



Creating A Deferred Maintenance Plan

When it comes to asset management of one's personal residence, condominium association, apartment complex, commercial, institutional, or healthcare facility, at some point in time the question will be asked, "What is the deferred maintenance plan for this building, its infrastructure, and critical equipment?"

To start the conversation, those responsible for asset management should clearly understand what "deferred maintenance" means. Well, "deferred" means to put off or delay. Deferred maintenance thus means put off or delay the maintenance categories that don't show up in the annual operating budget whether it is one's personal budget or an organization's budget.

For example, while air filters in a central air-handling unit will be replaced via the annual operating budget that is regularly scheduled quarterly, the air-handling unit as a whole will not be maintained in such a manner. Over time and even with proactive planned maintenance this air-handling unit will eventually reach the end of its useful service life. Reasons that will influence the asset management of the air-handling unit may be interior metal corrosion, fan shaft and bearing wear to mention two deficiencies that don't occur within an annual operating budget but occur over years of uses. In addition this air-handling unit technology will transition from the start with the latest in engineering and/or technology to current technology to out-of-date and/or eventually out of code compliance.

This business asset management should be integrated with capital project planning because building materials and the building's mechanical, electrical, and communication systems all have estimated useful service life because nothing lasts forever. Staying with the example of an air-handling unit/system the asset manager will be concerned with the air-handling unit remaining reliable and within code compliance. The capital planning manager will become aware of the physical and operating conditions of this air-handling



unit as it pertains to the building it serves and what the building plans will be in the future e.g., school building to be renovated and updated to serve senior assisted living. This is where a **Deferred Maintenance Plan (DMP)** will be beneficial to both asset management and capital planning management.

When should a DMP be created for a building? Well this Plan doesn't need to be drafted within the first year of the building being built and most building materials with its associated mechanical, electrical, and communication infrastructure should have a minimum of 5 to 10 year useful service life and most likely more in the range of 15 to 20 year useful service life excluding communication equipment and systems. For communication deferred maintenance, this plan will take on a different approach simply because digital technology can change dramatically each year and so, at some point the communication system e.g., fire alarm system may need updating to stay current with life safety codes.

Who should perform a DMP? For the homeowner, who

is inclined to do this proactive planning, the homeowner can research online examples of residential equipment and materials and/or base the plan on visual inspection e.g., exterior siding needs to be re-painted. For the building owner, the facility manager may be confident enough to perform this survey and estimating repair/replacement costs or a consultant may be hired to perform a facility assessment covering deferred maintenance of the building materials and the building infrastructure. From this assessment a report and 10-20 year deferred maintenance spreadsheet will be created.

What categories make up a DMP? For the “Building Exterior” here are few of several maintenance considerations:

- Roof shingles
- Pointing up of flashing and brick exterior
- Repair and repaint exterior siding

Heating, Ventilating, and Air-Conditioning Infrastructure:

- Central air-handling unit
- Pumps
- Terminal units

Plumbing Infrastructure:

- Hot water heater
- Circulators
- Heat exchangers

Electrical Infrastructure:

- Circuit breakers
- Transformers

Communication Infrastructure:

- Information systems
- Computer software for computerized equipment
- Electronic diagnostic equipment

How far should a DMP be forecast out? Experience has shown that a DMP should be projected out a minimum of 10-years with 15 to 20-years being more practical because a lot of building materials e.g., roof shingles may have a 30-year guarantee and building infrastructure having 15 to 25-years of useful equipment

service life. That said, this DMP should be revisited by the asset manager along with capital planning manager, and the facility manager every 5-years to update work completed, revisions to the DMP, and extend this Plan out an additional 5-years.

There are several resources available online for researching material and equipment useful service life. Another source for finding equipment useful service life can be the State’s Department of Taxation Property Manual, Division of Assessment Standards. The practice of maintaining a DMP goes beyond trying to forecast when a major piece of equipment could fail. The potential liability of equipment failure e.g., the primary refrigeration equipment at a nursing home during the air-conditioning season may result in significant cost premium to provide temporary cooling within the nursing home while a new refrigeration unit and/or system is engineered, purchased, and installed. It is therefore essential that buildings have a DMP on record and tentative plan updates at the appropriate time to avoid cost premiums, minimize failure and associated liability, continue to maintain occupant comfort each year.

The Facilities Services Corporation is available to assist in this process by creating a Property Condition Report and 5 year Capital plan. This report helps identify facility items that need addressed in the near future, as well as identify facility items that need to be planned and budgeted for based of the included table of Life Cycles of Various Building Components. By being proactive with having a DMP in place, this positions the asset manager to be able to minimize the chances of unexpected equipment failures, and plan the repairs or replacement on a schedule that minimizes interruptions to daily activities.

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