



Scheduling Preventive Maintenance Based on Building Application & Its Occupants

In our *Focus on Facilities* July Asset Management column titled [“Become Familiar with ASHRAE HVAC Handbooks”](#) we highlighted these very useful technical manuals used by heating, ventilating, and air-conditioning (HVAC) engineers when designing a building program, whether new construction or existing building renovation. Using these handbooks, as our reference, we want to discuss herein the optimum time facility management should consider scheduling the preventive maintenance (PM) work activities.

The Diocese has numerous buildings to provide PM services and the diversity of these buildings is significant. Within the Diocese building assets there are schools, parishes, and health and human services. The hour of occupancy is equally diverse spanning from the buildings being open 5-6 days per week from morning until the evening hours while other buildings are occupied 24-hours a day, 365 days a year. Based on the hours of occupancy the facility PM staff will attempt to work around the occupants, minimizing the disruption that can occur if a maintenance person(s) needs to get access to a space where individuals are occupying the space.

With the inventory of PM work orders, to complete routine maintenance the facility management person scheduling these task sheets for equipment within an occupied room or serving occupied rooms, will take into account where people are in the building and what these individuals are doing within these spaces. The goal of management is to minimize, if not to completely avoid disrupting the activities in occupied rooms when it is time to provide proactive maintenance chores.

The following are examples of how facility management will attempt to work around the occupants’ schedule and occupancy. The same can be said about avoiding the shutting down of building systems, e.g., central HVAC unit while the area being served is occupied.



So, recognizing the building applications from the ASHRAE handbooks and diocesan buildings, the PM work order scheduler will strive to assign service technicians to complete their work around hours of occupancy such as:

<u>BUILDING USE</u>	<u>HOURS OF OCCUPANCY</u>	<u>SCHEDULE PM WORK</u>
School	6A—8P, M-F	Start at 8P
Missions	6A—9P, M-S	Start at 9P
Church	8A—7P, M-S	Start at 7P
Parish Hall	4P—8P, F-S	T-Th
Residents	24-hr, M-S	Start at 11A
Social Services	6A—9P, M-F	Start at 9P

Ideally the above sample of hours-of-occupancy and the time to complete the PM work is simply an example to demonstrate how facility management endeavors to complete their work while accommodating the occupants, but this can't always be achieved. Occupants should try and understand that facility management is well aware of the occupants and the space usage and management tries to accommodate the building application and activity schedule, but PM work needs to be regularly scheduled to assure the building systems remain reliable and will perform as intended.

For occupant PM work order education, the facility management will most likely have another priority in addition to accommodating occupants and building usage, and that is prioritizing what can be maintained based on the available maintenance budget. An example of this type of prioritizing is as follows:

- Priority 1: Ensure life safety systems are operating correctly via routine testing per Code and good-practice, e.g., emergency generators, fire and smoke alarm system, fire extinguishers, security system(s), etc.
- Priority 1: Ensure indoor air quality is acceptable via maintaining clean air filters
- Priority 2: Complete regularly scheduled PM work order tasks for each primary piece of equipment, e.g., boiler(s), chillers, domestic hot water heaters, ejection pumps (sewer and/or water), electrical panels, etc.
- Priority 3: Complete regularly scheduled PM work orders for secondary equipment, central air-handling units, pumps and circulators, etc.
- Priority 4: If the maintenance budget and availability of service technicians are available, provide PM work order tasking for terminal equipment, e.g., unit heaters, fan coil units, etc.
- Priority 5: Do no PM work on specific terminal equipment, e.g., variable volume air terminals until this specific piece of equipment has failed and the unit or device is repaired, the work order completed, and the terminal unit is placed back into operation.

Scheduling preventive maintenance based on building application and its occupants is usually a very challenging job to achieve and occupants should recognize that facility management not only juggles the annual maintenance operating budget to perform the needed work, but they do so while coordinating the work getting done based on the building usage, occupants, and available access to the equipment and systems served.

For additional *Focus on Facilities* columns to cross reference with this column please go to:

Facility Management:

[June 2019, More Pollen = More Air Filter Changes](#)

[October 2020, Annual Building Maintenance Checklist](#)

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