# 17 SHOWER DOOR DESIGN & CONSTRUCTION TIPS

Congratulations on your decision to update your bathroom with a frameless glass shower enclosure! Your new enclosure is sure to add beauty to your bath and value to your home. We know that any remodeling project can seem a bit daunting, so we've put together some pointers for making the planning process easier and ensuring the installation process goes as quickly and smoothly as possible. Before we even arrive at your home, our handy tips will help you:

- **Choose the best spot to install your new shower**
- **Pick the right layout for your new shower**
- **Ensure a watertight, properly installed shower**
- **Keep costs to a minimum**

Many of our tips are just good advice – if you have certain spacing or remodeling constraints, we may be able to work with you to find a solution. Just ask!

**TIP 01**

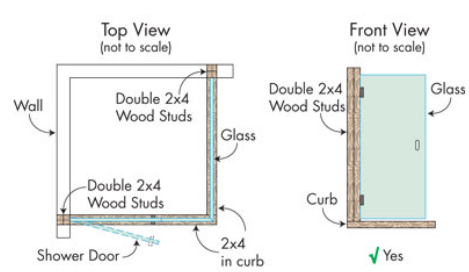
## Angles to Use

Plan for your shower to be built using 90°, 135°, or 180° angles. Most shower hardware is designed to accommodate these angles, so planning your shower with this in mind ensures a more cost-effective installation and a properly functioning enclosure.

**TIP 02**

## Support For Shower Doors & Hardware

Be sure the wall on which you would like to install a hinged shower door has proper studding behind it (double 2x4 is best, though single 2x4 is acceptable). Always provide wood studs or blocking where doors hinge or panels are anchored, especially when metal studs were used in the original construction of the wall.




**TIP 03**

## Shower Curb

**TIP 04**

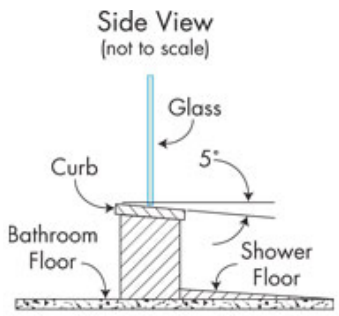
## Slope of Curb

Decide whether to install your shower enclosure on a curb or to have it flush with the floor. While eliminating the curb is beneficial when planning a handicap accessible shower enclosure, keep in mind that a properly constructed curb helps prevent water from leaking or pooling onto the bathroom floor.

Without Curb

With Curb

The curb or lip around the bottom of the shower should to be slanted inward at a 5-degree (approx. 3/16" to 1/4") "pitch" or slope so water flows in toward the drain. (A level curb would cause the water to stand, while a curb angled away from the drain would cause water to leak onto the bathroom floor.)

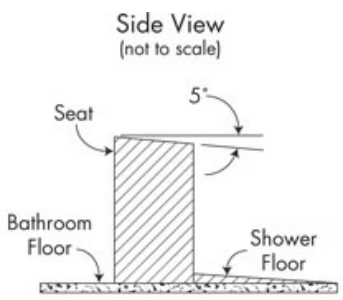



5° Curb Pitch

TIP 05

## Slope of Shower Seat

Design a built-in shower seat to slant toward the drain at a 5-degree (approx. 3/16" to 1/4") slope so water flows off the seat and into the drain. (Water will stand on a level seat or pool in a seat with a backward angle.)




5° Seat Pitch

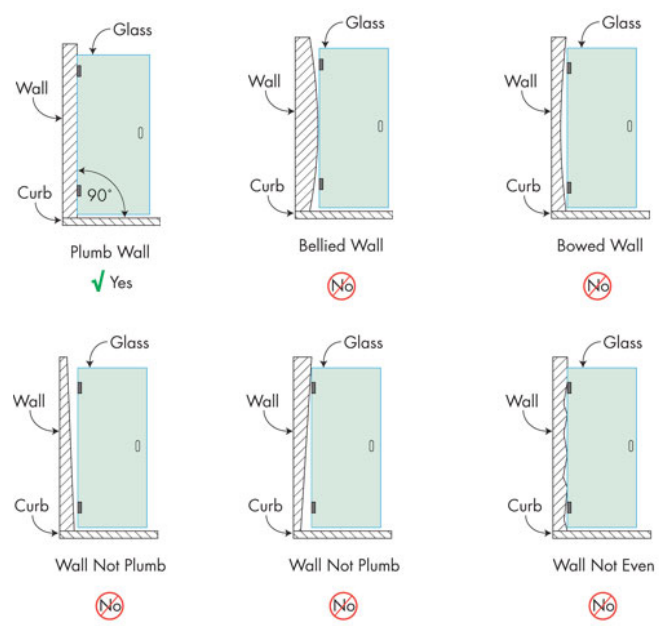
TIP 06

## Slope of Curb

Walls which meet a door or glass panel need to be completely vertical, or "plumb", in order to prevent gaps, uneven joints, and hinge "bind". This means the wall can't lean in any direction, or be "bowed" or "bellied". Any walls that are more than 1/4" out of plumb make it very difficult to install a shower properly because they cause unsightly gaps, are more likely to leak, and have a greater likelihood of hinge bind. We can work with walls that are less than 1/4" out of plumb.

When one of our technicians comes out measure your bathroom shower, he'll use a six-foot level to test your bathroom walls and floor (and ceiling for airtight enclosures).

About 75 percent of the homes we work in do not have perfectly straight walls, so this is a common problem that we're very good at handling. For less than 1/4" out of plumb walls, we will cut the glass so it will lie flush against your wall.



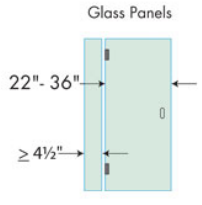

TIP 07

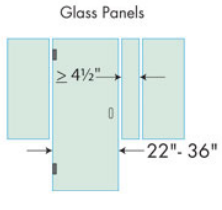
## Minimum Width of Glass Panel

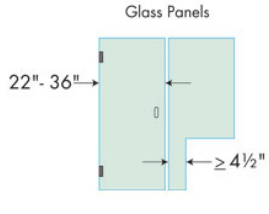
TIP 08

## Glass Tiles

When designing your shower enclosure, keep in mind that each glass panel needs to be at least 4 1/2" wide, which is the minimum width for tempering glass and supporting the hardware. Also, the door will need to be a minimum of 22" wide and no more than 36" wide.





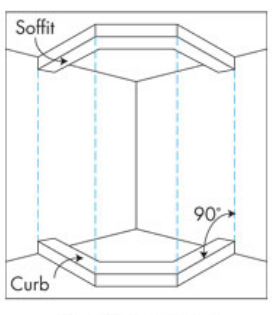


Drilling into glass tiles can cause breakage.



## Soffits

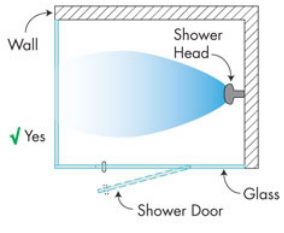
The "soffits" or eaves along the top of the shower enclosure must line up perfectly with the angles in the curb below in order to avoid an uneven look.



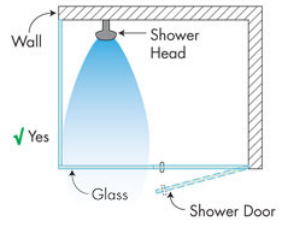

Soffit Alignment
(not to scale)

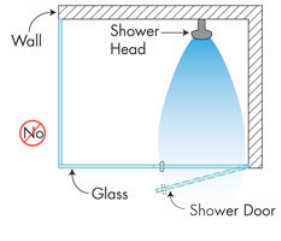
## Shower Head Position

To minimize leakage, position showerheads toward tiled walls or fixed panels. Showerheads should never be positioned opposite a door or other opening. (Exceptions may be made for smaller or low-flow showerheads or showerheads that point straight down at the floor.)



Leaks are minimized.

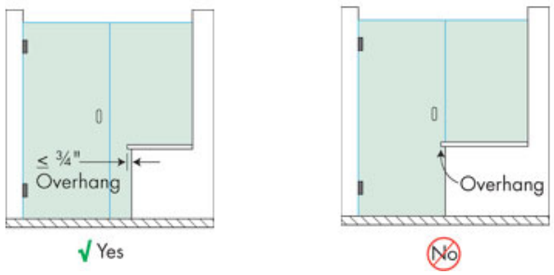


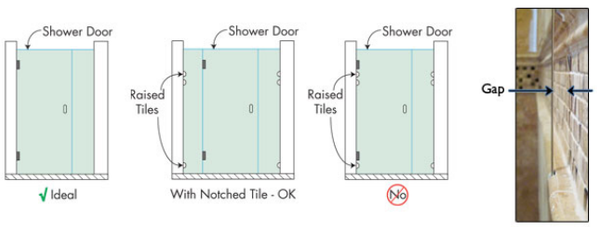
Greater chance of leakage

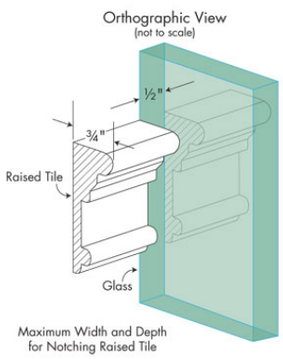
## Raised Tiles & Overhangs

Shower doors should be installed in such a way that nothing interferes with their movement and there are no gaps between the door and the wall. Environments that interfere with door movement are raised decorative tiles and overhanging tiles, and granite or marble slabs atop a shower seat or buttress wall. The tile or granite can be modified to allow for door operation, but a filler might need to be applied, negatively impacting the look of the finished product.




A better solution is to include a fixed panel in your design. That way, the door can align with the panel on one side, opening and closing properly with no interference. On the other side, the tile can be notched to allow the panel to line up flush against the wall.



Consult a tile professional.

## Curb Tops

Keep in mind that solid pieces of tile, marble or granite are best for the top of a curb. Tiled curb tops increase the likelihood of leakage and encourage the growth of mold or mildew because water collects in grout joints on horizontal tiles. The shower door seal functions best on a smooth surface.

Increased likelihood of mildew and mold growth.

Increased likelihood of leaks.

Ideal

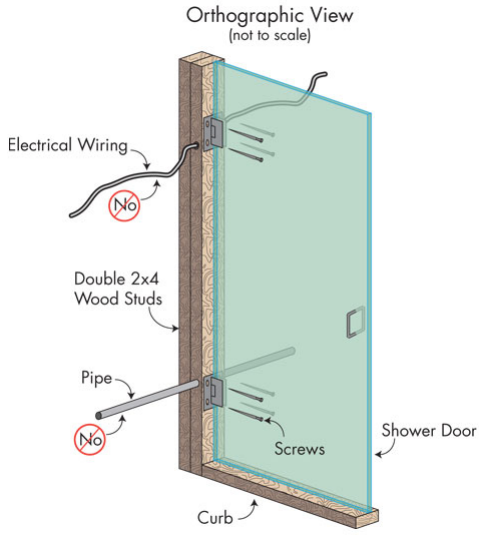
TIP 14

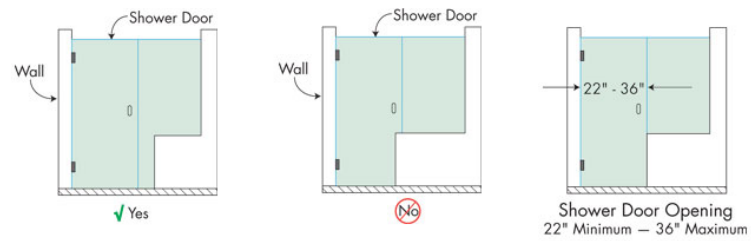
## Pipes & Wiring

Never run plumbing pipe or electrical wiring through walls or studs where an anchoring screw for the shower enclosure hardware might puncture it.

## Knee Walls

When designing an enclosure that has a buttress or "knee" wall, plan on including an in-line panel into your design. That way, you can modify the fixed panel to accommodate the buttress wall instead of trying to modify the door.



TIP 16

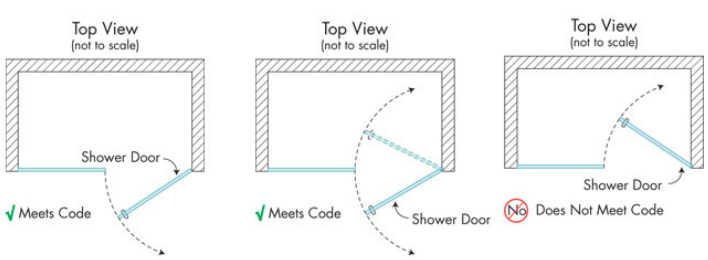
## Shower Door Swing

When planning your shower design, keep in mind that Building Code Requirement IRC P 2708.1 (2000 edition) states that all hinged shower doors must open outwards. Hinged shower doors that swing inwards only are not permitted by code.

There are reasons this code is in place. The shower enclosure must permit unobstructed access to a showering person in case of a fall.

However, your shower door can open in both directions, outward-opening and inward-swinging. You'll need about 30" of clearance space outside your shower to install a swinging shower door.

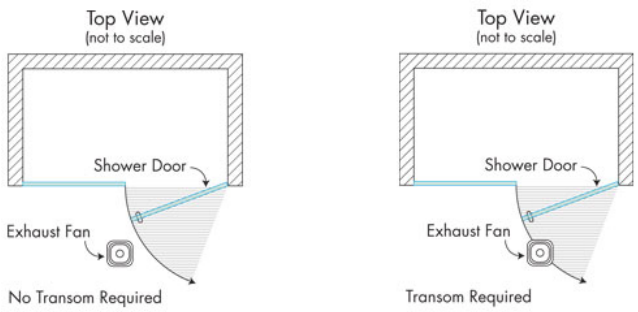
If your bathroom is not configured for a shower door, consider choosing a sliding shower door. Your other alternatives include double sliding doors, which come either semi-frameless or framed, and a shower screen which leaves ample clearance space in case of an emergency.



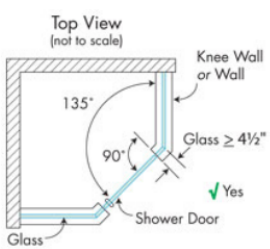
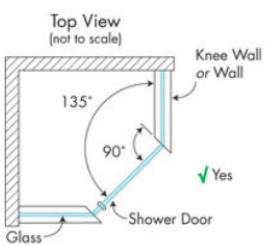
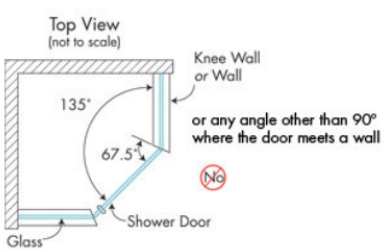
## Knee Walls

A glass transom is located above a frameless glass shower door. It can be fixed or movable. There are several reasons to use a glass transom:

Venting steam showers: Steam showers must run floor-to-ceiling for an airtight construction so steam can accumulate. Instead of bringing the door all the way to the ceiling, most steam showers are designed with movable transoms above the door. The glass transom then acts like a vent and can be tilted open to release hot steam or kept close to keep the steam in. You'll want to make sure you have a tile ceiling rather than drywall for this application.
Stabilizing tall floor-to-ceiling showers: Homeowners who want a floor-to-ceiling frameless shower may need a glass transom in their design. The need depends on ceiling height and weight limit of the shower door.
Installing pivot doors: Pivot doors that don't run floor-to-ceiling can mount to a header or a glass transom. Homeowners who would like to avoid the framed look of a header may find a solution by revising their design to incorporate a glass transom. We will help you get the best shower configuration for the look you want.
You'll want to make sure the door won't be hampered by anything installed on the ceiling when it swings open. If an exhaust fan, vent or light fixture is placed in the path of the swinging door, a transom may be required to give the door clearance.



## TIP 17

### Neo Angle Showers

If your neo angle shower enclosure includes a "knee" wall or wall, make sure that the shower door meets the structure at a 90 degree angle to accommodate the requirements of the hinges. This is not a restriction when glass meets glass at the 135 degree angle.