STATE UNIVERSITY CONSTRUCTION FUND

PROGRAM DIRECTIVES

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DEFINITIONS OF GROSS AND NET AREAS

1. General

   a. There are three different methods used to calculate the gross and net areas of the project. Select the method based on the purpose for which the calculations are needed. For each phase submission, the Consultant shall provide updated calculations.

      Method #1: For reporting in Phase submissions on a project involving a new building, an addition or a major renovation, with new and/or existing spaces being programmed, designed, reconfigured and/or reassigned for a different program purpose, use the method in this Directive to calculate gross and net areas. This method provides the gross and net areas that are consistent with the manner of calculating areas used since SUNY began monitoring and tracking the area of its buildings. The areas calculated by this method are used for comparative purposes relative to the data for other SUNY buildings.

      Method #2: For calculating square footages needed to develop the construction cost estimate, use the method in the Project Cost Reporting Guide.

      Method #3: For compliance with the requirements of the New York State Uniform Fire Prevention and Building Code, see the definitions within the Code for the methods used when calculating gross and net areas.

2. Definition and calculation of Gross Area

   a. The Gross Area of a building is the total of the gross area of each floor/level enclosed by the exterior walls of a structure (inclusive of the depth of the wall section) plus the addition of special area factors for the space covered by significant exterior projections, overhangs, canopies, loading docks, and accessible penthouses for mechanical, electrical, elevator and other building systems. These special area factors shall be calculated by adjusting the actual areas covered/enclosed to reduce the area to 50% of the actual area.

      i. Example: A 70 foot by 200 foot two-story building has 10 foot deep overhangs at the roof that are significant architectural features and more extensive than the overhang provided by ordinary solar shading systems. The area covered by the overhang (5,400 SF) is the perimeter of the building (540 feet) times the depth of the overhang (10

feet). The special area factor added to the Gross Area is 50% of 5,400 SF, or 2,700 SF.

b. In addition to the special area factors above, when calculating the Gross Area, add special area factors for some interior spaces with significant ceiling heights. A space such as a theater, gymnasium, swimming pool, ballroom, etc., requires a significant ceiling height for programmatic functionality and does not require the addition of a special area factor. However, a space such as a lobby, atrium, stairway with a significant interior well, light well and/or shaft, space with significant interstitial mechanical access platforms above it, etc., will require the addition of an special area factor. This factor is in addition to the area measured at the lowest level of the space and varies depending upon the height of the space. This factor is calculated by multiplying the area of the floor opening measured at the opening between the lowest level and the second level by 25% for simple two story spaces and by 50% or more for spaces three stories or higher, depending upon the geometry and complexity of the space. For the latter spaces, consult with the Fund about the use of percentages greater than 50%.

   i. Example: A two story building has a two story atrium with a stair from the first to the second story. The area of the floor opening (including the 5 foot wide stair) between the balconies and walkways of the second story 20 feet by 40 feet, or 800 SF. The special area factor added to the Gross Area is 25% of 800 SF, or 200 SF.

3. Definition and calculation of Net Area

   a. The net area of a building is the summation of the net areas of all of the program (assignable) spaces contained within the building. The net area of a space is that area available for use by the assigned program. It is calculated by measuring the area between the walls at the floor level and then deducting any protruding walls, abutments, mechanical and/or plumbing shafts, window niches with sills above the floor level and other construction that obstructs the programmatic use of a space. Do not deduct the area of built in case work.

      i. Example: A tiered lecture hall measures 30 feet wide by 50 feet long between its enclosing walls, excluding the area of the window sills. The simple area of this rectangle is 1,500 SF. However, there is other construction within this simple area, including floor to ceiling enclosures for mechanical ducts, walls near the entry doors for

acoustical mitigation, and built in storage for student belongings and campus owned AV equipment. The enclosure of the ducts is not available for program use and its enclosing area of 30 SF (two at 3 feet by 5 feet) and the area of the acoustical walls of 5 SF (two at 6 inch deep by 5 feet long) are deducted from the simple area resulting in a net area of 1,465 SF. The area of the built storage is available for use and is not deducted from the simple area.

b. The net area of a building doesn't include space that can't be assigned, such as circulation space, stairs, elevators, atria, corridors, toilet rooms, mechanical spaces, electrical closets, telecommunications closets and other spaces housing building equipment and systems. Locker rooms, storage rooms, atria kiosks and other lockable spaces can be assigned to a program user and should have their net areas calculated and included in the sum total of the net area of a building. Aisles provided for circulation within an assignable space (such as the lecture hall aisles in the above example), as opposed to aisles provided for general building circulation, and should be included in the net area of the space. Unenclosed spaces accessed from general circulation aisles, such as student gathering space, dining space, etc. can be assigned and should have their net areas included in the sum total of the net area. For spaces that are not easily classifiable, consult with the Fund as early as possible in the programming and design process.

4. Definition of Gross to Net Ratio

The gross to net ratio is the gross area divided by the net area. Sometimes this is referred to as the grossing factor or multiplier. For new buildings, additions and renovations, each phase report should include a 'as designed" calculation of the gross to net ratio for the project using the gross and net areas as calculated in this Directive.

i. Example: The gross area as designed is 124,505 and the net area as designed is 72,500. The net to gross ratio is 1.72 (rounded from 1.71731).

5. Space Programming Documentation

a. A resource available to the consultant is the SUNY booklet titled '*Facility Programming Standards*,' sometimes referred to as 'the Blue Book'. Since the factors and areas in this booklet have not been recently subject to general review and optimization to fit current programmatic metrics, this booklet is a guideline to assist the Campus and the Consultant in developing project-specific programs.

b. The Consultant shall review with the Fund Coordinator the software and format for reports on the program of the project before starting the programming effort. Reports on the program generally list each program space by name and net area, list each department or program area separately with respective subtotals and include distinct reference numbers for each space that align with SUNY's current space reporting system. The report is to be submitted in both hard copy and electronic form at the end of a programming effort and with each phase submission.

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