

## PREPERATION OF THE ROUGH OPENING

All NanaWall systems are to be installed into a rough opening only. It is necessary for all of the finish work to be done and returned to the NanaWall after complete and final installation.

### Framed systems only:

For necessary clearance and adjustment space, a rough opening is suggested to be  $\frac{3}{4}$ " wider and  $\frac{3}{4}$ " – 1" higher than the outside frame size of the framed unit ordered. Note that the outside frame height of the unit ordered is measured from the bottom of the sill and not from the finish floor. If it is to be a "high wind load" installation, the clearance sizes change and are indicated on the approved order drawings.

Please check to make sure you have the latest approved drawing paperwork from Nana Wall. It is not uncommon for the door sizes to change several times during the design and approval stage. Architect's renderings are not the acceptable form of drawings to use in determining Rough Opening sizes.

### All Glass Systems only:

For necessary clearance and adjustment space, a rough opening is suggested to be 1" wider and 1" taller than the unit height or width. The rest of the info for framed systems applies.

### All NanaWall systems:

The structural integrity of the header is critical for proper operation. Vertical deflection of the header under full live and dead loads should be the lesser of  $L/720^{\text{th}}$  of the span or  $\frac{1}{4}$ " max. Structural support for lateral loads must also be provided. All rough openings are supposed to be plumb, level, and square. There should be no twisting in any of the surrounding frame.

Items to consider when furnishing a prepared rough opening:

#### 1. Wood Surrounding Conditions:

- a. There must be a minimum of 3" of solid wood to anchor the system frame into. This is most easily defined as two 2" x 6" studs glued and screwed together. Nailing wood together is not acceptable. We need all space between joists filled by wood that is 3" thick and anchored securely.
- b. A plywood subfloor that is less than 3" deep is not sufficient for proper anchoring. Continuous backing is needed under the plywood sheeting.
- c. All side jambs should be braced horizontally to the adjacent studs to avoid any potential movement.
- d. Our experience is that LVL or microlam headers are strong but do deflect regardless of any printed qualification. Any microlam or LVL used must use some type of metal support plate or hanger to prevent any downward deflection. If a microlam or LVL beam is used as the header, we suggest a 1" x 4" should be glued and screwed to the underside of the microlam or LVL to give a flat and level surface to shim our systems. .
- e. Box beam headers are not allowed for header applications. The header must be solid wood and screwed together

#### 2. Steel Surrounding Conditions:

Unless you are going to structurally anchor 3" minimum of wood to the steel, no wood or other material should be attached to face of the steel for a spacer. If plywood or other material is installed to the surface of the steel prior to the system being installed, it will add to the installation price and

difficulty. All structural steel must be a minimum of  $\frac{1}{4}$ " thick so the steel can be drilled and tapped or if it is a HSW unit, it will be installed with hanging rods. All steel needs to be cross braced to avoid any sway or deflection in the material. If using an I-beam, do not finish around web so there is still access during installation for adjustment of bolts or rods.

### 3. Masonry Surrounding Conditions:

If the system is to be attached to brick or cinder block, extra care must be taken when determining your frame size due to the unevenness of this substrate. Brick or cinder block must be installed as plumb as possible. Open gaps between exterior brick and the interior material cannot be used to install the systems—we cannot attach to open gaps. The system frame must be installed a minimum of 2" from the edge of the brick or cinder block to avoid splitting the substrate. Brick or block is not acceptable as a substrate for the sill.

### 4. Concrete Sill Conditions:

Please contact your certified installer for possible suggestions on alternative sill weeping solutions prior to pouring concrete. With a recessed sill it must be securely attached to an adequate support structure prior to concrete being poured around it or if concrete is poured after system installation. If the sill is to be cast in concrete, an expansion gap with appropriate compression or break material should be created next to the sill. If the concrete is going to be saw cut for the sill, self leveling concrete is recommended to create a smooth base for firm and even shimming. The concrete knock out or cutout for the sill should be  $\frac{1}{4}$ " deeper and  $\frac{1}{2}$ " wider than the sill. For a saw cut, the cut needs to be deeper to allow for self leveling concrete.

### 5. Metal Studs Surrounding Conditions:

NanaWall Systems should not be installed into metal studs alone. NanaWall Certified Installers have been instructed not to install the doors into steel studs without sufficient backing. The doors open, close, and slide. Our systems move in all 3 planes of direction and the fasteners will work loose over time. If steel stud construction is used there must be 3" of continuous wood backing. Two 2" x 6" screwed together and screwed to the studs, or laminations of thick good quality plywood to reach 3" total thickness. These steel studs must then be braced horizontally to the adjacent studs and at the top and bottom of the steel studs. There can be no movement in any direction.

Other Items to help make sure the rough opening is correct:

- A. Take photos of the openings and send them to the certified installer for review and comment. This can reduce any delays if modifications have to be made or answer any questions prior to you finishing opening.
- B. Whenever possible, arrange for a site consultation between the certified installer and the builder to aid in the preparation of a satisfactory opening.
- C. The surrounding floor should be level 36" outward from the centerline of the system on the side of the opening that the doors stack. If the floor is not level the doors may bind during operation. If the door has a single panel off of the jamb, consideration of swing clearances should be reviewed. The single door off the jamb can swing up to 180 degrees.

- D. NanaWall Systems do not have nailing flanges. They are meant to be installed within a frame prepared prior to the installation. Please keep this in mind while preparing for where the system will be placed.
  - E. NanaWall Systems require that they be properly flashed and waterproofed by others around the perimeter of the opening, especially at the sill. This should be completed prior to the installer arriving on site. At a minimum the jambs and head should be wrapped in Tyvek or Blue Skin and the sill should have ice and water shield or peel and stick membrane. This should extend a minimum of 4-6" up the jamb sides.
  - F. No drywall or finishes should be run between the system frame and structure for frame attachment. The doors should be anchored directly to the wood or steel and the finishes should be terminated to the NanaWall system frame.
  - G. The "in" and "out" location of the system varies on each project and is determined by the location of the sill. When a Low Profile Saddle Sill is used, the centerline of the sill is not the centerline of the door frame. It is up to the customer or General Contractor to determine exactly where the system is to be installed. Please keep in mind all of the previously listed info when determining where in the plane of the opening the system is to be placed.
  - H. Review the finish floor detail with the sill detail prior to starting the door installation. Remember each project is different and the interface between the finish floor and sill is CRITICAL to a successful installation.
  - I. If you are installing a screen, sufficient space needs to be between the screen and NanaWall units to allow clearance for any handles on the units. The screen must also clear the sill of the NanaWall unit. Please look at your drawings and review with your Sales Rep and installer for confirmation on proper screen centerline placement.
  - J.
- Please ask for the Job Site Preparations Checklist from your local Independent Certified Installer. Please complete the Job Site Preparations Checklist and return it to the Certified Installer prior to installation of the NanaWall System.