Cornell University

Guidelines for Space Needs Studies

Approved by the Space Use Advisory Committee[1]; 3/28/19

INTENT

Develop a standard process, including standardized documentation, to assess existing space utilization and analyze space needs.

OUTCOMES

1. Create a consistent framework, based on Cornell standards, policies and institutional data-of-record.
2. Exercise due diligence in the assessment of existing utilization as well as the establishment of space needs.
3. Integrate programmatic mission and strategic objectives into the space planning process
4. Measure the space program development through the course of a project against the original space program objectives.
5. Create transparency for approved deviations from Cornell space standards.
6. Create space program documentation that is concise, clear and actionable.

CONTEXT

Facilities & Campus Services (FCS) has identified what is currently a six-step process for unit master plans:

   I. College/Division Profile
  II. Assessment of Existing Program and Space Utilization
 III. Analysis of Space Needs Based on Strategic Vision
  IV. Facilities Existing Condition Assessment
   V. Space Study/Facilities Renovation Plan Concept Alternatives
  VI. Space Study/Facilities Renovation Plan Final Recommendation

A space needs study may be conducted as part of an overall master planning process (in phases I, II and III, as highlighted above), or it may stand alone to support particular initiatives. Should the space needs study stand alone, it may drive subsequent projects, particularly if the study identifies a shortfall of

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[1] The Capital Funding & Priorities Committee approved the first version of the *Guidelines for Space Needs Studies* on September 26, 2011. Subsequently, these *Guidelines* were updated to reference changes in organizational units and the creation of Cornell Design and Construction Standard 013000, Space Programming Requirements.

space.   Units are expected to develop and to analyze alternatives to mitigating space needs and, if renovating or adding space, to consider several concepts before a final recommendation is selected.

PROCESS

- The Director of Capital and Space Planning and the University Architect will consult with units during the annual development of the capital plan to recommend those cases in which a space needs study should serve as the first phase of one or more unit capital projects. A space needs study will typically be recommended in cases in which the unit already perceives a shortfall of space or is projecting a shortfall of space based on new programmatic initiatives and the unit believes new space (constructed or annexed) is necessary.

- Space needs studies that exceed the PAR threshold will follow these guidelines.

- The unit will present the purpose, scope and approach for the space needs study to the Space Use Advisory Committee (SUAC). The expected outcome of this discussion is for the SUAC to understand the issues that the unit hopes to resolve through the study and for the unit to hear from the SUAC members regarding broader contextual issues.

- The unit will present to the SUAC again at the end of the study, provide a summary of the report, and lead a discussion of the implications and next steps.

- Presentations to the SUAC are part of the capital project review and approval process. The SUAC advises the Provost Capital Planning Group (PCPG) and the Capital Funding & Priorities Committee (CF&PC) regarding projects it reviews.

- Cross-functional working groups will advise space needs studies.   The groups should include, at a minimum, the Director of Capital & Space Planning and representation from the Office of the University Architect. Units may wish to add representatives from other units or functions that might best inform the study through active involvement.   Alternatively, other units or functions may be consulted through the study process.

- The specific elements that should be considered in a space needs study are included in Appendix A.

EXPLORATION OF ALTERNATIVES TO MEET SPACE NEEDS

When space needs studies determine a shortfall of space, by type or quantity or both, then the analyses and documentation developed through the study should inform a consideration of alternatives to meet the space need when the unit is ready to address the shortfall.   The alternatives explored should include at least a few of the following options:

- Academic and other programmatic strategies (such as time of day utilization, alternative work locations, etc.)
- Use of nearby space
- Lease/rent
- Real property acquisition
- Relocation
- Renovation
- Construction

The consideration of all alternatives should identify and weigh the institutional impacts, including but not limited to program delivery, capital investments, and lifecycle costs.

The process for exploring alternative strategies to meet space needs is developed and coordinated by various units within Facilities and Campus Services. The work to develop alternatives may not be a part of the space needs study phase itself, but may follow such studies, and should therefore be consistent and coordinated with the results of the space needs analyses.

RENOVATION/NEW CONSTRUCTION

Renovation and/or new construction projects are coordinated through several units in Facilities and Campus Services. When the only viable alternative to resolving a space need is renovation and/or new construction, such work should be based on previous efforts to understand the space needs.

Construction or renovation projects that derive from space needs studies must monitor alignment with the recommended space program through each design phase. Each design submission must incorporate the requirements and follow the process specified in Cornell Design and Construction Standard 013000, Space Programming Requirements.

RESOURCES

Space needs studies should reference these resources:

- Cornell Policy 2.7: *defines Cornell-specific room types, functional codes, and code definitions as well as definitions of square footage measurements as used at Cornell and consistent across U.S. higher education institutions*
- Cornell Design and Construction Standard 013000, Space Programming Requirements
- Classroom Space Guidelines, 2017
- Office Space Guidelines, 2017
- Peer benchmarks: *where available and applicable; benchmarks are particularly useful for research space, or other specialized space types or programs*
- Postsecondary Education Facilities Inventory and Classification Manual (FICM) (2006 Edition): *defines standard practices in U.S. higher education for initiating, conducting, reporting, and maintaining an institutional facilities inventory, including building-level data elements*

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Appendix A: Specific Elements of Space Needs Studies

Space needs studies should consider for inclusion the elements discussed in this section. The relevant elements will be evaluated on a project-by-project basis by the Director of Capital and Space Planning, the University Architect and the unit. The included items may be specified in the consultant selection and/or contractual process. These details are subject to revision based on experience and the specific circumstances of each study.

A. Assessment of Existing Conditions
    Analysis of how existing space accommodates functional programs of concern and/or affected by proposed changes
    I.   Assess quantity, quality and utilization of existing space
          a. Quantitative summaries and statistics by type, function, unit, etc.
          b. Functionality/suitability/effectiveness
          c. Utilization and utilization capacities
          d. Physical location, including adjacencies
          e. Physical condition
          f. Operational issues, such as security, building code, accessibility, life safety or health deficiencies
    II.   Use existing data where available and deemed sufficient; include as many of the following as necessary
          a. Facilities Inventory data (most recent snapshot data)
          b. Floor plans
          c. Course and classroom data (from University Registrar and unit)[A1]
          d. Event data
          e. Walkthrough data (visual review)
          f. Previous planning studies, if available and applicable
    III. Identify opportunities and constraints, including fit to function of current space

B. Confirmation phase
    Document and confirm through the organizational hierarchy:
    I.   Staffing projections
          a. Presented in organizational chart format
          b. Full-Time Equivalents (FTE)
          c. Headcount
    II.   Enrollment projections
          a. FTE
          b. Headcount
    III. Functional program scope: related to unit strategic plan
          a. Note areas of growth and decline, by department and/or program element

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[A1] Where the study involves the use of classrooms, the Office of the University Registrar and the Director of Capital and Space Planning will advise the project team regarding the expected classroom analytics. Classroom room type coding needs to be confirmed in order to include the correct rooms in the study. The classroom analysis should include not only the rooms within the unit of study (regardless of scheduling modality), but also rooms within a reasonable walking distance of the unit.

C. Develop space requirements
   I. Basis
       a. Cornell space guidelines
       b. Unit specific guidelines (if applicable)
       c. Peer benchmarks
           i. Research laboratories
           ii. Specialized spaces
       d. Building efficiency requirements (*to be developed*)
       e. Designated analyses for classrooms (see footnote)
   II. Establish requirements
       a. Room specifications
           i. Size
           ii. Features
           iii. Capacity
       b. Spatial relationships/adjacencies, represented in graphic format
       c. Special design requirements
       d. Classroom utilization objectives
       e. For other meeting spaces (seminar rooms, conference rooms, etc.)
           i. Seat count
           ii. Square feet/seat

D. Report: Discuss ability of current space to meet needs and determine gaps
   I. Added, reduced or reconfigured square footage Net Assignable Square Feet (NASF)[A2]
   II. Added, reduced or reconfigured square footage Gross Square Feet (GSF)[A2]
   III. Efficiency
       a. Building efficiency (Net/Gross, NASF/Gross)
       b. Suite efficiencies
   IV. By functional program element
       a. HEGIS[A3] code functions
       b. Compare to standards/benchmarks
   V. By space type
       a. HEGIS code room types
       b. Compare to standards/benchmarks
   VI. Functional relationships between spaces, represented in graphic format
   VII. Identify and explain deviations from Cornell space guidelines

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[A2] See Policy 2.7, Reporting the Use of Facilities, for standard definitions
[A3] HEGIS: The Higher Education General Information Survey: standardized coding for higher education; basis of Cornell facilities inventory