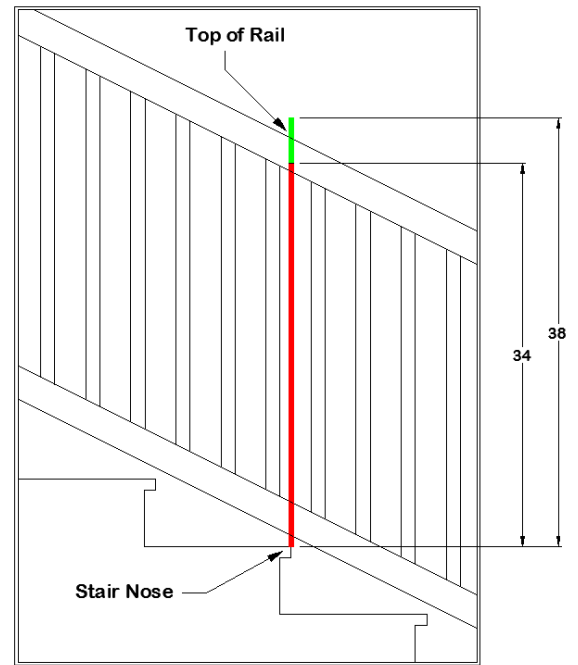


About Code Compliance

If you wish to ensure close alignment of sight lines between your top stair rail and top level rail, you may have to make some adjustments to either the stair or level rail. However, it is imperative that building code is met while considering these adjustments. Below is a brief explanation of the building code requirements which must be met during rail installation.

Overall Stair Rail Height

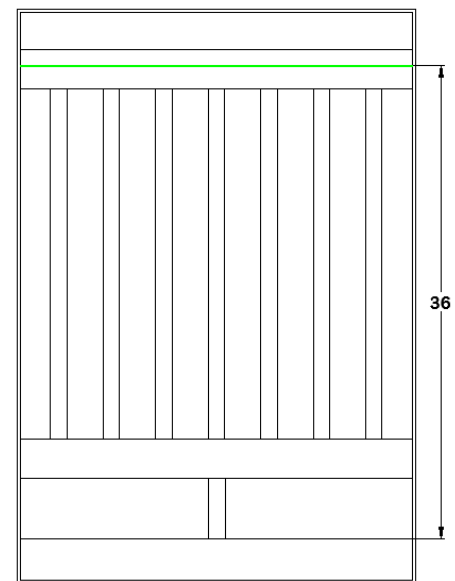
The overall height of your top stair rail – measured plumb from the stair nose – must fall between 34" and 38". This is illustrated to the right.



OVERALL HEIGHT OF STAIR RAIL MUST FALL BETWEEN 34" AND 38" AT STAIR NOSE

Overall Level Rail Height

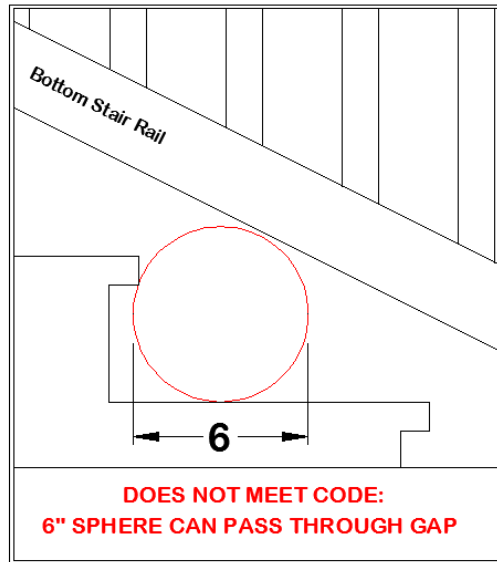
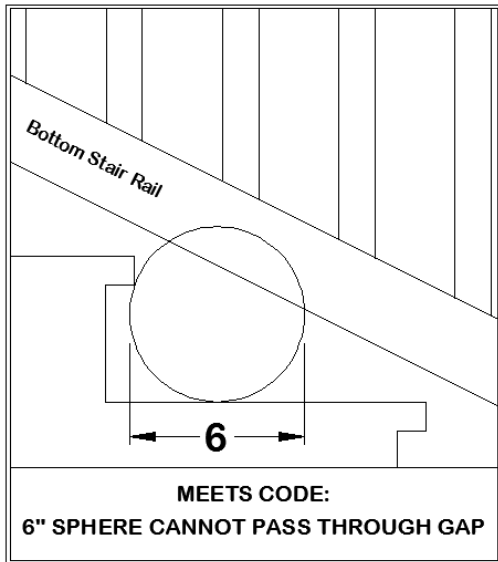
The overall height of your top level rail – measured from the deck or flooring – must meet a minimum of 36". This is illustrated to the right.



OVERALL HEIGHT OF LEVEL RAIL MUST MEET MINIMUM OF 36"

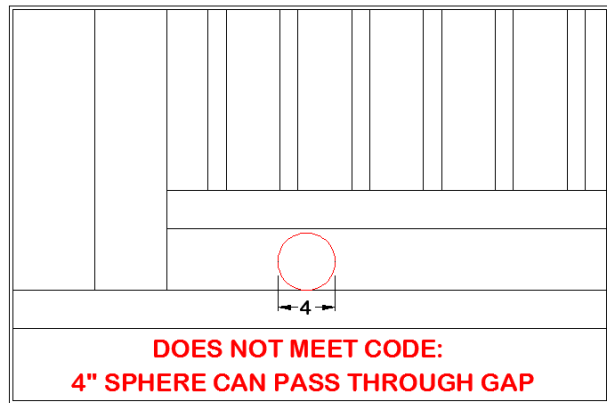
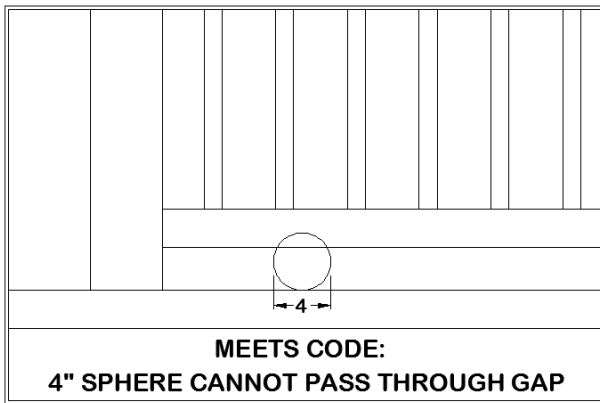
6" Sphere Rule

For all permissible stair tread depths and riser heights, a 6" diameter sphere **cannot** be allowed to pass freely between the bottom stair rail and the gap created by the stairs. This is illustrated below.



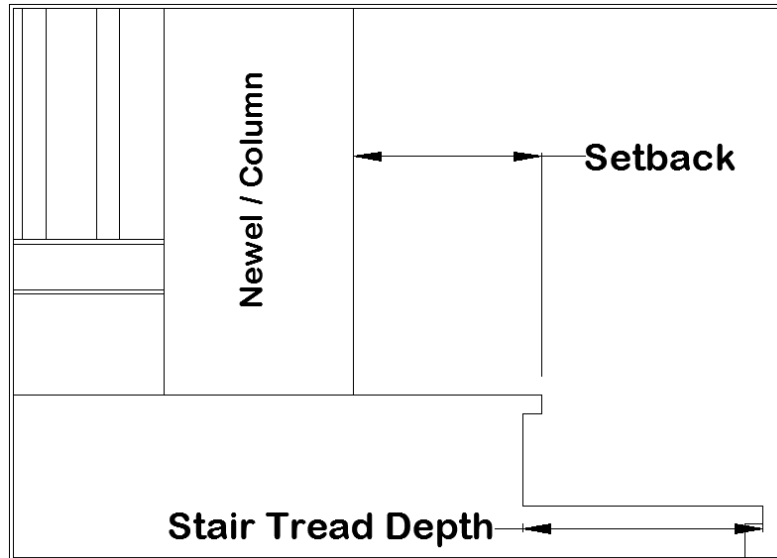
4" Sphere Rule

For all permissible level rail heights, a 4" diameter sphere **cannot** be allowed to pass freely between the bottom level rail and the deck or flooring. (All INTEX Rail Sets include crush blocks to allow for a maximum 4" space below the bottom rail.) This is illustrated below.



Adjusting Your Sight Lines

In order to achieve alignment of the stair and level rail sight lines, there are 2 pieces of information you will need. These are the stair tread depth and the stair rail finish setback (distance from the top stair nose to the newel, column or wall where the stair rail will terminate.) These are illustrated below.



Based on these dimensions, you can identify your particular scenario below to find helpful tips on making the sight lines match while maintaining building code compliance. **Please read these before getting started on your installation, as some scenarios will require cutting the level rail crush block to a specific length prior to installing any level or stair rail sections. Please note that the scenarios below accommodate for any permissible stair riser height from 4" to 7-3/4".**

For a 2" to 3" Setback:

For 11" to 12" tread depth, cut your level rail crush block to 3-5/8" length (or 3" if using Hampton level rail) prior to installation and raise the stair rail to meet the installed level rail sight line. In some cases, your stair rail sight line may need to fall slightly below your level rail sight line (by about 1/2" at most) in order to meet the 6" sphere rule.

For all other stair tread depths and riser heights, the trim-able kit must be purchased to achieve an exact match in sight lines. Be aware some tread depth / riser height combinations cannot meet the 6" sphere rule.

For a 4" to 5" Setback:

For an 11" tread depth, leave the crush block at 4-1/2" length (or cut to 3-7/8" if using Hampton level rail) and raise the height of the stair rail to meet the installed level rail sight line.

For a 12" tread depth, cut your crush block to 4" length (or 3-3/8" if using Hampton level rail) and raise the stair rail to meet the installed level rail sight line. In some variations your stair rail sight line may need to fall slightly below your level rail sight line in order to meet the 6" sphere rule.

For all other tread depths, sight line matching can be achieved by cutting crush blocks in some cases, but it is recommended to purchase a trim-able kit to account for all situations.

For a 6" Setback:

For an 11" to 12" tread depth, it is recommended to purchase a transition hardware kit to match the stair and level rail sight lines. In these situations, the stair rail height will overshoot the level rail height and will need a length of 2-4" of level rail to match the sight lines properly and maintain code compliance.

For a 13" tread depth, cut your crush block to 4.5" (or 3-7/8" if using Hampton level rail) and raise the stair rail to meet the installed level rail sight line.

For all other tread depths, cut your crush block to 3-5/8" (or 3" if using Hampton level rail) and raise the stair rail to meet the installed level rail sight line. In some cases, your stair rail sight line may need to fall slightly below your level rail sight line (by about 1/2" at most) in order to meet the 6" sphere rule.

For an 8" to 11" Setback

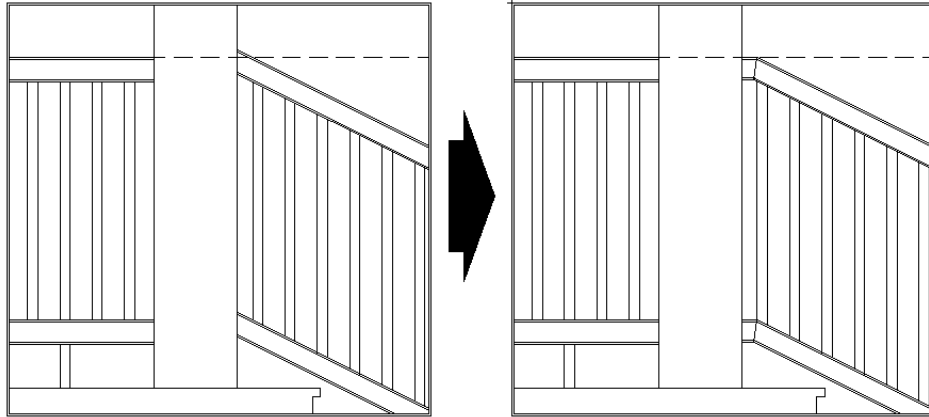
For setbacks greater than 6", it is recommended to purchase a full transition kit in order to match sight lines and meet all code requirements.

About Transition Kits

In some cases, the stair rail finish will overshoot the top level rail height and cannot be adjusted without failing building code. In these situations, a transition kit can be used to miter the stair rail to a short section of level rail, thereby matching the sight lines.

Transition Hardware Kit

In cases where only a short run of level rail would be required (2" to 3-1/2"), a Transition Hardware Kit can be purchased to effectively match sight lines. Please note that this kit includes transition hardware **only** and will need to be used in conjunction with some spare amounts of level rail.

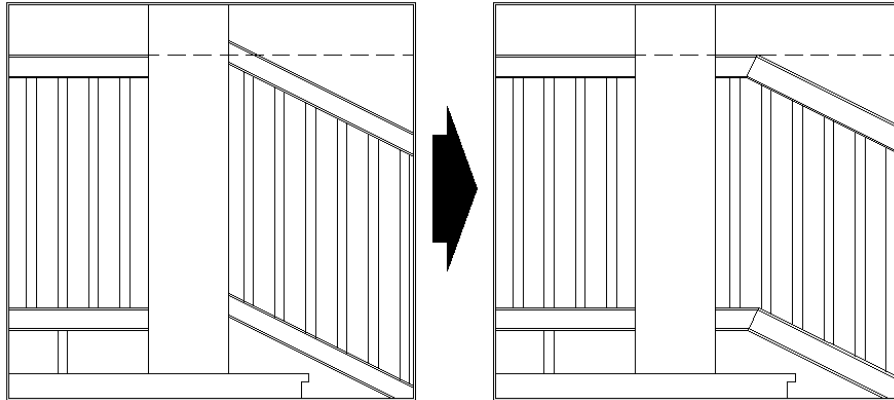


Transition Hardware Kit - For Short Runs

Part Number	Description
RS60STAIRTRANS	Liberty Series Stair Transition Hardware Kit. Includes Transition Hardware w/Screws and Straight Rail Hardware Only.

Full Transition Kit

In cases where a longer run of level rail would be required (4" to 11"), a Full Transition Kit can be purchased to effectively match sight lines. Depending on the length required, this kit can be trimmed and extra balusters utilized to adhere to code compliance and provide the appropriate aesthetic.



Full Transition Kit - Includes Balusters

Part Number	Description
RS60275STAIRTRANS	Liberty Series 2-3/4" Graspable Stair Transition Rail Kit. Includes 12" Rail, 2 Balusters, Reinforcements, Transition Hardware and Straight Rail Hardware
RS60350STAIRTRANS	Liberty Series 3-1/2" Stair Transition Rail Kit. Includes 12" Rail, 2 Balusters Reinforcements, Transition Hardware and Straight Rail Hardware