Guidelines for Construction and Renovation Projects

Statement of Principles

The University is committed to the design of comfortable and functional state of the art facilities that meet research and teaching standards. To make the best use of University funds, projects are expected to conform to University norms for allocation and utilization of space to accommodate generic needs and to incorporate standard design features and finishes. In addition, as a rule, it is expected that renovations will take place within existing walls, with minimal change to ventilation, lighting, and behind the walls infrastructure; and that to the extent possible, existing furniture and casework will be utilized.

Guidelines for Sustainable Construction should be followed (not sure whether these guidelines are complete).

1. Facility Planning and Project Management

Schools or divisions should create a team responsible for construction projects within their division/School. This team would represent the School/division and would be considered the client for any given project. This management team committee is responsible for making sure that the dean’s goals are met. They are also responsible for working with the end user to make sure that the space works for their needs.

This team should adapt guidelines their specific school/division:

- Site Review: Team should consult with the User to review existing space and resources and determine the User’s requirements. The team or Dean identifies tentative space and site.
- If the site is occupied, the School/Division may be responsible to pay for the domino move.
- Project Proposal: The team and PM meet with User to determine scope of project. Broad program requirements, space needs, proposed schedule, and a cost estimate based on square footage should be summarized in a written proposal. The project proposal also notes any special circumstances or budget concerns, including for example, special needs and unusual operating costs. The project proposal should be submitted to the Dean or VP for review of program, site and preliminary budget, and for authorization to proceed. The project proposal should be as complete as possible, since it will be the basis for calculating the project budget.

A project manager from OCM is assigned to manage the project. The PM through the project management team is responsible for all phases of design and build-out of a project including control and management of the budget.
The PM is responsible for maintaining communication with the School/division through
the management team committee regarding schedule and budget. If the location is
occupied, the PM must work with the building manager to communicate all phases that
will affect the operations of the building. The BM is responsible for communicating this
information to the community at large.

Project Process and Stages

Each School/Division must have a process for approval major renovation projects and
changes in space assignment. For example The Law School Board of Trustees approves
any major renovation.

In implementing an approved renovation project, these procedures should be followed:

- Site review: The management team works with the end users to review existing
  space and resources and determines the Users’ requirements. The team identifies
  tentative space and site, consulting with the Dean/VP.
- Project Proposal: The management team meets with the end user to determine the
  scope of the project. Broad program requirements, space needs, proposed
  schedule, and rough estimates based on square feet are summarized in a written
  proposal. The project proposal is submitted to the Dean/VP for review of the
  program, site and preliminary budget, for authorization to proceed. The project
  proposal should be as complete as possible, since it will be the basis for
  calculating the project budget.
- Budget and Project Review: A preliminary budget will be calculated on the basis
  of the project proposal and the approved program and space described therein,
  and will be refined throughout the course of the project. That preliminary budget,
  plus a reasonable contingency added to it will constitute the Project Budget.
  Professional construction cost estimates, by architect or professional estimator,
  will be obtained at the schematic phase and again at the design development
  phase. Soft costs (a/e fees, security, telecommunications, abatement costs,
  moving and FF&E) will also be refined at each of these stages. The Dean/VP
  should review each budget iteration. Increases in the project budget that cannot
  be explained by reasonable development of the approved program, previously
  unavailable engineering information, or existing conditions should be scrutinized
  carefully and budget reductions may be necessary (via value engineering process).
- Program planning: The management team and the PM work closely with the end
  users to develop a program that details project requirements and assesses
  feasibility in terms of space, cost and services required. This involves describing
  activities and functions to be conducted in the project space; reviewing operating
  system requirements; assessing the capacity of existing operating systems to
  accommodate the project; discussing domino moves, phased construction, and
  relocation of present occupants, if relevant; proposing a preliminary design
  layout; and refining the preliminary cost estimate. Members of the management
  team and the end user should sign off on the final program plan. The Dean/VP
  gives the authorization to proceed based on this plan.
• Design: The Dean/VP authorizes OCM to establish an account with a designated funding source, and to engage an architect (if one has not already been hired) to prepare schematic and design drawings based on the program plan. The NYU design standards must be followed by the architectural team. In some instances there will be additional design standards set by the School/division which must also be followed. These standards must be in writing and presented to the design team immediately upon hire.

• A schedule is set by the management team, PM and architect and eventually refined by contractors. The OCM department is responsible for oversight and approval of all phases of the design including HVAC and electrical. Construction documents are reviewed by the technical staff and signed off by the Management team. Once a project design has been completed, changes in scope require the approval of the Dean.

• The job is then released for competitive bid by general contractors (GC) or a construction management (CM) firm. Depending on complexity of the project, the bids should be due within two to four weeks. Another two weeks is required for leveling of bids. A contract is awarded and the project costs are finalized. Once the project cost is established, the PM cannot exceed the approved budget without approval of the Dean/VP.

• Construction: The project continues to be monitored by the Management team. Job meetings are held on a regular basis (at least weekly). Meeting minutes are prepared by the contractor and distributed to the group. Construction sites are under the jurisdiction of the contractor, and for safety and insurance reasons, the construction site is considered a restricted area. However, the Management team and/or end user may be escorted through the site by the PM or contractor.

• Review of job completion: A walkthrough is scheduled for approximately two weeks before the anticipated completion date, with the management team, end user and architects. A schedule is set for the final walkthrough with this group prior to move in.

• FF&E: The design team should work with the Purchasing office to identify the furniture items that can be purchased at the best discount to NYU. The Office of Purchasing can also identify sustainable products for the project (for example, carpet and furniture). A furniture list and layout should be approved by the end users prior to the purchase of these items.

A schedule for mov- in should be addressed early in the project and revisited at crucial points during the project meetings. The furniture installers should meet with the project team to determine accessibility, protection and scope of work.
GUIDELINES FOR CONSTRUCTION AND RENOVATION OF SCIENCE LABORATORIES AND OFFICES IN ARTS AND SCIENCE

I. Facility Planning and Project Management

Space norms and design standards for construction and renovation projects are developed by the Office of the Dean for Science and are implemented by the Management Team Committee. The committee is chaired by the Dean for Science and includes University and Arts and Science administrators and technical and engineering staff. The committee meets monthly to review projects' architectural and mechanical designs, and monitor progress and adherence to the approved project scope, cost, and schedule.

Arts and Science projects are managed by a designated Project Manager from the Office of Construction Management. The Project Manager oversees the project and maintains liaison with the Faculty User, engaging the User for consultation as appropriate and keeping the User informed of the project timetable. The Project Manager works with the FAS Director of Technical Services who represents and reports to the Dean, works with the User to articulate program needs and ensure conformity with FAS standards, and monitors progress of the project and its scope of work. The User and Department Chair work with the architect through the Director of Technical Services and then Project Manager.

The Dean for Science, as Chair of the Management Team Committee, advises the University Science Planning Group, which is chaired by the Dean of the Faculty of Arts and Science, and includes the Vice President for Academic Development and the Vice President for Administration. The Science Planning Group reviews and prioritizes major projects in the context of long term goals and budgets, considers alternative site and project scenarios, and identifies funding sources.

II. Statement of Principals

The University is committed to the design of comfortable and functional state-of-the-art facilities that meet research and teaching standards. To make the best use of University funds, projects are expected to conform to Arts and Science norms for allocation and utilization of space to accommodate generic needs, and incorporate standard design features and finishes. In addition, as a rule, it is expected that renovations will take place within existing walls, with minimal changes to ventilation, lighting, and behind-the-walls infrastructure, and that, to the extent possible, existing furniture and casework will be utilized.

III. Project Process and Stages

Department chairs present proposals in the Annual Planning Report for major renovation projects and changes in space assignment, including adjustment in the allocation of laboratory space available to the department. In implementing a particular renovation project, these procedures are followed:
1) **Site Review:** The Department chair consults with the User to review existing space and resources and determine the Users requirements. The Chair identifies tentative space and site, consulting with the Dean for Science when the proposed site is not within department space.

When the User is a new faculty candidate, the Chair should consult with the FAS Director of Technical Services about feasibility of the proposed renovation, as part of the process of developing recruitment package.

2) **Project Proposal:** The Director of Technical Services and designated Project Manager meet with the Chair and User to determine the scope of the project. Broad program requirements, space needs, proposed schedule, and rough estimates based on square feet are summarized in a written proposal. The *Project Proposal* also notes any special circumstances or budget concerns, including, for example, special safety issues and unusual operating costs. (See attached sample.) The *Project Proposal* is submitted to the Dean for Science for review of the program, site, and preliminary budget, and for authorization to proceed. The *Project Proposal* should be as complete as possible, since it will be the basis for calculating the project budget.

2a) **Budget and Project Review:** A preliminary budget will be calculated on the basis of the project proposal and the approved program and space described therein, and will be refined throughout the course of the project. That preliminary budget plus a reasonable contingency added to it will constitute the Project Budget. Professional construction cost estimates, by architect or professional estimator, will be obtained at the schematic phase, design development phase, and construction documents are prepared. Soft costs (design fees, security, telecommunications, asbestos, moving, and furniture) will be also refined at each of these stages. The Director of Technical Services, the Project Manager, the User, and the Dean will review each budget iteration. Increases in the Project Budget that cannot be explained by reasonable development of the approved program, previously unavailable engineering information, or functional, criteria will be scrutinized carefully and budget reductions may be necessary.

3) **Program Planning:** The director of Technical Services and the designated Project Manager work closely with the Chair and User to develop a *Program* that details project requirements and assesses feasibility in terms of space, cost, and services required. This involves describing activities and functions to be conducted in the project space.; reviewing operating system requirements; assessing the capacity of existing operating systems to accommodate the project; discussing domino moves, phased construction, and relocation of present occupants, if relevant; proposing a preliminary design layout; and refining the preliminary cost estimate. The Chair and User sign off. The Project Manager presents the *Program* to the Team Management Committee, which accepts the program as is or suggests revisions. The Dean for Science signs off with authorization to proceed.
4) Design: The Dean for Science authorizes The Office of Construction Management to establish an account with a designated funding source, and to engage an Architect to prepare schematic and design drawings on the basis of the program and in consultation with the Director of Technical Services and the Project Manager. The Dean may meet with the User and Architect to clarify expectations, budget, and schedule.

The Architect, Director of Technical Services, Project Manager and User meet to establish a program and agree on a time line for the Architect to produce schematic drawings. This process may take several meetings, depending on the complexity of the project, and may also involve engineers. During this process, the Architect takes direction from the Director of Technical Services, who represents the Dean, and the Project Manager. The User generally attends early meetings with the Architect. The User or department representative is informed of all planning meetings and can make arrangement to attend them. Once the schematic drawings are approved, the User signs off on the drawings. Beyond this stage, the Project Manager will regularly advise the User of the progress of the project, and will consult with and engage the User where appropriate.

The Project Manager continues to update the Management Team Committee as the design proceeds. Any substantial change in program and costs required the Dean’s approval, and could involve reconsidering/reducing project scope and design. When the design drawings are completed, the Project Manager presents the drawings, including the updated cost estimate, to the Chair, User and Dean for Science for sign off.

5) Construction Drawings: During the preparation of construction drawings, the User is consulted about special project requirements. When the project involves the design of heating, ventilation and cooling (HVAC) the Office of Construction Management Engineers, along with Maintenance and Operation personnel review mechanical, electrical and plumbing (MEP) drawings to ensure that they conform to NYU standards. Construction documents are reviewed by the technical staff and signed off by the Chair and User. After this point, all changes in scope require the sign off by the Director of Technical Services. The job is released for competitive bid by general contractors (GC) or a construction management (CM) firm. Depending on the complexity of the project, bids may be due within two to four weeks and institutional review and selection of the bidder may take another two to four weeks to allow for leveling of the bids. A contract is awarded and the project costs are finalized. In addition to construction costs, the project budget includes furnishings, moveable equipment, telecommunications, asbestos removal, etc, as needed. Once the project cost is established, the Project Manager cannot exceed the approved budget without approval of then Dean for Science.

6) Construction: The project continues to be monitored by the Management Team Committee. Job meetings are held on a regular basis, usually weekly. The Project Manager notifies the User or department representative of the calendar, should they wish to attend. Meeting minutes are prepared by the contractor and distributed to the group, including the User. Construction sites are under the jurisdiction of the contractor, and for
safety and insurance reasons, the construction site is considered a restricted area. However, the User may be escorted through the site by the Project Manager.

During construction, all change orders for job conditions must be approved by the Project Manager. If the User discovers a problem, it should be promptly reported to the Project Manager or the Director of Technical Services, who will then give direction to the contractor.

7) Review of Job Completion: A walk through is scheduled for roughly two weeks before the anticipated completion date, with the User, or departmental representative attending. A schedule is set for a final walk-through with the User, Architect, Project Manager, Director of Technical Services and the contractor.

IV. Architectural and Design Standards

Structural: To the extent possible, renovations will take place within existing walls, with minimal change to ventilation, lighting, and behind-the-wall infrastructure.

Office Space: Offices are generally no smaller than 90 sf and no larger than 150 sf. Graduate students, research staff, and part-time instructional (teaching assistants, adjuncts) are expected to share office space. More than one office cannot be assigned per faculty.

For faculty offices, one unit standard of area should apply to all faculty ranks. This is especially important in buildings where the number of windowed offices are limited; for theoreticians in these buildings additional interior space can be assigned to meet the aggregate programs needs for the research group. Generally, where windowed offices are limited, these cannot be converted from faculty research offices into circulation or shared space without compelling evidence of need.

Personnel Areas: Laboratories generally do not include cooking facilities or refrigerators for the storage of food. Generally, laboratories do not incorporate lounges or conference rooms for the laboratory group.

Outer Corridors: Generally the project does not include renovation of outer corridors. Where this is necessary, the corridor will feature simple flat ceilings with proper lighting, and the walls will feature chair rails where needed.

Doors and Walls: So as to meet building standards, doors to offices and laboratories are generally solid. View panels are permitted where desired. Walls are painted gyp board; partially windowed walls or clear stories are permitted where desired to permit natural light to enter the space.

Design Finishes: Finish materials are selected in light of User needs, engineering limitations, maintenance factors, budget requirements, aesthetic preferences, and
applicable codes and regulations. Users choose finishes from a limited sample (color boards) intended to produce consistency and chosen for durability, practicality and ease of maintenance.

Flooring is generally vinyl composition tile (VCT), except in offices, which may be carpet. Ceilings are generally 2X2 acoustical tiles. Window treatment is the mini blind or shades. Paint is latex egg shell finish for walls, and semi gloss for trim except for research areas that may require special paint finishes. Laboratory casework is made from phenol resin materials except in areas that may need special materials such as stainless steel. Generally, lighting is from fluorescent fixtures that are either lay-in or pendant hung lighting. Special lighting may be installed where required.

Office Furniture: Desks, chairs, bookcases, files, etc. are chosen from samples of furniture available to the University through NYU Purchasing Services. Custom designed furniture is generally not permitted. Furniture requests should be justified by the needs of existing personnel who will simultaneously use the space at any one time, with reasonable allowance for chairs that are not interchangeable and suit different functions.

New furniture budgets are generally developed by calculating the cost of standard furniture layouts, using NYU Purchasing quotes. The standard faulty office module includes a desk with return, two guest chairs, one desk chair, two files, and two bookcases or shelving. The module for offices for other personnel (graduate students, fellows, visitors, or administrators) includes a desk, desk chair, a guest chair and a file cabinet. Lounge modules vary in size and numbers to be seated but will generally include club seating, stack chairs, and occasional tables. Departments have the freedom to use the assigned budget to furnish standard modules or to incorporate individualized preferences with the understanding that they will work with the University Purchasing Services and order furniture from University approved vendors. Departments that chose to exceed the assigned furniture budget will be required to fund the excess costs from the department operating budget.

V. Sample Project Proposal

User: Name and department of faculty member
Name of Work or Activity Short description based on type of activity
Target Occupancy Date: For major construction not before 9-12 months
Location of Space: Building, room numbers, net square feet
Estimated Project Cost Construction costs are estimated at ______/sf for laboratories, and ______/sf for offices and office suites. Additional soft costs, approximately ___%/sf for office
suites and ___ %/sf for laboratories. Soft costs cover architectural and engineering design, asbestos removal, telecommunications, security moveable equipment, furniture and University supervision.

**Personnel:**
Numbers of faculty, graduate students, technicians, fellows etc.

**Offices:**
Number, square feet, occupants

**Research rooms, e.g.**
Dark rooms, hood rooms, acoustically treated rooms, computer rooms, server rooms, clean rooms, washer rooms or any other special needs rooms.

**Fixed Equipment, e.g.**
Autoclaves, dryers, electron microscope, MRI

**Furniture (moveable)**
Number and kinds of desks, desk chairs, bench chairs, file cabinets, shelving

**Telecommunications:**
Number of data and voice jacks, video

**Special Space Requirements**
Processed chilled water for cooling equipment, temperature/humidity controlled rooms, sinks, high purity water

**Special Needs:**
Hazardous materials (chemical acid waste storage, large quantities of solvent storage etc.), radioactive materials.

**Special Needs:**
Electromagnetic shielding, isolated power, acoustical chambers or rooms, special sound or lighting needs, special exhausts.

**Authorized Signatures**

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**Faculty User**

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**Department Chair**

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**Dean for Science**

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