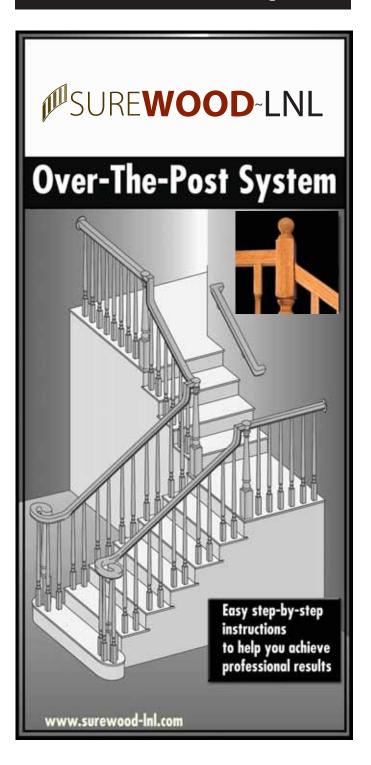
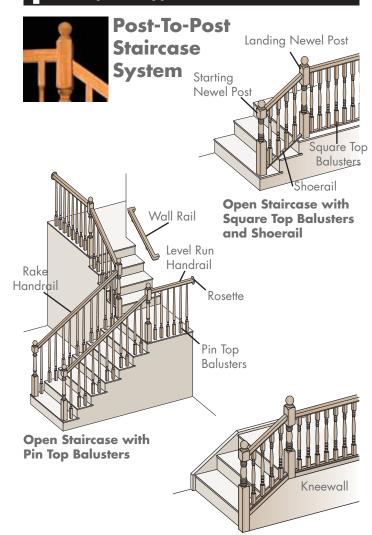
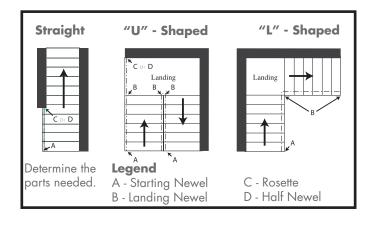
# How to build a staircase like a pro.



### Identify Your Type of Post-to-Post Staircase:



Closed Staircase with Square Top Balusters and Kneewall



#### **Selecting Your Parts:**

There are several styles and options for your treads, risers, balusters and newel posts. Below are the most common. Other items are available by special order. Check with your store representative.

#### Balusters, Newel Posts, Handrails, and Shoerails:

#### **Pin Top Baluster:**



6010-S

#### **Square Top Baluster:**







Solid handrail

6010-P 6050 Fillet 1-1/4" Plowed handrail

6045 Shoerail 1-1/4"

B



4015-BT Startina



Newel

59"





5205 Pin Top

3500-BT Sauare Baluster Top

Startina Newel Baluster

3500-BT54 3503-BT Landina Startina Newel Newel 48" 54" 54"

Treads and Risers:

Newel

54"

Tread

Startina

Newel

48"



8080 Tread Return Nosing



#### **Mounting Hardware:**



#### Wall Rails and Handrail Ends:







Round Rosette



D Half Newel:

For Wall Finishina Half newels available to match newel style.

#### Post-to-Post Staircase Parts Checklist:

Part number

Selected

Quantity

Needed

Check local building codes to ensure compliance.
All stair parts shown in this brochure are for interior use only.
<b>Treads</b> - Select one tread for each step.

Risers - Select one riser for each step. Select one more riser than treads per each staircase.

Landing Tread - Select sufficient lineal footage for the entire balcony and width of stairs at each landing.

Return Nosing - If stair is open on one side, select one tread return nosing per step. If two-sided, select two per step.

Starting Newel\* - Use at the bottom of the staircase.

Landing Newel\* - Use at the landing corner of an L-shaped stair and at the second floor landing.

Level Run Newel\* - If the balcony is 10 feet or longer, use a newel every 5 or 6 feet. Place a newel at every corner. The Landing Newel may be used, but be sure to match the top block with the newel used at the top of the stairway for consistency.

Rosette or Half Newel - Select either a rosette or half newel for each handrail connecting to a wall.

Newel Mounting Hardware (J-Anchor) - Select one newel mounting kit for each newel post mounted on top of a tread.

Rake Balusters\* - Select the 34" baluster for the front baluster on each tread and the 36" baluster for the back baluster on each tread. If using 3 balusters per tread, use the 36" baluster for the middle baluster on each tread.

Rake Balusters for Kneewall Staircase\* - Select the 34" baluster at a rate of 2 per tread. Standard placement is 4"on center. Check local building code for your area.

Level Run Balusters\* - Use the 36" baluster for all 36" height balconies and the 41" baluster for all 41" height balconies. Standard placement is 4"on center. Check local building code for your area.

Handrail - Buy 13" of handrail for each tread or step. Buy enough for all level runs.

Shoerail for Rake - Buy 13" of corresponding shoerail for each tread or step (shoerail or kneewall stairs only).

Shoerail for Balcony (optional) - Buy enough to cover all Level Runs.

Plugs -Select two wood plugs for every newel mounting using lag bolts. Select one plug for each handrail rail bolt used. Select one plug for every handrail or shoerail mounting using a lag bolt or wood screw.

#### \*Note:

These guidelines are for a rake handrail height of 36"-41". Longer newels and balusters may be required for a different handrail height.

## 4

#### **Tools Required:**

#### Operation:

#### Tools Needed:

Measuring and Leveling Metal measuring tape, hand levels, (torpedo and 4' level),

framing square

Cutting Miter box and saw (fine-tooth) hand or power circular saw or

standard hand saw

Nailing Hammer, nail set, 1/2" and 1" finishing nails

Gluing Carpenter's glue and construction adhesive

Screw Driving Screwdriver (manual or power), 3" wood screws

Drilling Hand drill, drill guide and 1/8", 1/4", 3/8", 5/8", 3/4", 1"

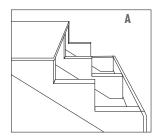
wood bits

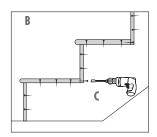
Finishing Sandpaper, steel wool, wood file, wood chisel, finishing stain,

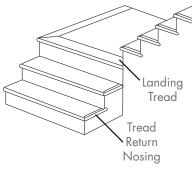
rags, tack cloth, etc.

## Getting Started - Tread and Riser Installation:

To properly install solid oak treads and risers, you must first remove the existing steps to expose the rough framing. Leave the beginning riser at base of steps (A). Measure and cut each step separately to ensure tight fit. (B). Pre-drill, apply construction adhesive and nail into place. For added strength, screw treads to risers from behind (C). Complete each step before continuing on to next step.

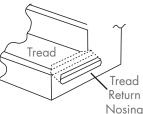






#### **Landing Tread**

Landing Tread can be used with 3/4"oak flooring along a landing when solid oak treads and risers are used. Landing tread can be used along a balcony with oak flooring. Properly cut miters and attach directly to sub floor.



## Tread Return Nosing Installation Cut and miter tread return nosing to fit.

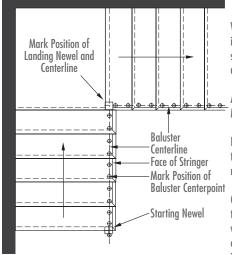
Cut and miter tread return nosing to tit Adds a finished look to the tread edge.



#### **Basic Layout and Newel Post Installation:**

## Marking Your Staircase for Installation

Layout your staircase directly on your treads and landings. Carefully mark Newel and Baluster positions and centerlines.



With newel in position where it is to be mounted, slide short end of framing square along slope of stairway.

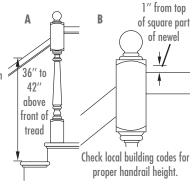
**Starting Newel Height** 

- A) Slide into post as shown. Make mark.
- B) Measure down 1" from top of newel square. Make mark.

C) The difference between the two marks "A" and "B" is what will be cut off bottom of newel. Proceed with newel installation.

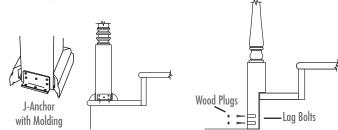
#### **Landing Newel Height**

- A) Height of the handrail should be between 36" and 42". Check local building codes.
- B) Place the top of the handrail one inch below the top block of the newel.

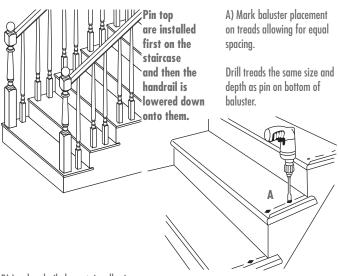


#### **Newel Post Attachment**

Trim and Fasten the Newel Posts

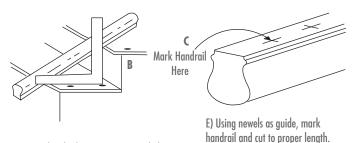


## **7** Attaching Handrail for Pin Top Balusters:



B) Lay handrail along stairs allowing extra length for proper fit to newels. Using framing square, transfer tread markings to side of handrail. Transfer markings to bottom center of handrail.

C) Locate baluster holes in solid handrail. Mark center of handrail

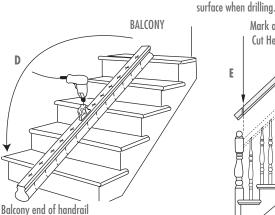


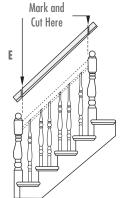
D) Rotate handrail 180 ° on stairs so balcony side of handrail is at base of stairs. Drill holes using 5/8" drill bit a minimum of 3/4"deep into handrail. Use drill guide set to proper angle

Follow instructions for attaching newels.

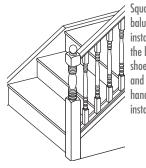
For balconies, follow same

procedures, keeping handrail on flat

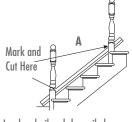




# 7b Attaching Handrail for Square Top Balusters:

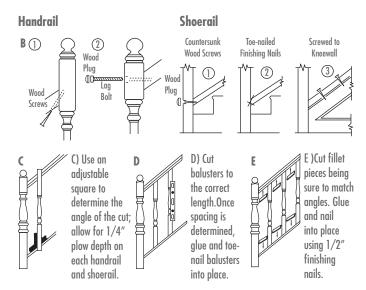


Square top balusters are installed after the bottom shoerail and plowed handrail are installed.



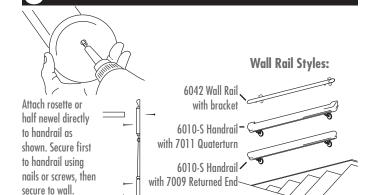
A) Lay handrail and shoerail along stairs, marking where they intersect with newels. Place rail on side and cut along marks.

B) Attach handrail using option #1 (3"wood screws) or option #2 (4-1/2" lag bolts through front of rail). Both options require pre-drilling a pilot hole. Attach shoerail using option #1 (3"wood screws), option #2 (toe-nailed finishing nails) or option #3 (screwed to kneewall).

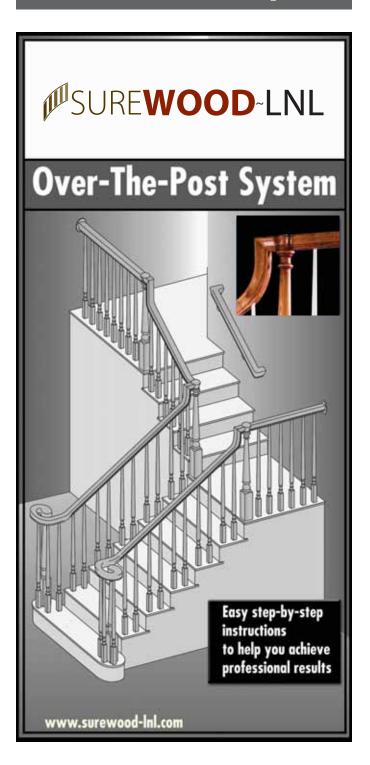


\*Most codes require 4"on center spacing, but you should check your local building codes.

Finish to Wall and Wall Rail Installation:

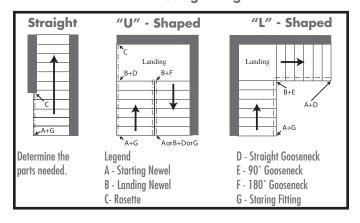


# How to build a staircase like a pro.



## **Identify Your Type of Over-The-Post Staircase: Over-The-Post Staircase System** Turnout Balusters Radius End Wall Rail Starting Step **Open Staircase with** Level Run **Turnout Starting Fitting** Handrail Rake Handrail Rosette Volute **Newel Post** Radius End Startina Startina Step Easing **Open Staircase with Volute Starting Fitting** Starting

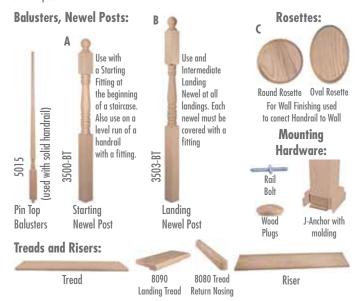
Open Staircase with Starting Easing Fitting



Newel Post

## **Selecting Your Parts:**

There are several styles and options for your treads, risers, balusters and newel posts. Below are the most common. Other items are available by special order. Check with your store representative.



#### Handrail, Ends and Wall Rails:





Returned End





Wall Rail





#### Choose Fitting Style:

With Cap











#### **Choose Gooseneck Style:**

With Cap D 7088 Straight Riser With Cap









7095 Hand 180 Riser

Each newel post must be covered with a fitting. The floor plans to the left illustrate the fitting components needed for each landing situation.

#### **Choose Starting Fitting:**

S-7035 Right Hand Volute S-7030 Left Hand Volute



S-7045 Right Hand Turnout S-7040 Left Hand Turnout

Cap



S-7010 Starting Easing

Use at the bottom of the stairway over the Starting Newel. Volutes and Turnouts are available left hand or right hand.

Non-Stock Fittings Available UPS Quick-Ship. See store personnel.

## Post-to-Post Staircase Parts Checklist:

Check local building codes to ensure compliance. All stair parts shown in this brochure are for interior use only. Treads - Select one tread for each step.

Part number Quantity Selected Needed

Risers - Select one riser for each step (except the starting step). Select one more riser than treads per each staircase.

Landing Tread - Select sufficient lineal footage for the entire balcony and width of stairs at each landing.

Return Nosing - If stair is open on one side, select one tread return nosing per step. If two-sided, select two per step.

Starting Fitting - Select either a Volute, Turnout, or Starting Easing.

Starting or Landing Newel\* - Use at the bottom of the stairway and at the second floor landing. If the balcony is 10 feet or longer, use the starting newel every 5 or 6 ft. Place a newel at every corner under a quarterturn.

Intermediate Landing Newel\* - Use at the intermediate landing corner of a U-or L-shaped stair.

Rosette - Select a rosette for each handrail connection into a wall.

Newel Mounting Hardware (J-Anchor) - Select one newel mounting kit for each newel post mounted on top of a tread.

**Balusters for Starting Fittings\*** - Each volute requires (6)1-1/4" x 41" balusters, or (4)1-1/4 or 1-3/4" x 41" balusters. Each turnout requires (2)1-1/4" x 41" balusters or (1)1-3/4" x 41" baluster. Each starting easing requires (1) 41" baluster.

Rake Balusters\* - Select the 34" baluster for the front baluster on each tread and the 36" baluster for the back baluster on each tread. If using 3 balusters per tread, use the 36" baluster for the middle baluster on each tread.

Level Run Balusters\* - Use the 36" baluster for all 36" height balconies and the 41" baluster for all 41" height balconies. Standard placement is 4" on center. Check local building code for your area.

Handrail - Buy 13" of handrail for each tread or step. Buy enough for all level runs.

Plugs - Select two wood plugs for every newel mounting using lag bolts. Select one plug for each handrail rail bolt used.

Handrail Mounting Hardware - Select one Rail Bolt Kit for each handrail-to-handrail connection required.

Gooseneck Fittings - Select the appropriate gooseneck fitting for each straight, U or L-shaped staircase newel.

\*Note: These guidelines are for a rake handrail height of 36"—41". Longer newels and balusters may be required for a different handrail height.

## 4

#### **Tools Required:**

#### Operation: Tools Needed:

Measuring and Leveling Metal measuring tape, hand levels, (torpedo and 4' level),

framing square

Cutting Miter box and saw (fine-tooth) hand or power circular saw or

standard hand saw

Nailing Hammer, nail set, 1" finishing nails

Gluing Carpenter's glue and construction adhesive

Screw Driving Screwdriver (manual or power), 3" wood screws

Drilling Hand drill, drill guide and 1/8", 1/4", 3/8", 5/8", 3/4", 1"

wood bits

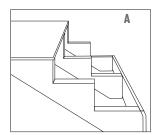
Finishing Sandpaper, steel wool, wood file, wood chisel, finishing stain,

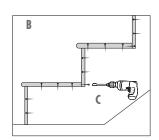
rags, tack cloth, etc.

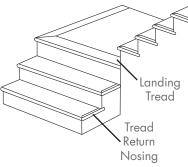
## 5

#### Getting Started - Tread and Riser Installation:

To properly install solid oak treads and risers, you must first remove the existing steps to expose the rough framing. Leave the beginning riser at base of steps (A). Measure and cut each step separately to ensure tight fit. (B). Pre-drill, apply construction adhesive and nail into place. For added strength, screw treads to risers from behind (C). Complete each step before continuing on to next step.

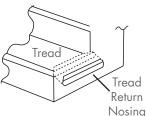






#### **Landing Tread**

Landing Tread can be used with 3/4"oak flooring along a landing when solid oak treads and risers are used. Landing tread can be used along a balcony with oak flooring. Properly cut miters and attach directly to sub floor.



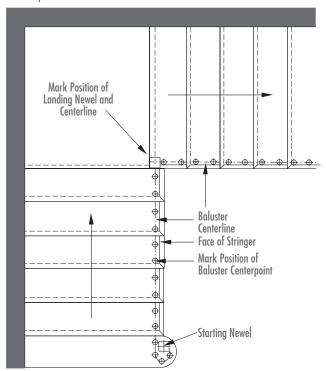
### Tread Return Nosing Installation

Cut and miter tread return nosing to fit. Adds a finished look to the tread edge.



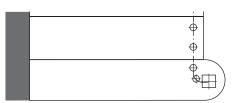
#### Marking Your Staircase for Installation

Layout your staircase directly on your treads and landings. Carefully mark Newel and Baluster positions and centerlines.

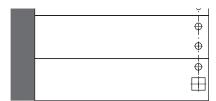


#### **Volute Starting Fitting Layout**

The balustrade centerline and newel centerpoints should be laid out. On a kneewall stair, the balustrade should be centered on the kneewall. On an open-tread stair, the centerline should be 1/2 of the baluster square in from the face of the stringer; i.e. 5/8" for a 1-1/4" baluster.

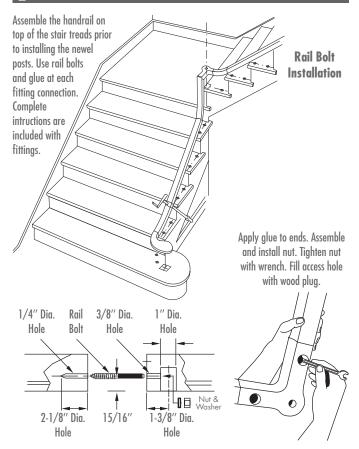


#### **Turnout Starting Fitting Layout**



Starting Easing Fitting Layout

#### **Assemble the Handrail:**



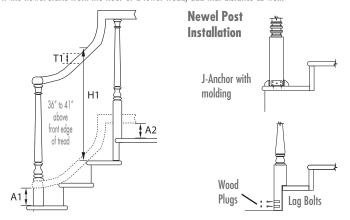
#### **Newel Post Installation:**

#### **Measure and Trim Newel Posts**

The rake rail height should be between 36"—42" (H1) (check local building codes). Center the assembled handrail over the newel locations. Measure the distance between the tread and the bottom of the handrail fitting (A1 and A2). Also measure the rake rail thickness (T1). Use the following formula to calculate the starting newel height.

#### H1 + A1 - T1 = Starting Newel Height

If the newel starts from the floor or a lower tread, add that distance as well.

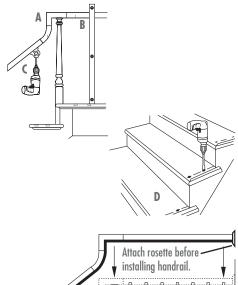


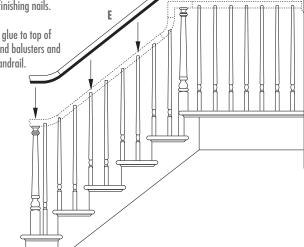
#### Installing the Balusters and Handrail:

- A) Temporarily position assembled handrail onto newels.
- B) Use level to mark the handrail with baluster centers.
- C) While handrail is on newels, drill baluster holeswith drill guide. Drill holes using 5/8" drill bit a minimum of 3/4" deep into handrail.









### Finish to Wall and Wall Rail Installation:

