to avoid damage from carts moving in corridors or carts being placed in room.

**Clock Type/Size**

1. Single face clocks shall be 12" round, semi-flush, with sweep second hand, 24 VAC synchronous wired indicating clock with black molded case/lens and symmetry dial and hands. Provide 9" clocks where space is limited, i.e. above door frames

When extending Simplex 120 volt systems or National Systems adjust part numbers as needed and/or to match building standard.