

**UNIVERSITY OF PENNSYLVANIA
SCHOOL OF MEDICINE
SPACE PLANNING AND OPERATIONS**

**CAPITAL PROJECT
RENOVATIONS MANUAL
FOR
DEPARTMENTAL REPRESENTATIVE**

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TABLE OF CONTENTS

Introduction	3
Initial Project Identification	3
Project Development	4
Design Development and Documentation	5
Total Project Budget Development and Approval	6
Construction	7
Occupancy	8
Punchlist	8
Project Closeout	8
Appendix	
Capital Needs Statement	9

Introduction

This manual is meant to inform the School of Medicine departmental representatives of the steps necessary for a successful Capital Renovations Project. Representatives in Space Planning and Operations are available to guide and assist during all phases of the process. The main phases of a typical Capital Renovations Project are:

- Initial Project Identification
- Project Development and Kick-Off
- Design Development/Documentation
- Total Project Budget Development and Approval
- Construction
- Occupancy
- Punchlist
- Closeout

The following document details each phase in the process.

Initial Project Identification

Once an individual/department identifies a need, the Request for Renovations Services (RRS) form is to be completed. The RRS is available on the Space Planning and Operations website, www.med.upenn.edu/spo/. This form allows the user to identify the need and obtain the approval of their Department Chair or Center Director. Although the form asks for information regarding space and cost, it is simply an opportunity to identify that information if it is available. In some cases, the project itself will determine that information.

When the RRS is approved by the Department Chair or Institute/Center Director, it is submitted to Space Planning and Operations for review and subsequent approval by the Dean of the SOM and the Vice-Dean of Administration. Upon approval from the SOM Administration, an Associate Director, Facilities Planning & Space Management (AD/FPSM) is appointed to oversee the process.

The AD/FPSM begins to work with the Departmental Representative to formalize and initiate the project. A Capital Needs Statement (CNS) must be prepared and submitted with the RRS to the University Office Facilities and Real Estate Services (Facilities Services). A copy of the CNS form is provided in the Appendix for reference. Facilities Services then identifies a Project Manager (PM), and the project is formally “kicked-off.”

There may be times when it is necessary to perform a study to determine the feasibility of a project within a given space. If that is the case, a proposal is obtained from an Architect and the fees are certified. Once the feasibility study is completed, should the School decide to move forward, a Total Project Budget would be developed and approved, funds would be certified, and construction would then begin.

Project Development

The AD/FPSM and the PM will identify the project team, which will include some or all of the following individuals:

- End-User Representative(s)
- Associate Director, Facilities Planning & Space Management
- Facilities Services Project Manager
- Architect/Designer
- Engineer
- GMP/GLP Consultant
- Environmental Health & Radiation Safety Representative
- Construction Manager/General Contractor
- SOM Building Administrator
- SOM Security Representative
- University Fire/Life Safety Representative
- University Telecom/Datacom Representative
- Facilities Services Zone Representative(s)

A formal kick-off meeting is scheduled and the overall scope of the project is outlined and discussed. The Architect/Engineering Team would be asked at that time for a proposal for their services.

Once the proposal is received and determined to be appropriate, a preliminary project budget is produced and funds are certified to begin the design process.

At the kick-off meeting, an overall meeting schedule is developed. Depending upon the size and duration of the project, weekly or bi-weekly meetings will be scheduled on a chosen day at a chosen time and location. Prior to each meeting, the AD/FPSM and the PM will develop an agenda, ensuring that the appropriate people attend at appropriate times.

Design Development / Construction Documentation

During the design process the architect obtains detailed information from the end-user. During this phase of the process it is very important that the end-user be as specific as possible with information. The more information the architect is given, the better and more complete the design will be. Therefore, the representatives should be individuals working in the space with intimate knowledge of how the proposed space will be used. The following information will be discussed and detailed:

- Private offices
- Support spaces
- Lab functions
- Specialized equipment needs
- Telephone and data needs
- Furnishings

Once all the information is obtained, the architect will produce a Schematic Design for approval. This is a general layout, considering all the major factors.

Once the Schematic Design is approved, Design Development begins, detailing every aspect of the project, including but not limited to structural, mechanical, electrical, plumbing, finishes, furniture, etc.

Once Design Development is complete and approved, the A/E team begins to finalize the documents for construction. This phase is called Construction Documentation. This phase finalizes further the details of the design in such a way that the project can be built.

Typically, at this point in the process, a construction estimate is developed and an accurate, total project budget is produced.

Total Project Budget Development and Approval

When the original RRS is completed, a very rough estimate is given for the overall project cost. This figure is usually identified in a range. For example, under \$50k, \$50k-\$100k, \$100k-\$250k, \$250k and above. To begin the design process, architectural and engineering fees are typically certified to assure completion of design.

When design is complete, the construction cost is obtained from an estimator. That cost is included in a total project budget and submitted for approval and identification of funds. This budget includes all professional fees, construction costs, equipment and furniture costs, associated building costs, project contingency, and project management fees. Once the Total Project Budget is complete and approved by the Department and the School, it is then submitted to the appropriate groups for formal approval. The approval process can include some or all of the following, depending upon the total amount:

- Capital Advisory Group
- University Capital Council
- University Trustees
- UPHS Trustees

Once all the approvals are completed and the funds have been identified and certified, construction can begin.

Construction

Pre-Construction

A detailed Project Schedule is developed which identifies each phase of the construction and the estimated time frame.

When all approvals are in place, the project team plans for the construction. If a temporary swing space is necessary, it is identified and plans are made for the temporary move. Once the space is vacated, it is cleared out and made ready for construction. It may be necessary to put up temporary partitions and protection to protect existing occupants from the construction.

Construction

During this important phase, the Construction Project Manager and the Superintendent on the project manage every aspect of the work. They identify issues as they arise to ensure a smooth process. The project team is informed of shut downs and building issues that can affect other occupants of the building. Notice is given to occupants if building services are affected. All requests for information and any change orders are presented to the project team for consideration.

After each meeting during this phase the project team members walk through the construction site. This allows the end-user to see the progress of the work. The other members of the team will be looking for adherence of the construction to the design documentation.

Occupancy

As construction completes, the final occupancy is planned. A date is chosen for move-in based on all the factors available, and the schedule is planned accordingly. Typically construction is completed, the space is cleaned, furniture is installed, phones and data lines are activated, and the occupants move in.

During the planning for occupancy, typically a mover has been identified up front and they are asked to provide boxes. If the move is very large, the mover may assist by making a presentation to occupants on how best to pack and label the boxes. Specialized consultants may be required to properly “shut-down” and pack specialized pieces of equipment. The move route is identified and all the details for a smooth move are discussed.

Punchlist

A punchlist is a document that identifies each issue that is outstanding at the end of construction. This list can also be extended through occupancy, as there are typically many small issues that arise while the occupants are settling in. The project team will continue to meet past occupancy until all punchlist items are completed.

Project Closeout

The PM continues, past occupancy to pay outstanding invoices and reconcile the account. Typically this process takes up to a few months. During that time, should unexpected issues arise on the project, the PM, along with the AD/FPSM, are available to troubleshoot and resolve them as quickly as possible. Well after completion of the project, the AD/FPSM is available to the End-User to answer questions and assist in any way necessary to accomplish a successful end to the project.

APPENDIX

