



The New Foundation For Floor Area Measurements

Presented by:

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Learning Objectives

- Learn how to use the two most commonly used standards in North America, based on one set of measurements
- Understand what is changing and how these changes will affect your organization
- Learn how to measure and classify floor area elements in your office building using the new common measurement methodology and taxonomy, and understand the impact on lease negotiations and chargeback

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The Standards ⁽¹⁾

Facility professionals and building owners and managers commonly use two measurement standards to measure floor area in office buildings



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The Standards ⁽²⁾

- These two area measurement standards have important implications related to:
 - Legal
 - Financial
 - Workforce issues

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The Standards ⁽³⁾


- **ASTM E1836-01**
 - Standard Classification for Building Floor Area Measurements for Facility Management
 - Used primarily by facility managers
 - Determine the amount of floor area available for fit-up and for chargeback



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The Standards ⁽⁴⁾

- **ANSI/BOMA Z65.1**
 - Standard Method for Measuring Floor Area in Office Buildings
 - Used primarily by building owners and managers
 - Determine the amount of rentable and usable area available for lease




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The Goal

- Reduce the time, cost, and effort required to produce two sets of floor area measurements

Solution - appoint a joint working group...



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Members of the Working Group (1)

- Co-Chairs
 - Lynne Y. Blair, B. Com., of L.Y. Blair & Associates
 - Kent C. Gibson, CPM, of Zions Securities Corp.
- Association Support
 - Shari Epstein, Associate Director of Research at IFMA
 - Dave Johnston, Director of Codes and Standards at BOMA International

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Members of the Working Group (2)

- Ted Eedson, IFMA Fellow
- Susan M. Hensey, AIA
- Kurt Neubek, CFM, FAIA
- Steve Peters
- Michael Schley
- Meredith Thatcher, IFMA Fellow
- William B. Tracy
- As well as early input from: David J. Corpening, CPM, Lisa DiGiacomo, Alana F. Dunoff and Bruce Lyman

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Past Challenges (1)

- Past challenges included:
 - Some confusion in marketplace
 - ❖ Individually modified standards
 - ❖ When to use which standard
 - ❖ Duplicate/inconsistent use of terminology
 - ❖ Some terminology is too close
 - Optional use of standards

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Past Challenges (2)

- Other challenges:
 - Standards are subject to interpretation – difficult to audit
 - Multiple versions of multiple standards
 - Marketplace commitment to chosen standard – adoption of new standard is expensive and time consuming

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Mandate

- Working Group's mandate:
 - Produce one set of definitions and a measurement methodology for reference by both standards
 - Develop commentaries to demonstrate principal concepts
 - Fulfill needs of IFMA and BOMA members and other key stakeholders

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Scope

- **Scope of what was created:**
 - Includes a taxonomy and measurement procedure
 - Provides a common methodology and common definition for the two area measurement standards
 - Capability to measure different categories of floor area in a building once
 - Uses these measurements to produce calculations detailed in either standard

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Keep focus

- **Focus on:**
 - Level of effort needed to be appropriate for the intended purpose
 - Desire for KISS (Keep it simple for stakeholders) principle
 - Varied levels of knowledge of stakeholders
 - Need to eliminate room for error
 - Need to pass a reasonableness test
 - Justify the ROI (return on investment of time, return on information)

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Specific Objectives (1)

- **Include**
 - Measurable elements of floor area
 - Terms for which minimum measurements are required to support the current calculations in the two standards
 - Minimum level of detail – measure only what you need to measure

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Specific Objectives (2)

- **Exclude**
 - Calculations
 - Exterior Gross Building Area
 - Unenclosed circulation paths and gathering areas
 - No specific tolerance for accuracy of measurements
 - ❖ Accuracy dependent on local situation

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Specific Objectives (3)

- **Other specific objectives...**
 - Develop a common system for measuring
 - Include directions to manage the placement of boundaries between measured elements
 - Provide diagrams to illustrate the hierarchy of wall measurements

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6 Key Concepts

- Sequence of measurement
- Wall priority
- Boundary line placement
- Perimeter encroachments
- Amenity areas and service areas
- Circulation areas

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1st Key Concept

➤ **Sequence of Measurement**

- "Although any area can be measured in any order, understanding the overall sequence of measurement is a key concept in this approach."
- Sequence of measurement supports:
 - ❖ Appropriate wall priority
 - ❖ Specific boundary line placement
 - ❖ Consistent measurement methodology

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Overview - Sequence of Measurement

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Figure 1 - Sequence of Measurement

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Figure 2 - Sequence of Measurement

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Figure 3 - Sequence of Measurement

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2nd Key Concept

➤ **Wall Priority**

- Area measurements can:
 - ❖ Include the enclosing walls (floor area taken up by wall(s) is generally included with the measured element)
 - ❖ Include part of the enclosing walls (commonly called centerline)
 - ❖ Exclude the enclosing walls
- Wall priority or hierarchy protects against areas being measured twice

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3rd Key Concept ⁽¹⁾

- Boundary Line Placement
 - Place boundary lines so that all of the area being measured is defined and so that no area is measured or counted more than once
 - Draw a single boundary line between defined adjoining areas

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3rd Key Concept ⁽²⁾

- Boundary Line Placement
 - Determine boundary lines according to Sequence of Measurement, Wall Priority and boundaries determined by definitions (defined boundary)
 - The boundary lines around an area form a polygon, which is used to measure the area

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4th Key Concept

- Perimeter Encroachments
 - Represent the primary area difference between the two standards
 - Identification and definition of perimeter encroachment(s) helps users of both standards to navigate between the two standards

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5th Key Concept

- Amenity Areas and Service Areas
 - 4 possibilities – allocate to either:
 - ❖ all occupants of the floor where the area is located, or
 - ❖ all occupants in a building, or
 - ❖ all occupants of a campus, or
 - ❖ a limited group of occupants within a campus, building or floor

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6th Key Concept ⁽¹⁾

- Circulation Areas...
 - Primary Circulation Area
 - Represents the reasonable minimum path, considering tenant/occupant space configuration, on a floor necessary for access to:
 - ❖ egress stairs, elevator lobbies, toilet rooms, refuge areas, building lobbies and entrances

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6th Key Concept ⁽²⁾

- Circulation Areas
 - Base Building Circulation Area
 - Represents the minimum path to connect service areas, elevators and emergency exits for the floor

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The Measurement Rules (1)

Matrix for facility management

3 easy steps for users to determine measurement rules for plannable area...

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The Measurement Rules (2)

Matrix for building management

3 easy steps for users to determine measurement rules for rentable and usable...

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Taxonomy

- ❖ Amenity area
- ❖ Assignable area
- ❖ Base building circulation
- ❖ Building
- ❖ Excluded area
- ❖ Finished surface
- ❖ Floor
- ❖ Interior encroachment
- ❖ Interior gross area
- ❖ Interior parking
- ❖ Interstitial floor area
- ❖ Major vertical penetration
- ❖ Occupant
- ❖ Occupant void area
- ❖ Perimeter encroachment
- ❖ Plannable gross area
- ❖ Polygon
- ❖ Primary circulation
- ❖ Restricted area
- ❖ Restricted headroom
- ❖ Secondary circulation area
- ❖ Service area
- ❖ Tenant area
- ❖ Unassigned area
- ❖ Usable area
- ❖ Void area

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Impact – IFMA Stakeholders (1)

- This new foundation provides:
 - Crosswalk between leasing and space management measurements and calculations
 - Shared language
 - Broader benchmarking

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Impact – IFMA Stakeholders (2)

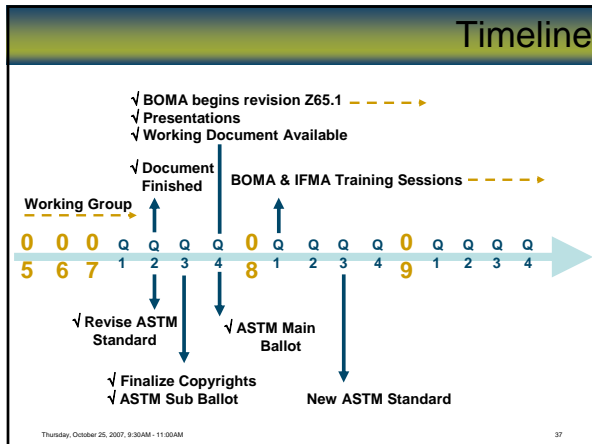
- This new foundation provides:
 - Ability to more consistently integrate facility data with enterprise wide databases
 - Tools to conduct additional calculations
 - ❖ Cleanable
 - ❖ Carpetable

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Impact – BOMA Stakeholders

- Impact is expected to be similar to IFMA stakeholders
- Also expect...
 - ❖ Less confusion within the BOMA marketplace with a shared language
 - ❖ Stabilizing R/U ratios with introduction of base building circulation
 - ❖ Increased flexibility, e.g. amenity areas - new categories
 - ❖ Application to other building types using a common taxonomy

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Future Focus (1)

- For the future:
 - Resolve current perception of confusion in market place
 - Provide consistent/compatible terminology and methodology
 - Promote reusability of data – measure once, calculate many ways

Future Focus (2)

- For the future:
 - Support comparable metrics / benchmarking
 - Promote use of new foundation by others
 - Integrated taxonomy into the space classification standard as developed by Open Standards Consortium for Real Estate (OSCRE)
 - Integrate taxonomy with US National Building Information and Modeling Standard (NBIMS)

Critical Issues

- To be successful, will need:
 - ❖ Buy-in of wider audience of stakeholders
 - ❖ Process to issue the document to other organizations
 - ❖ Both GSA and PWGSC actively participated in the development of the working paper - future endorsement and integration into their contracts and real property activities is critical

How to order

- Phone the IFMA bookstore
- Ask for: A Unified Approach for Measuring Office Space
- Cost
 - Approx. \$50US for members
 - Approx. \$60US for non-members