



Repair, Replacement, Renovation and Maintenance Program

Hillsborough County, Florida

Introduction

The Repair, Replacement, Renovation and Maintenance (R3M) Program concept is a strategy for managing Hillsborough County's physical assets. The purpose of the R3M Program is to protect investment in infrastructure, reduce the maintenance backlog, control and reduce costs, minimize waste, and to maintain public buildings and facilities in a safe and efficient condition.

The Problem

Before the R3M program, Hillsborough County's facility maintenance was conducted under the management, funding, procurement and standards of each operating department. Hillsborough County maintains over 300 buildings and facilities, including libraries, fire stations, Head Start facilities, adult day care centers, courthouses, warehouses, fleet operations buildings and administrative offices. When a department needed to undertake a renovation, replace a roof, repave a parking lot or replace an HVAC system, it entered a bureaucratic gray area between routine facilities maintenance (minor electrical, painting or plumbing problems) and architectural services (major new construction or building expansion).

Because of budgetary shortages and staff limitations, the Facilities Maintenance Division did not perform intermediate-level project management functions. If a renovation was undertaken by the architectural services unit, it faced a major procurement process and required approval as a capital project by the Board of County Commissioners in the County's Six-Year Capital Improvement Program (CIP) cycle.

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This was a cumbersome process that could not satisfy immediate renovation and repair needs in a timely manner.

As a result, a huge backlog of deferred capital maintenance projects had accumulated by the late 1990's. Operating departments found themselves bartering for services amongst themselves to get necessary work done. Citizens were upset, as books in libraries were covered with mold and mildew as a result of leaky roofs, deteriorated finishes began to affect the appearance and operation of buildings, and inefficient, deteriorating lighting and HVAC systems wasted public funds.

In the past, smaller projects fell through the cracks and remained unfunded until catastrophic failures occurred. That emergency scenario resulted in high premiums for emergency labor, rush shipments for parts and unplanned overtime that broke the budget. Also, an inventory of County-owned facilities had never been performed.

At this time, Hillsborough County was entering its "journey of excellence" using the Florida Sterling Management System, modeled after the national Baldrige System. The system is built around such concepts as Customer Alignment, Process Management and Results. To align with internal and external customers, it became clear that something had to be done to reduce the deferred maintenance backlog. Also, the Governmental Accounting Standards Board (GASB) established new standards to make government more accountable for tracking infrastructure condition and spending. Clearly, the County needed a comprehensive approach to maintaining its facilities.

The Solution

In FY 2000, a new program and organizational unit was created to address the large backlog of deferred maintenance. The new program was called R3M: Repair, Replacement, Renovation and Maintenance. It was housed in the Real Estate Department, alongside the Facility Management and Architectural Services Divisions, integrating maintenance into the cycle of facility asset management. A framework was established to deal with projects less than \$150,000 in cost, and less than twelve months in duration. As such, they became exempt from the CIP process.

The R3M Program addresses each aspect of the maintenance process:

Funding

In Fiscal Year 1999, the Hillsborough County Board of County Commissioners made a commitment to improve the maintenance of the county's infrastructure. To that end, they committed 1% of their ad valorem tax revenue to infrastructure maintenance and repair. Over the life of the program, this has averaged \$8 million each year. In the public sector it is impossible to defend a budget without detailed information regarding facility condition that is credible, supportable and consistent. The application of predictive tools to multi year planning helps present a persuasive timeline of future projects. The R3M Program has accomplished this task. Specific projects are identified and reported, and an appropriate budget request is made on a multi-year basis for each building and facility.

Inventory

The inventory portion of R3M gathers detailed information and statistics regarding location, utility infrastructure, roadways, sidewalks, security elements, structure type, cost, use, square footages, quantities, and other baseline data regarding all systems of each county building or facility. The inventory is housed in a centralized, accessible database. The information provides the core data used to determine existing building value and replacement cost. In hurricane-prone Florida this data is especially important, as documentation of each building's condition at the time immediately prior to catastrophic damage is needed to satisfy FEMA requirements when requesting damage assistance funds.

Assessment, Evaluation and Project Development

The assessment portion of the process determines the condition of each building and system. Staff assigns life expectancy standards for systems and equipment. Using these standards, custom software calculates the existing condition and remaining service life of each system and the entire facility. Finally, the software estimates repair and replacement costs for each problem identified during the assessment. This data is then used to develop budget and funding requirements for project work identified during the evaluation process. The software also provides capital budget data five years into the future, so that future requirements are considered during the current budget process.

Procurement of Services

Master contracts are awarded for both general and specific types of renovation, repair or maintenance work. These contracts are used as needed, on a work-order basis. Hillsborough County currently has two Miscellaneous Construction Contracts, each with three contractors for a period of two years. Each contract is valued at \$1,000,000 per year, which provides \$6,000,000 construction capacity each year. The use of multiple contractors facilitates the assignment of multiple work orders at any given time. In addition to the Miscellaneous Construction Contracts, specialty contracts for specific trades and services include: Paving; Painting; Roofing; Roof Inspection; Demolition; Lighting Retrofit Services; and Mechanical Engineering Services. Three of these contracts are Small Business Enterprise (SBE) Set-Aside contracts that promote small business. These flexible methods permit a significant number of projects can be accomplished simultaneously.

Construction

If deficiencies are found during Inventory and Assessment inspections, a scope of work is determined, a work order is issued, and construction work is completed using a Miscellaneous Construction Contract. The R3M Program uses qualified construction inspectors who oversee each construction project to ensure that specifications are followed, that the work quality is acceptable, and that each project is completed on time. The same inspectors that oversee construction perform the inventory and assessment inspections. Upon completion of each project, the inspector is responsible to update the database to reflect the upgraded condition of the building or facility.

Information gathered from this process is used to establish a baseline for building condition; evaluate deteriorated maintenance; identify funding requirements; identify project work; and prioritize maintenance work. A more complete asset portfolio overview can be organized. Accurate and supportable information for planning and justifying the budget is documented and used to develop budget strategies to effectively maintain County assets. The new program provided for uniformity and standardization of the assessment process. The continuous comprehensive reviews allow the County to understand what assets were owned, and the extent of its financial obligation to maintain facilities.

The Program has identified facility problems, developed solutions, provided the funding, and performed the construction work for the customer. By using streamlined procurement processes routine projects could be undertaken and completed within 12 months. Emergency projects could be undertaken immediately using Miscellaneous Construction Contracts already in place. This is especially important for programs serving children and the elderly.

As a result, internal customers can focus on their core missions and the delivery of important services. Department directors no longer need to reallocate staff, barter with other departments, or find other work-arounds to ensure that their facilities are appropriately organized and equipped to support their mission. They no longer need to seek routine maintenance funding through a Capital Improvement Program geared toward major construction projects.

The external customers—the citizens of Hillsborough County—have also benefited. Complaints regarding poorly maintained facilities have decreased. Books

in the libraries are no longer moldy from poor air quality; minor building renovations provide more functional facilities; energy improvements provide better lighting and cost savings; and code and ADA improvements make facilities more accessible.

No official legislation was needed to organize this program. The Board of County Commissioners adopted a policy to support maintenance and upkeep with a 1% contribution of Ad Valorem taxes and the operating principles of the Program are contained within Administrative Guidelines.

R3M's benefits are highlighted by the following data. Prior to the implementation of the program, renovation and maintenance projects were considered general construction and processed as a part of the Capital Improvement Program. The best-case scenario to introduce a project into the adopted CIP was 6 months, assuming an availability of funds. Construction time for Capital Projects, after all approvals were received, averaged 175 days. The R3M Program average construction time over the past seven years is 56 days, thereby saving 119 days. Similarly, for a re-roofing project, construction time was reduced from 125 days to 35 days, saving 90 days.

The improved procurement process has also saved time. Miscellaneous Services Contracts and "specialty" contracts have eliminated a significant amount of processing time from the procurement procedure. By "bundling" the contracting component, lag time between processes was reduced. Our study of the records recognized that lag time ranged from 79 to 160 days between phases in each project. Overall, the average time savings for general construction projects is 192 days or 6.4 months, and for re-roofing projects it is 155 days or 5.1 months.

Relevance to Massachusetts

The Hillsborough County R3M Program offers useful lessons for asset maintenance throughout the Commonwealth:

1. The Board of County Commissioners made a commitment to improve infrastructure maintenance and repair, and steadily funded the R3M Program.
2. The Procurement process has replaced a full contracting effort for each construction project with Miscellaneous Construction and Specialty contracts based on work orders. This change has significantly increased capacity to perform numerous construction projects simultaneously using multiple contractors.
3. R3M Staff developed inventory, inspection and assessment processes to facilitate asset management over the life of each building and facility.
4. An inventory of each building and facility was conducted and reliable baseline data regarding each building and facility was established.
5. Construction Inspectors now perform building inventory and assessment inspections, as well as construction inspection. This provides continuity and ensures that the original problems are resolved.
6. Scheduled assessment and evaluation inspections to determine the condition of each building and facility, using the latest asset management software is a cyclical process that will continue.
7. A multi-year budget strategy ensures that maintenance needs are resolved before they become crises.
8. Compared to the pre-R3M norm, projects are now completed significantly faster.

9. Proactive intermediate maintenance performed through the R3M Program has led to cost avoidance savings. While not quantified, these savings are realized by avoiding premiums for parts, eliminating payment for emergency shipping, and expensive overtime to perform emergency repairs.

10. Finally, improved facility conditions significantly reduce exposure to code violations or other regulatory problems. Personal injuries related to poor building maintenance and disrepair is minimized thereby making Hillsborough County less vulnerable to litigation.

Conclusion

None of the individual parts of the R3M Program are extraordinary, but when employed together in a logical sequence, with the right leadership, the program provides outstanding service to clients, enabling them to focus on constituent services.



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