

Introduction to BOMA Measurements

Questions and Answers from the June 26, 2012 webinar

GENERAL NOTE: Please be aware that these clarifications are provided for convenience in the context of the seminar content presented. To avoid misinterpretation, the full text of the BOMA Office Buildings: Standard Methods of Measurement publication should be consulted directly. Only the statements of BOMA Recognized Floor Measurement Standards Interpreters are authorized by BOMA/ANSI as interpretations of this information. All BOMA publication content and language referenced is copyright 2010 by BOMA International and all rights are reserved by BOMA.

Q01: How expensive is it to obtain a copy of the BOMA standard? [Philip Proefrock]

A: At the time of this seminar, the list price for non-members was \$36.75. For most current information, please see <http://www.boma.org/MEASUREMENTSTANDARDS/Pages/default.aspx>

Q02: Is BOMA international? Do all countries adopt and use this method. [Eric Faulkner]

A: Although BOMA is now an organization with an international reach, these standards are most commonly used in the United States, and are recognized by the American National Standards Institute (ANSI).

Q03: No ambulatory stalls shown in the toilet rooms in the core area? [James Thompson]

A: The building graphics used for this presentation are examples for area measurement use only, and do not necessarily represent all items that would be present in a fully-designed actual building today.

Q04: Their IGA looks like it went to the exterior face of the glass. Please clarify. [Susan Welker]

A: In the example provided, the IGA extends to the outermost surface of the building enclosure only where it is adjacent to a Public Pedestrian Thoroughfare (IGA Boundary Condition ID #2), using the Enclosure Limit method.

Q05: Did that used to be called Store Area? [James Lloyd]

A: Under the current standard, the term "Store Area" is no longer used, and such areas are included within the "Occupant Area" definition.

Q06: Why you only cut in the door in the upper left corner? [Julie Hoelzel]

A: In our example building, we have assumed that the building enclosure continues unchanged above the other door setback areas, but follows the profile of these angled doors. As such the Enclosure Limit follows the door line here.

Q07: How did you determine that the northwest corner was part of the enclosure limit versus dominant portion? [Jennifer Song Koeppe]

A: This was done because the adjacent Public Pedestrian Thoroughfare continues along this northwest area.

Q08: Corner recess is outside area at street level. It appears similar to recess in middle of a side of a space? [Alfred Johnson]

A: See answer to Q06.

Q09: What about the plumbing chase? [Michael A Tomczak]

A: It depends on whether or not there is a floor in the chase space (our case today) or if that chase space is actually a fire-rated shaft. If there is a penetration of over 1 SF in area that serves vertical building systems, it would be an MVP.

Q10: What about plumbing chase between the stairs and the lavatories. Would that count as a Major Vertical Penetration? [Bryce Hamels]

A: See answer to Q09.

Q11: Do MVP have to serve the whole building or simply multiple floors? [Eric Faulkner]

A: BOMA's definition states only that it must serve "vertical building systems or vertical occupant circulation functions".

Q12: It is too bad you are showing bathrooms and door conditions, as an example, that do not meet basic ADA requirements. [Jack Romigh]

A: See answer to Q03.

Q13: Why is the IGA on upper floors to the dominant glass portion, and level one was to the enclosure limit and not the face of glass? [Aaron Beltran]

A: On the upper floors the BOMA IGA Boundary Condition is #1, Vertical Exterior Enclosure, which requires the use of the Dominant Portion method. At some portions of the ground floor only, the existence of an adjacent Public Pedestrian Thoroughfare required the use of IGA Boundary Condition #2, Enclosure Limit.

Q14: I think the plumbing chase would only count as an MVP when the perimeter of the plumbing chase is actually subtracted from the deck, and the chase wall is fire rated. That is not the norm. [Preston Hite]

A: See answer to Q09.

Q15: Regarding Atrium: Is floor level part of IGA but all "voids" second story of atrium & above considered major vertical penetration? [Rogers Malone]

A: The floor area at the bottom of an atrium is part of the IGA, but the "void" areas at levels above are excluded from the IGA entirely for those floors, and are therefore not considered Major Vertical Penetrations.

Q16: I presume "required" door setbacks refer to Code requirement? [Patrick McIlhenney]

A: Generally, yes. BOMA's definition of Door Setback indicates that it is "for the purpose of allowing the door to swing in the direction of egress without obstructing circulation in the adjacent area".

Q17: Why isn't an atrium (earlier in the discussion) an MVP? When do you take it out of the measured area? [Lisa Cianciolo]

A: See answer to Q15.

Q18: If restrooms are designed to service 2 floors in a multiple floor building, are these servicing just the floor? [John Phung]

A: We have not typically encountered this condition, and would recommend submitting the specific question to a BOMA Interpreter for the best response. BOMA's definition of Floor Service Area merely states that the area should "primarily service only the floor upon which they are located".

Q19: On the ground floor, what if office 103 used the BSA as a means of egress? Would that affect office 103 OA? How would it affect other tenants? [Eric Faulkner]

A: If an Occupant Area on the ground floor had adjacent common circulation that did not serve the entire building but primarily the occupants of that floor, it would be counted as Floor Service Area.

Q20: BOMA 1996 Useable area is now Prelim Floor area? [Aaron Beltran]

A: There is no direct equivalent to the prior Usable Area definition. BOMA states that "Usable area has been redefined. In the previous standard it included office area, store area and building common areas. In this standard, building common areas have been split into two classes of space, Building Service Area and Building Amenity area, and usable area now excludes Building Service Area."

Q21: Is BOMA's choice not to provide a spreadsheet a legal/liability decision? [Eric Faulkner]

A: We are not aware of the factors contributing to this decision. However, all required formula information is made available in the BOMA publication, allowing easy creation of one's own Excel or other spreadsheet document. See pages 60-64 of the current version of the publication.

Q22: Where does the Floor Service Areas fit into the chart? [Daniel Scott]

A: In Method A, the total of Floor Service Area and Floor Amenity Area is calculated in Column L of the chart. In Method B, all Service and Amenity Areas (whether Floor or Building) are calculated in Column J.

Q23: How do you calculate rentable area for a full building user? [Wayne Benson]

A: If a full building user occupies all Occupant Areas on all floors of the building which are calculated, their Rentable Area would equal the total Rentable Area of the complete building.

Q24: Where can one find this Excel chart with the pre-set formulas? [John Phung]

A: See answer to Q21.

Q25: Is there a max load factor? [Jennifer Song Koeppe]

A: While there is technically no limit to the load factor, realistically commercial considerations would generally keep this within typical market ranges when a building is being developed. If an existing building's load factor is so high as to make it unmarketable, the owner has the option of using the Capped Load Factor to reduce it to an acceptable level for leasing purposes.

Q26: If an owner hires you to design the building with the most rentable area, do we design something as close to floor 3 as possible? [Eric Faulkner]

A: Floor 3 represents an efficient floor from the tenant's point of view, maximizing the Occupant Area.

Q27: How are parking lots handled, say on a lower level? [Elizabeth Kincaid]

A: Under BOMA 2010 (either method), they are a deduction from the IGA for that floor of the building.

Q28: It appears that you've taken the polyline to the inside face of an imaginary corridor wall to the south - is this consistent for the imaginary corridors on east and west? In other words, is the polyline measured at 64" vs. 60"? [Eddie Muñoz]

A: Referring to Base Building Circulation in Method B, the area is measured to the Far Side of the wall at Occupant Areas as per the Wall Priority diagram, and the hypothetical corridor width is determined based upon the building's standard or typical width. In our example, this is shown as a 60" corridor plus 4" partition width for a total of 64".

Q29: How are mechanical penthouses calculated or included/excluded? [Anneleise Loescher]

A: BOMA states that mechanical or electrical equipment rooms must be "fully enclosed" to be included in Building Service Areas, and includes "wall-mounted louvers" in its definition of Exterior Enclosure. They further state that "all enclosed space must have a roof." If a space met these criteria, it would be included within the IGA boundary and allocated accordingly.

Q30: I thought one of the main purposes of Method B was to allocate the main lobby to all occupants. [Jeffrey Johnson]

A: The main purpose of Method B is to establish a single consistent load factor for all floors of the building, primarily by the concept of Base Building Circulation. A main building lobby that generally serves multiple floors would generally be counted as Building Service Area and apportioned among all tenants in either method.

Q31: Where I am located, property managers don't want to track a different factor for each floor. They want 1 factor for the entire building. [Lisa Cianciolo]

A: This can be accommodated by using Method B which establishes a single load factor for the entire building.

Q32: How do you revise the calculations when you get a new tenant that changes the base building circulation? [Paul Levine]

A: While actual practice may vary, revisions to multi-tenant corridors would technically affect the rentable calculations under Method A. The concept of Base Building Circulation applies to Method B only and does not rely upon the physical build-out, therefore it does not change if a new tenant makes internal alterations to a floor.

Q33: In Method A are the service areas and amenity areas calculated the same? If so why distinguish between them?
[Robert Longo]

A: BOMA's instructions indicate that all areas are to be correctly designated as the appropriate space class. However, it is correct that Floor Service Areas and Floor Amenity Areas are calculated together in Column L under Method A.

Q34: Is there a difference between how the R/U is calculated between 1996 and 2010 BOMA? [Aaron Beltran]

A: The measurements contributing to the R/U ratio by floor in the 2010 Method A calculation vary from the prior standard based upon the reclassification of former Common areas in to Service and Amenity categories. In 2010 Method B, the R/U ratio by floor is not utilized due to the establishment of a Single Load Factor B.

Q35: Are there any guidelines where to use Method A or B? Or it is up to landlords? [Prabhansu Ghoshal]

A: This decision is up to the Landlord and primarily concerns whether a single load factor is desirable for a given building.

Q36: In Method B, is the lobby area part of the 5,972 under column J? [Jeffrey Johnson]

A: Yes. The 4,953 SF of Building Service Area which includes the ground floor lobby is a portion of this total.

Q37: What happens when the definition of MVP and BSA overlaps? Example: A small 2-story lobby space provides access to only one first floor tenant (say to the left of the entry door) and one 2nd floor tenant (via open stairs to the right of the entry door). Is the portion of the first floor lobby area that is only used by the first floor tenant to access their Premise attributable to the first floor tenant's rentable area or do you lose this entire area as a major vertical penetration, and thus lose it as rentable area?[Daniel Scott]

A: All areas must be identified as a single space class only with no overlap. In the 2-story lobby example given, assuming you are using Method A, it would appear that circulation common to both tenants would be Building Service Area and that serving a particular floor only would be Floor Service Area. The staircase would be a Major Vertical Penetration and the 2nd floor portion of the double-height lobby would be excluded from IGA as a 'void'. In this way all spaces would be accounted for. Many complex situations exist, and the advice of a BOMA Interpreter should be sought when necessary.

Q38: It would seem that a building with 80% efficiency would yield a 1.25 load factor, likely the highest we would see.
[Greg Burke]

A: See answer to Q25.

Q39: If upper level occupant areas have either balcony or roof access (dedicated to tenant or shared), how are those categorized? Similarly, please comment about facilities with a basement. [John Phung]

A: Any areas defined as 'enclosed' spaces would be within the IGA boundary. See also answer to Q29.

Q40: How do you measure residential & commercial mix use building? [Rosmal Seneviratne]

A: There is a separate BOMA standard for Mixed Use Properties which addresses this.

Q41: Seems like A will change over time depending on the tenants - B will be constant? [James Lloyd]

A: See answer to Q32.

Q42: Top floor mechanical spaces are included in the overall IGA? [Michael A Tomczak]

A: See answer to Q29.

Q43: Can you explain measuring to exterior glass of individual windows not on ground floor. Explain the 50% glass rule.
[Chad Berreau]

A: These measurements go to the interior side of the glass on the upper floors of our example building. Based upon the IGA Boundary Condition of Vertical Exterior Enclosure, the Dominant Portion method is used to locate the boundary at the interior side of the portion of the enclosure that makes up 50% or more of the floor-to-ceiling dimension.

Q44: In your experience, do you always report the calculated RSF, or are you asked to skew the RSF so landlord can keep the \$/SF rent rate and "round up" the lease dollars? [Stephen Scheirman]

A: See answer to Q47.

Q45: Ultimately, which method is better? [Joseph Buda]

A: The pros and cons of each method must be evaluated by the building owner based upon their specific circumstances.

Q46: How are atriums classified? [Nicolas Pacella] Could you explain the atrium exclusion again? [Missy Stover]

A: See answer to Q15.

Q47: How do you deal with a landlord who establishes a "Target" rental area that may vary with the age of the building and the market at a certain time? [Roy Gee]

A: Our subject matter is limited to calculations using the BOMA standard. The only allowable modification of rentable area provided by BOMA is the use of the Capped Load Factor to reduce rentable area.

Q48: How do you calculate the area of a private stair that only serves one tenant space? [Paul Poirier]

A: Typically, convenience stairs within a tenant's space remain part of the Occupant Area. An access or egress stair outside the Occupant Area serving only one tenant would still be a Major Vertical Penetration.

Q49: How do you handle the area below restricted head room caused by structural cross bracing? [Michael Murphy]

A: This area is typically included within the IGA boundary, occupant area and rentable area, but BOMA requires that the area of restricted headroom "be disclosed in any presentation of building measurements".

Q50: While this presentation has focused on Office commercial, do the basic rules regarding where you measure to also apply to retail tenant spaces in the new BOMA guidelines? [Jeff Hardy]

A: Retail spaces in commercial office buildings are now treated as Occupant Areas with no distinction from other tenants. There is a separate BOMA standard for Retail Buildings.

Q51: From an ethics standpoint it would be a no-no. As an Architect you could be liable for the discrepancy during litigation? [Michael A Tomczak]

A: See answer to Q47.

Q52: When you have boxed in wind bracing or x bracing along a corridor would that be part of the corridor space or the occupant space? [Deborah Wells-Jahn]

A: Our understanding is that Building and Floor Service Areas such as multi-tenant floor corridors in Method A are measured only to the Far Side of their own enclosing walls and would not include items beyond this enclosure.

Q53: Is there a separate standard for single tenant buildings versus multi-tenant / and what is it? [Douglas Short]

A: We are not aware that any distinction is made in measurement based upon the quantity of tenants in office buildings.

Q54: You are going to the outside line of the building on the ground floor. So your gross area on the ground floor could be more than on other floors if you did not have public walkways. [Robert Jillson]

A: For clarification of the IGA boundary conditions on the ground floor in our example building, see answer to Q04. It is the presence of Public Pedestrian Thoroughfares here that causes us to go to the Exterior Enclosure. If these did not exist, we would most likely be using Dominant Portion, which would reduce slightly the area within the IGA boundary.

Q55: How do the warehouse BOMA standards differ from the office ones? [Jean Duffett]

A: Please consult the separate BOMA Industrial Buildings standard for this information.

Q56: What about the roof terrace? [Rosmal Seneviratne]

A: Generally, a roof terrace would not be considered as part of the building IGA if it has no surrounding walls or roof. See also the answer to Q29.