

# Site Conditions: Preparations For Installing Architectural Woodwork

The installation of custom architectural woodwork generally includes labor, tools, equipment, adhesives/fasteners, common blocking, furring and hanging devices for the support or attachment of the woodwork. Large, detailed tables and in-depth information on proper installation methods are explained in Section 1700 or AWI's *Quality Standards Illustrated*.

## INSTALLER RESPONSIBILITIES

When compliance with Section 1700 of the 8th Edition *Quality Standards Illustrated* is specified in the contract documents, the installation contractor is responsible for:

- Receiving and distributing woodwork to the proper location;
- Installation of finish hardware not furnished by the manufacturer;
- Installation of adjustable shelves, standards and brackets on building walls, and shelf clips or pins in cabinets, cabinet standards and/or in-line boring done by manufacturer;
- Filling of nail holes and touch up on all pre-finished woodwork after installation to achieve best color blend;
- Preparation of walls for paneling outlined in the contract, including installation of 19 mm x 64 mm [3/4 x 2-1/2"] minimum veneer core plywood or solid wood grounds, and/or extruded aluminum strips and clips; set plumb and true, squaring out corners, windows and door openings up to and including 12.5 mm [1/2"].

There are also a variety of things which are specifically excluded from the scope of the installation contractor's work by the QSI. These, of course, can be specified in the contract documents, and then would be included. Unless required by the specifications, the installer shall not:

- Provide structural grounds or blocking inside partitions or above finished ceiling or below finished floor;
- Supply exposed materials other than wood, solid surfacing, or plastic laminate;
- Apply factory or site-applied finish to unfinished or primed woodwork;
- Fill nail or screw holes in unfinished or primed woodwork;
- Caulk to fill between woodwork and any wall, floor, and/or ceiling imperfections;
- Prepare wall, floor, or ceiling to accept the woodwork;
- Install electrical, telephone, plumbing, computer, or mechanical equipment to include grommets and wire management;
- Supply electrical power, water, hoisting, sanitary or waste disposal services;
- Supply fastening devices unrelated to the architectural woodwork being installed;
- Provide "buildups" to level floor or walls in excess of 12.5 mm [1/2"] at any one point; or
- Seal edges, tops and/or bottoms of wood doors.

## GENERAL CONTRACTOR RESPONSIBILITIES

It is the responsibility of the general contractor to insure the establishment and maintenance of proper site conditions. These conditions are required if the installed work is to meet the AWI 8th Edition *Quality Standards Illustrated*.

Architectural woodwork is a “finish” trade, and should be installed after ceilings, plumbing, flooring, etc. The fabricator of the work shall not be held responsible for any damage that might develop by not adhering to the following procedures.

Walls, ceilings, floors, and openings must be level, plumb, straight, in-line, and/or square. We’ve all seen examples of a project on which the concrete floors are poured wildly out of level, and the woodwork installation is required to be level and scribed to the floor. The result can be paneling with a baseboard which runs from 3 inches to 1/2 inch on a 60 foot wall.

As indicated throughout the QSI, “Architectural woodwork shall not be subjected to extremes of temperature and humidity. The relative humidity during the time of installation should remain within the range to be maintained during occupancy.”

Areas to receive architectural woodwork must be fully enclosed with windows installed and glazed, exterior doors in place, HVAC systems operational, and temporary openings closed. All plaster, wet grinding, and concrete work shall be fully dry.

Of all the installation guidelines, these are the most often violated. In the rush to get the job done, contractors often fail to coordinate the delivery and installation of fine woodwork with conditions which will serve to protect the client’s investment.

A secure storage area must be provided within the building that is flat and level, clean, dry, well ventilated, and protected from direct sunlight.

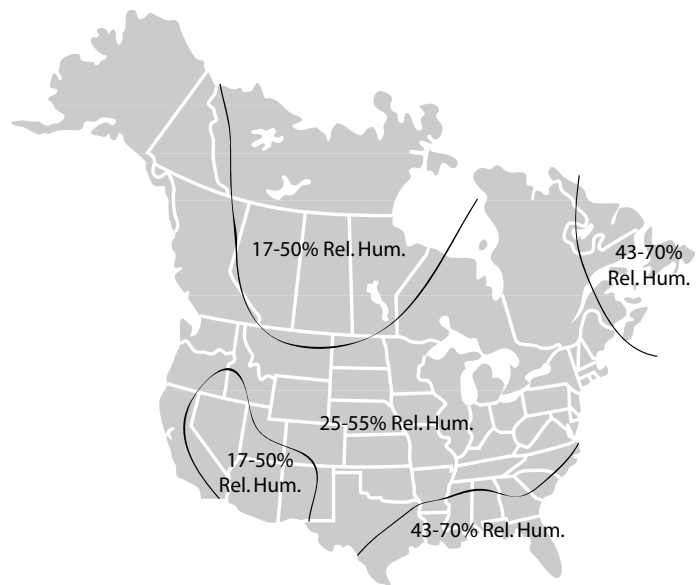
For most areas of the country, the ambient relative humidity at the site, including both the storage and the installation areas, should be maintained between 25% and 55% prior to delivery and through the life of the installation.

In any event, the range of relative humidity change should not exceed 30 percentage points. Relative humidity below 20% and above 80% is particularly harmful to wood and wood products, not to mention fabrics, ceiling materials, and floor and wall coverings.

All preparatory work done by others shall be subject to inspection by the architectural woodwork installer, and may be accepted or rejected prior to installation.

Rough openings which are installed by the general contractor shall be built square, in plane, and to the proper dimensions.

Architectural woodwork should be allowed to come to equilibrium on site prior to installation. A minimum of 72 hours shall be allowed for best results. Factory finished woodwork may require a week or more to acclimate.



## INSTALLATION STANDARDS

As shown in the Standards, the installation team has some heavy responsibilities too. In the absence of details or specifications to the contrary, the AWI Installation Standards apply when referenced in the contract documents.

When required, the installer shall submit evidence of having adequate equipment and experienced workers to complete the installation.

The installation team must have access to the job site to inspect all preparatory work done by others, and shall accept or reject conditions prior to installation. This provision is not designed to DELAY the work, but helps move the installation along by assuring proper conditions for success.

The installer must also be responsible to receive and distribute woodwork to its proper locations.

Remember, the architectural woodwork should be acclimated to these conditions for a minimum of 72 hours prior to installation. This will usually allow the wood to come to equilibrium with the environment.

During the site inspection and preparation to receive and distribute the woodwork, a review of the manufacturer's shop drawings is required. The shop drawings and the physical materials must be coordinated with the architectural drawings, the specifications, and the job site conditions.

A few minutes invested at this point in the installation pays big dividends.

The installation of standing and running trim is often the first, and sometimes the ONLY, woodwork put down on the site.

Prior to cutting standing and running trim, the QSI requires the installers to inspect all material for its compliance with the specified Standards for grain and color. Then they must cut and fit the trim so the natural characteristics of the wood shall not exceed those allowed in Section 100 and Section 200 for the Grade of Work specified.

Unless it was in the fabricator's contract, the installer is to provide all cutouts through woodwork necessary to accommodate electrical, telephone, mechanical, or plumbing equipment. This requires a high level of workmanship under often trying conditions.

All nails on exposed and semi-exposed surfaces must be countersunk.

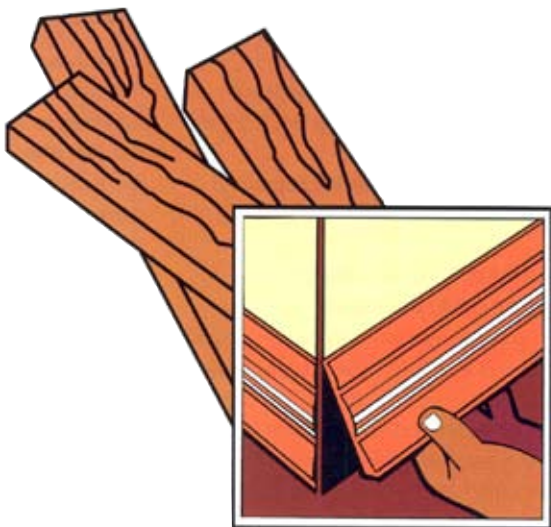
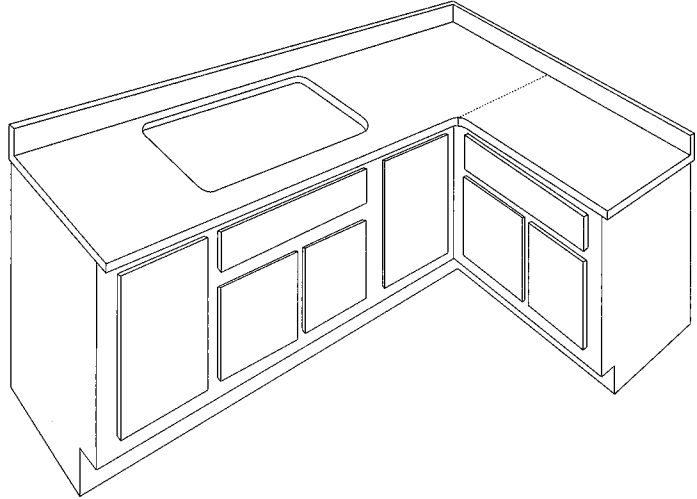
Care must be taken to avoid open joints, visible machine marks, tears, nicks, chips, scratches and/or sanding cross-scratches greater than tolerances allowed by the Standards. And, of course, woodwork must be installed level and plumb within specified tolerances.

On all Factory Finished woodwork installations, installers must do all filling of nail holes and touch-up on pre-finished woodwork with blending filler, usually a wax stick. It is important that the installer, which is the woodworking firm in many cases, be aware of setting and filling those fasteners. A lot of time can be burned up on the type of labor and requires experienced woodworkers.

Job-finished woodwork is to be filled by the paint finisher.

The installation is not complete until all adhesives are removed from exposed and semi-exposed surfaces.

Due to deviations in existing buildings and lack of clear performance standards for framing and drywall, even in new work, gaps between standing and running trim at building walls and ceilings shall not be the responsibility of the woodwork installer. Please refer to page 533 of the QSI for more details.



## POINTS OF SPECIAL CONCERN

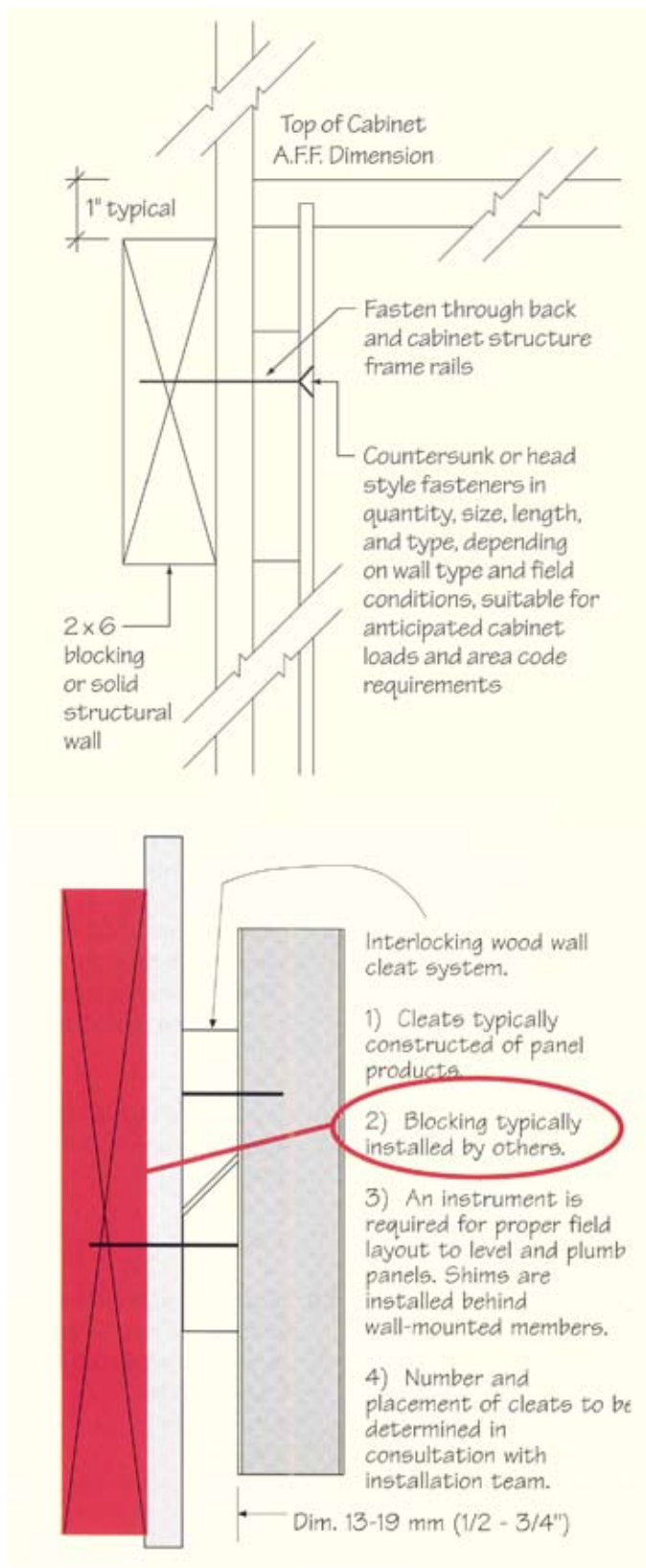
At AWI, technical assistance is asked for most often on cracked and warped woodwork than on any other subject. Delivering woodwork to a job site before the site is "dried in" and humidity controlled can cause the wood to lose moisture, or more probably, take on additional moisture prior to installation.

Delivering woodwork the same day it is installed, even in a controlled environment, can cause problems as well. In either case, the woodwork has not come to equilibrium with the environment in which it's destined to live before it is fastened in place.

Bad storage conditions have a similar effect. The most common result of bad storage is warped doors, usually because they've been unprotected on very new concrete.

Finally, woodwork that's installed too soon will usually suffer from swelling or shrinking. Most often the general contractor forces the delivery and installation of fine woodwork before the building is ready.

We all understand the many hours of labor required to bring the woodwork to the point of installation. In most cases, the woodwork is delivered to the job site in fine condition. Failing to take the time and care needed to do a quality installation degrades the fine woodwork delivered by the manufacturer. Best results are achieved when you don't take shortcuts on installation.



TYPICAL SECTION DETAILS NOT SPECIFIC TO THIS JOB.  
REFER TO JOB DRAWING FOR ALL FINAL DETAILS.