GYPSUM ASSOCIATION

CHAPTER 25 - BOARD TALK

FALL 2010

INSIDE

Gypsum Association Publishes 2010 Edition of GA-216

The Gypsum Association is announcing the release of the 2010 edition of its publication, GA-216, *Application and Finishing of Gypsum Panel Products.* GA-216 is a code-referenced industry standard that describes the proper methods and materials for most applications of gypsum panel products in the built environment.

Included in the document are instructions for the proper delivery and handling of gypsum panels, single- and multi-layer applications over both wood and steel framing, installation of semi-solid gypsum panel product partitions, adhesive application to a variety of substrates, gypsum panel product application over rigid plastic foam insulation, exterior applications of exterior gypsum soffit board, and the finishing of gypsum panel products. Also included are recommendations for special situations, including floating angles, outside corners, arches, and curves.

GA-216 has been a primary publication of the Gypsum Association for many years. With the passage of those years, it has become an industry standard. Industry's reliance on GA-216 has led to it's becoming a referenced standard in the building codes during the last few code cycles. The Association's Technical Committee updates GA-216 on a three-year cycle to keep the document current with changes in technology and the building codes.

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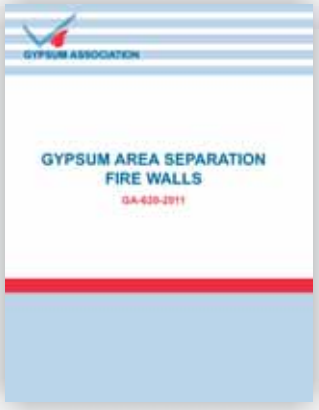
BOARD TALK is published specifically for code officials and building inspectors. To request your own copy and be added to our complimentary mailing list, just submit the online sign-up form located under the Code Enforcement Officials section on our Website (www.gypsum.org). You can also contact us at: fax: 301-277-8747; phone: 301-277-8686; e-mail: info@gypsum.org.

Gypsum Association to Release New Publication on Area Separation Fire Walls



The Technical Committee of the Gypsum Association has completed its work on the Association's newest publication, GA-620, *Gypsum Area Separation Fire Walls.* Area separation fire walls are most typically installed to separate adjacent townhouse units that are constructed with a common 2-hour wall.

The document provides both general and specific information about the selection, design, and installation of gypsum area separation fire walls, ranging from an introduction that describes that features and benefits that accompany these assemblies to cross-sectional construction details of several common configurations. The document also includes sections on Handling and Storage, Cutting the gypsum panels, Limitations and Special Conditions, Components, and Installation.

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Upcoming Changes to Model Codes

The Final Action Hearings to create the 2012 International Residential Code (IRC) and the 2012 International Building Code (IBC) concluded in mid-May. Three items of interest to drywall contractors were approved during the meeting.

The first item was a modification to the IRC that will require the application of a drywall or structural wood panel membrane to the underside of floor systems in non-sprinklered residential dwellings. The membrane can be either drywall – with a minimum thickness of ½ inch – or a 5/8 inch structural wood panel and, with the exception of areas over crawl spaces or areas less than 80 square feet, it must be continuously applied to the underside of the floor assembly.

Technically, the approved code language applies to all floor systems; however, an exception exempting systems that incorporate minimum 2 x 10 nominal dimension lumber framing members limits the impact of the approved language to light-weight construction systems. Examples of light-weight construction systems include particle board and lumber wood I-beam systems, glue laminated beams, and wood and steel prefabricated truss systems.

Because the ceilings of the first and second stories of a dwelling are typically covered by a drywall membrane, the primary effect of the language on new construction will be the requirement to install a membrane on the underside of the floor immediately above a habitable, non-sprinklered basement.

The second and third changes both occur in the IBC. The first IBC change adds language that permits the ceiling membrane of a one- or two-hour floor-ceiling system to be interrupted by the "double wood top plate" of a partition as long as the fire-resistance rating of the wall system is not lower than the rating of the horizontal floor- or roof-ceiling system. This modification addresses a problem encountered when installing a fire-rated partition to the underside of a gypsum-membrane fire-rated horizontal system: construction sequencing often makes it difficult to install the board to the underside of the floor system as a continuous membrane immediately above the point where the partition and the floor system intersect. The approved language allows the double wood top plate to function as a substitute for the membrane by acknowledging the fire-resistive contribution of the layers of board on the intersecting partition.

The second change in the IBC adds structural integrity requirements to elevator hoistway applications. Language approved in 2009 used the criteria in ASTM C 1629 to establish minimum impact-resistance threshold limits for stair and elevator shaft enclosure systems installed in buildings over 420 feet in height. Proposals approved for the 2012 IBC extend the scope of the applicable language to two new types of elevator enclosures: dedicated fire service access elevator enclosures and occupant evacuation elevator hoistway system enclosures. In both instances, the code voting body agreed with the logic that supported the imposition of the impact-resistant requirements onto the two specialty hoistway situations. As a result, the 2012 IBC will contain language expanding the use of impact-resistant drywall systems.

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Gypsum Association Publishes 2010 Edition of GA-216

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The 2010 edition of GA-216 includes new language reflecting changes in ASTM C 1396 and ASTM C 1658, changes terminology from metal gauges to base metal thickness to reflect practices of the steel framing industry, and revises the recommendations for water-resistant gypsum tile backer board to comport with companion specifications found in the tile industry's TCNA Handbook and ANSI A-108, which are also now required in the ICC codes.

The new 2010 edition of GA-216 is available from Association's on-line bookstore at www.gypsum.org.

Gypsum Association to Release New Publication on Area Separation Fire Walls

(Continued from page 1)

The section on Handling and Storage describes proper procedures necessary for receiving and storing the materials used to construct the area separation fire walls, with particular attention paid to the gypsum panels. This section includes instructions on removing shipping wrappers, stacking materials in such a manner as to prevent moisture damage, protecting materials from exposure to the elements, and preventing worker injuries.

The section on Cutting describes the methods and procedures available for cutting the gypsum panels to the desired size.

The Limitations and Special Conditions section includes seven points of interest that need to be taken in consideration when constructing gypsum area separation fire walls. These points include applications that these assemblies are not intended to serve and environmental conditions – heat and moisture – that the gypsum panels are not designed to endure for sustained periods.

The Components section itemizes the materials used to construct a typical assembly.

The Installation section describes first, in general terms, the procedure for building an assembly; it then describes step-by-step procedures for assembling all the components into a complete building system, including fastening of framing members, the installation of gypsum panels, and the spacing and attaching of break-away aluminum support clips.

The document ends with eight detailed diagrams, including a typical floor ceiling juncture, a typical roof junction detail, a typical roof parapet detail, a roof intersection with parallel roof trusses, an intermediate floor intersection, a wall-foundation intersection, an exterior wall intersection, and an exterior wall protrusion.

The eight-page document will be made available on the Association's on-line bookstore found at www.gypsum.org.

MAILBAG

QUESTION: I often see gypsum board installed using a combination of nails and screws, and I've always assumed this practice is acceptable. However, one of my superiors recently questioned the practice. Could you explain if combining nails and screws is acceptable?

ANSWER: According to GA-216-2010, *Application and Finishing of Gypsum Panel Products*, the practice is acceptable with the addition of one caveat that does not appear in the text.

Section 5.5 of GA-216 allows the use of a combination of fasteners consisting of nails along the perimeter and screws in the field of the board in a standard, non-fire-resistive installation of gypsum board. In fact, this is a fairly common residential application practice in some parts of the United States and Canada.

However, one must be careful with this practice when a fire-resistive system is involved. Fire-resistive gypsum board systems are not typically tested using a combination of screws and nails, so correlation of this practice to a tested system in the field is next to impossible. It is very important to follow the details of the tested system when installing fire-resistive systems.

Nonetheless, it is well documented that one can substitute a screw for a nail in a fire-tested system as long as the screw is equal to or greater in length and head diameter than the specified nail. For example, if the tested system calls for nails, you can substitute screws for the nails in the field of the board, and this will not adversely impact the fire-resistive ability of the test. Just make sure the substitution is done one-for-one so the screws are spaced as the nails would have been.

It is important to note that the converse of the above mentioned example is not acceptable. In other words, if the original system was tested using screws, and you replace some of the screws with nails, then the system may not pass the fire test. This is largely due to screw heads being larger than nail heads which provides a larger fastener-the bearing surface to support the board.

GA-600-09 19th Edition
Fire Resistance Design Manual

Includes fire-resistance ratings for over 420 gypsum protected wall, ceiling, roof, column, beam girder, and truss systems. Contains laboratory tested designs for both fire-resistance and sound-attenuation-rated gypsum board building systems, including walls and partitions, floor-ceiling and roof-ceiling systems . Over 80 proprietary building system designs are offered. Referenced by the International Building Code, Uniform Building Code, the BOCA National Building Code, the Uniform Building Code, the Standard Building Code and The National Fire Codes. Also referenced in major jurisdictions in the United States such as Florida, Chicago, Los Angeles, and New York City. Recognized in major jurisdictions in Canada. 178 pages.

GA-600-2006 18th Edition
Fire Resistance Design Manual

Includes fire-resistance ratings for over 375 gypsum protected wall, ceiling, roof, column, beam girder, and truss systems. Over 40 system designs have been added since the previous edition, including several new floor- and roof-ceiling systems and double-stud steel partition designs. Referenced by the Inter-national Building Code, Uniform Building Code, and the Building Construction and Safety Code, NFPA 5000. Also referenced in major jurisdictions in the United States such as Florida, Chicago, Los Angeles, and New York City. Recognized in major jurisdictions in Canada. 158 pages.

GA-530
Design Data - Gypsum Board

Our most complete collection of current Gypsum Association publications containing the most recent edition of the *Fire Resistance Design Manual* (GA-600) as well as GA-214, GA-216, GA-220, GA-221, GA-222, GA-223, GA-224, GA-225, GA-226, GA-229, GA-232, GA-234, GA-235, GA-236, GA-253, GA-254, GA-276, GA-290, GA-291, GA-406, GA-510, GA-515, GA-610, GA-618 and ICC-ES ESR-1338.

CHAPTER 25 - BOARD TALK

FALL 2010

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_____ Copies of GA-216-2010 - APPLICATION AND FINISHING OF GYPSUM PANEL PRODUCTS NEW X $16.00 each = _____

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