

Methods To Attach Fixtures, Handrails, Cabinets to Gypsum Board Assemblies

Drywall Contractor's Percentage of Jobs Increases, But So, Too, Does Responsibility and Performance For Specialty Walls

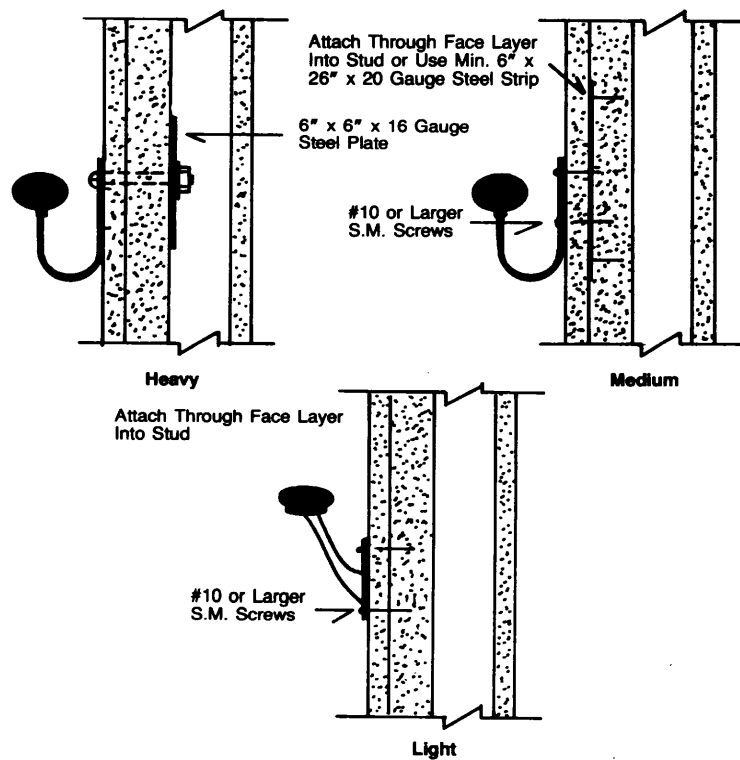
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DOMTAR GYPSUM

During the past twenty years a remarkable evolution has been taking place in the core areas of our buildings. *Gypsum board assemblies* have virtually replaced masonry walls in elevator shafts, stair-walls, mechanical enclosures and restrooms on almost every floor.

The drywall contractor's percentage of the overall construction budget has increased, and so has his responsibility for the proper installation and performance of these *specialty* walls. For instance:

- Elevator shafts must meet lateral deflection requirements for positive and negative pressures created by high speed elevators.
- Stairwalls that resist pressurization to meet the smoke-free requirements of the building code in addition to supporting a heavy iron handrail.
- Chasewalls that conceal a massive array of plumbing and hold wall-supported water closets, metal toilet partitions and railings for the handicapped.
- Fire-rated party walls with sinks, shelves, hand dryers, towel dispensers, urinals, cabinets and mirrors attached to the gypsum board and metal framing system.
- Unit demising walls with night stands, headboards, flexible light fixtures and dresser units, some designed without floor support for ease of cleaning underneath, all attached to the gypsum board and framing system.

HAND RAIL ATTACHMENTS



On a recent job call, a contractor related the fact that he had inadvertently overlooked more than 12,000 lineal feet of 6" wide 20 gauge stripping support for such fixtures . . . not exactly a minor item. Fortunately the error was caught *before* the gypsum board was in place. He

was lucky . . . others have horror stories of similar costly oversights . . . especially in hospitals and health care facilities.

Supports and back-blocking requirements are frequently *not* openly, nor precisely detailed on the plans, but occur as side notes or subscribed



8" x 20" ga. continuous metal stripping attached to each stud prior to installation of gypsum board.



references in the written specifications; easily missed, but still a vital part of the contract.

There are essentially three categories of supports. They are described as *light*, *medium* and *heavy duty* depending on their intended use.

Within the *light* category, one might find wall to wall mirrors, a residential type handrail or kitchen countertop supported by cabinets, but also attached to the wall. The items may be sufficiently supported with #10 screws through the gypsum board and into the framing. In the field molly type fasteners and toggle bolts as well as plastic expansion devices are generally acceptable for attachments to the board between framing members. They work well for decorative items such as pictures and other accessories that weigh less than five pounds per single hanger.

In the category of *medium* support would be handrails in public egress areas such as stairs and exit ramps. Also wall-hung fixtures, cabinets and various dispensers in public restrooms that would be subject to continuous or abusive use.

The most commonly specified support for the *medium* requirement class is 4" or 6" wide, 20 gauge continuous strip of electro galvanized steel. Strips should be securely attached to each framing member with at least two 3/8" drill-point pan-head screws. Electro-welding is an acceptable alternative to screws, but requires a high level of skill with lighter gauge metal studs.

Controversy often occurs over who should supply and install *heavy-duty* supports when 16-gauge or heavier steel-plate blocking is required or specified. It is general practice that 16-gauge or heavier steel-plate blocking should be provided by the hollow-metal or general contractor even though it may be coordinated and installed within the scope of the drywall contract. It is an area that should be noted for clarification prior to contract acceptance.

Steel-plate blocking is often found detailed in commercial kitchen areas or health care facilities where carts are used and walls are subject to unusual abuse. Mechanical equipment rooms, gymnasiums, storage and conference rooms are also prime areas to check

for steel-plate blocking requirements.

Although often detailed, standard wood blocking should not be used in noncombustible, fire-rated assemblies; use a Fire-Retardant treated wood product. Where additional structural support is specified; metal channel, strips, stud or track of sufficient gauge should be used.

The lines on a set of drawings are no longer confined to designate just the scope of the contractors work . . . they delineate components of a *total* building system. One must visualize the function of these components and think in terms of performance . . . fire, sound, aesthetics, deflection, control of expansion and contraction, service penetrations, smoke barriers and installation of doors and accessories that may require support beyond that of normal framing dimensions.

The wall and ceiling contractor today *must* be both a generalist and a specialist. It has become a highly sophisticated and technical trade, emphasizing the axiom that “liability” increases in direct proportion to responsibility.”

