

STONE LEGENDS®

301 Pleasant Drive * Dallas, TX 75217 * Voice: 800-398-1199 * Fax: 214-398-1293

www.stonelegends.com sales@stonelegends.com

Balustrade and Newel Pier Technical Information

CompanyInfo DocID 1826

Editor: Peggy Jones

Unit Component Parts

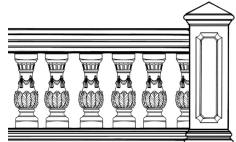
Unit Styles	Balustrade Parts															Newel Pier Parts																				
	Hand Rails					Base Rails				Balusters						Bases				Caps			Newels													
	Binell1	Binell2	Connelly1	Duran1	Extrados1	Ogle3	Chamfer1	Chamfer3	Cole1	Cove1	Verona1	Verona2	Belleville	Florentine	Jefferson	Kendal	Kinnard	Noble	Oakley	Otterwood1	Otterwood2	Otwell	Chamfer1	Chamfer3	Cole1	Cove1	Verona1	Verona2	Binell1	Connelly1	Duran1	Extrados1	Ogle1	Caprice	Carriage	Carol
Belleville					•		•						•										•												27.5"	
Florentine	•										•			•														•					33.25"			
Jefferson			•							•					•											•				•					27.5"	
Kendal			•							•						•									•				•						32"	
Kinnard			•							•							•								•				•						38"	
Noble		•										•						•										•		•				32"		
Oakley						•		•											•					•									•		32"	
Otterwood1					•		•													•			•									•			27.5"	
Otterwood2					•		•														•		•									•			32"	
Otwell Duran				•					•													•		•		•					•					31"

Unit drawings for reference to chart.

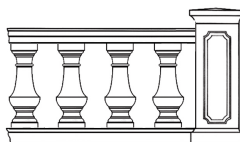
(Drawings are not to scale)



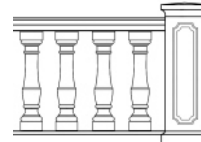
Belleville Balustrade
with Carriage Newel Pier



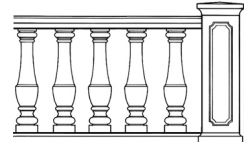
Florentine Balustrade
with Caprice Newel Pier



Jefferson Balustrade
with Carriage Newel Pier



Kendal Balustrade
with Carriage Newel Pier



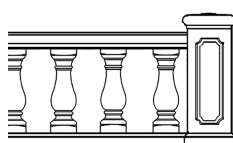
Kinnard Balustrade
with Carriage Newel Pier



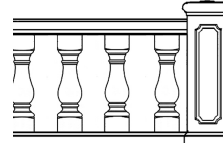
Noble Balustrade
with Caprice Newel Pier



Oakley Balustrade
with Carriage Newel Pier



Otterwood1 Balustrade
with Carriage Newel Pier



Otterwood2 Balustrade
with Carriage Newel Pier



Otwell Duran Balustrade
with Carol Newel Pier

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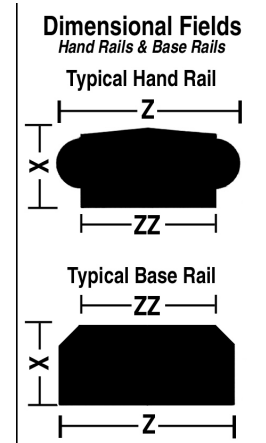
Balustrade Profiles

Listed by Parts

The following pages illustrate dimensional information, including weight, and cost factors for individual parts. You would need this information to order parts for customizing a standard unit for a particular situation, or to mix and match pieces to suit your design. Also noted in the table are the baluster spacing requirements to meet 4" and 6" ball codes.

To order pieces, determine the profiles and sizes desired. Refer to the Generic Parts Code to specify the part required, i.e. straight, finished end, cope radius, etc.

Important Note: In using these lists, please pay special attention to the ZZ, or setting bed, dimension of the base and hand rails in relation to the ZZ dimension of the balusters. Use the drawing at right to determine the setting bed or ZZ of each hand and base rail. The baluster must be the same size or smaller than the rails at the setting bed for proper fit and construction. To determine the finished overall heights of mixed parts, add 1 1/8" total for mortar joints between stones. For balusters with lugs, add 7 inches to charted dimension.



Hand Rails

Profiles and samples of straight rail

Binelli

Available in two sizes. See chart.



Binelli
Hand Rail

Connelly



Connelly
Hand Rail

Duran



Duran
Hand Rail

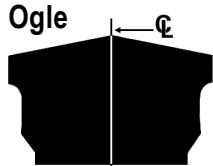
Extrados

Available in two sizes. See chart.



Extrados
Hand Rail

Ogle



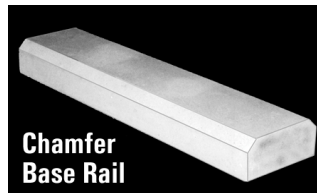
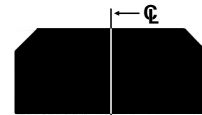
Ogle
Hand Rail

Base Rails

Profiles and samples of straight rail

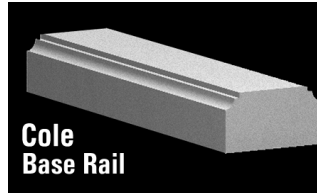
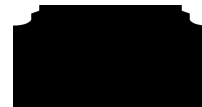
Chamfer

Available in two sizes. See Chart



Chamfer
Base Rail

Cole



Cole
Base Rail

Cove

Available in two sizes. See chart.



Cove
Base Rail

Verona

Available in two sizes. See chart.



Verona
Base Rail

Stock radii are noted to center line of base rail (typical)

Stock radii are noted to center line of hand rail (typical)

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Balustrade Components Dimensional Table (listed by profile)

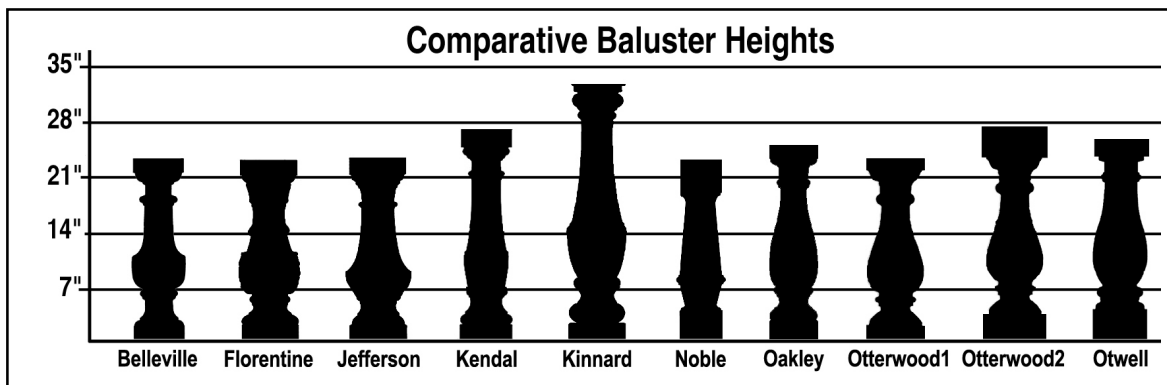
Dimensions	Hand Rails							Base Rails						Balusters									
	Binelli1	Binelli2	Connelly1	Duran1	Extrados1	Extrados2	Ogle3	Chamfer1	Chamfer3	Cole1	Cove1	Verona1	Verona2	Belleville	Florentine	Jefferson	Kendal	Kinnard	Noble	Oakley	Otterwood1	Otterwood2	Otwell
X "	9	7 1/4	4	4	4	3	4 1/2	4	5 1/8	5 1/2	4	5 3/4	4 5/8	7 1/8	7 1/2	8	5 1/2	7 1/2	6	6 1/16	6 3/4	6 3/4	6
Y Typical "	all 36							all 36						23 1/2	23	23	26 7/8	33 1/4	23	24 1/2	23	27 1/2	25 3/8
Z "	11 3/4	8 1/2	10 1/2	9	9 1/2	6 3/4	8 7/8	9	7 1/2	10	7 1/2	11	8 1/4	7 1/8	7 1/2	8 1/8	5 1/2	7 1/2	6	6 1/16	6 3/4	6 3/4	6
ZZ "	7	5	7 1/2	7 1/2	7	5	7	7	6	7 1/8	9 1/2	7	5	6 3/4	7	7	6 1/2	7	5	6	7	7	6
Wt/piece #	170	98	96	87	93	48	88	96	95	147	102	140	80	52	58	62	48	73	43	49	50	80	48
Cost Factor/lb	1050	817	600	500	550	400	525	450	440	750	500	900	733	2295	4650	2550	3100	3100	2850	2280	2250	2450	2290
Baluster spacing on center to meet 4" Ball Code requirement (in inches)	See page 5.													7 1/2	7 1/2	N/A	7 1/2	7 3/4	7 1/4	7 1/4	7 1/2	7 1/2	7 1/4
Baluster spacing on center to meet 6" Ball Code requirement (in inches)	See page 5.													9 1/2	9 1/2	9 3/4	9 3/8	9 3/4	9 1/4	9 1/4	9 1/2	9 1/2	9 1/4

Stock Radii Available (to centerline) (\$500 setup for custom radii)

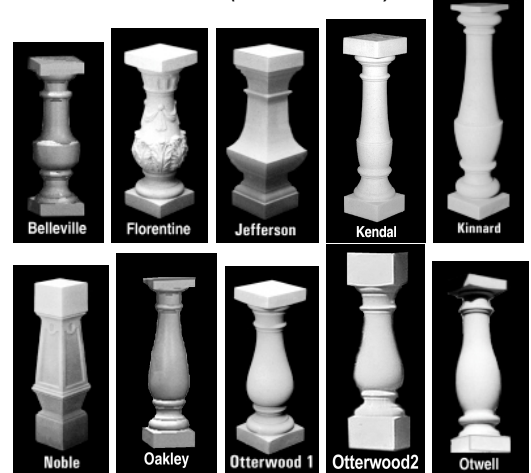
3 ft (36")		•	•	•				•			•		•
4 ft (48")		•	•	•				•			•		•
5 ft (60")				•				•					
6 ft (72")				•				•					
9 ft (108")				•				•					
10 ft (120")		•	•	•				•			•		•
12 ft (144")				•				•					
14 ft (168")				•				•					
16 ft (192")				•				•					
20 ft (240")		•	•	•				•			•		•

Notes: Balusters with lugs: add CF of 500 to the Cost Factors noted above. Optional half balusters may be purchased separately for the same cost as the standard baluster. Weights and sizes are divided by two. The X and Z dimensions are the maximum width across the main body of a baluster. The ZZ dimension is the maximum size top and bottom for matching up to hand and base rail ZZ dimensions when customizing.

Below is a proportional chart designed to help visualize the size of the balusters. All balusters are square top and bottom.



Baluster Photos (Not to same scale)



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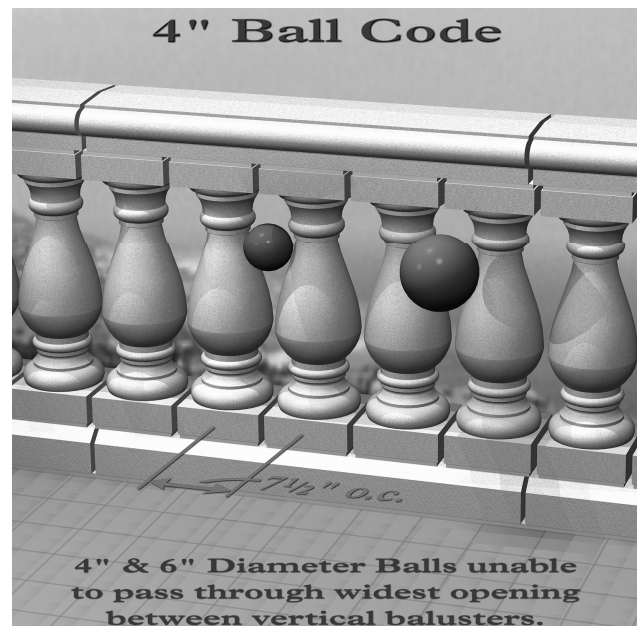
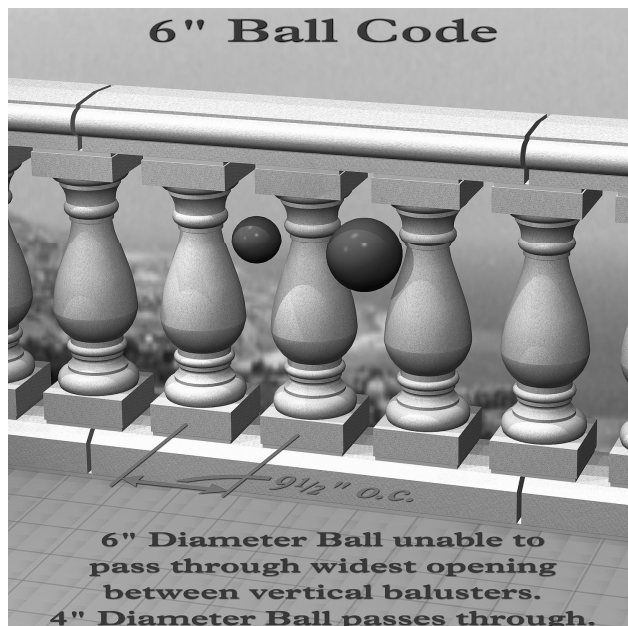
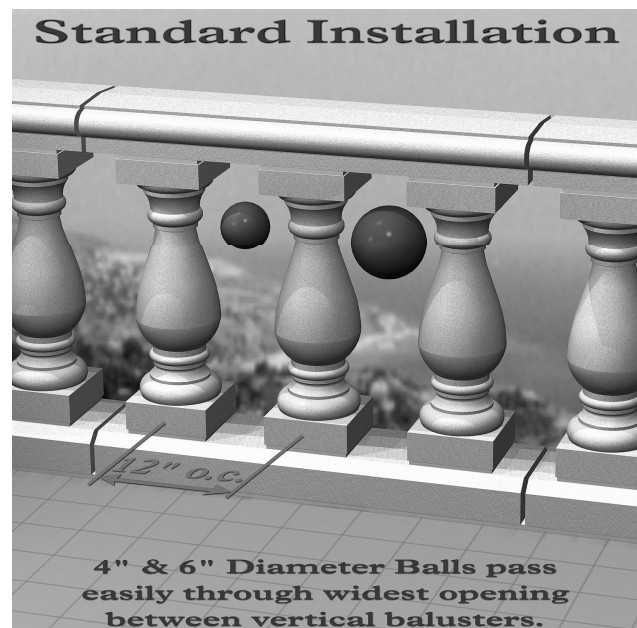
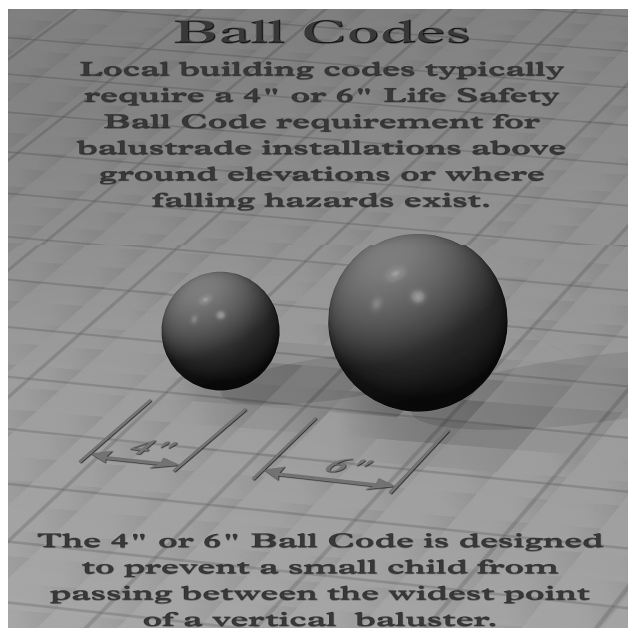
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What is a Ball Code?

The 4" or 6" delineator refers to the "maximum diameter" of a hypothetical ball that could be used to measure the maximum gap between balusters. A ball is used in order to mimic the size of a small child's head. Theoretically, if a child's head can pass through the opening a chance that a child's body can pass through also exists. Therefore, a falling hazard exists. If a ball will not fit through the widest gap then a small child's head should not be able to fit through the gap either. Though a falling hazard does not exist, it is recommended to use a Ball Code installation around pool areas where drowning hazards exist.

Below is a pictorial representation of the two primary ball codes: 4" and 6", compared with Stone Legends standard spacing of 12" on center. The balustrade unit chosen for the illustrations is Otterwood1. The actual spacing to meet ball code requirements for each unit is shown in the table on page 4.

Stone Legends is not responsible for installation of any kind and will not determine baluster spacing for you. Check local building codes for all Ball Code requirements pertaining to your specific installations.



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Newel Pier Parts

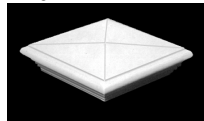
Standard Newel Piers project above the balustrade hand rail and are typically 12" square. Choose 360°, 270°, 180°, or 90° Newel Piers, as required by your design. Optional Pass Through Newel Piers are shorter than the standard piers (the same height as the baluster), but still 12" square. The hand rail aligns with the top of the newel cap, see photo on page 6. In Line Newel Piers are the same height as the balusters and the same zz width as the hand and base rails. The hand and base rails continue above and below the In Line Newel instead of using a separate cap and base. See page 6.

Newel Cap Profiles

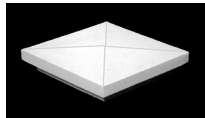
Cap photos show 360° parts.

Binelli

Not available as pass-through



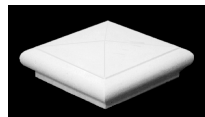
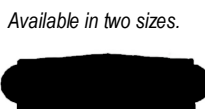
Connelly



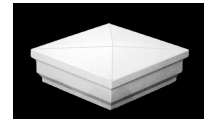
Duran



Extrados



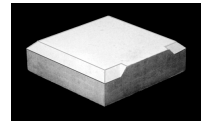
Ogle



Newel Base Profiles

Base photos show 270° Finished Ends.

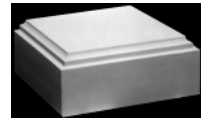
Chamfer



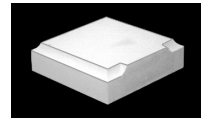
Available in two sizes



Cole



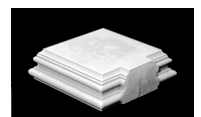
Cove



Available in two sizes



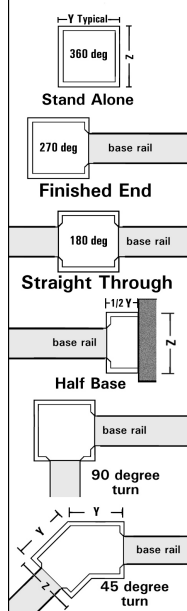
Verona



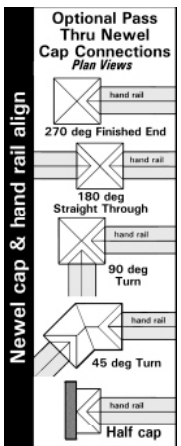
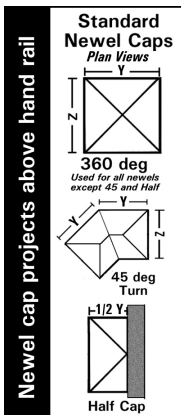
Available in two sizes.



Standard Base Connections



Base Connections—Standard & Pass Thru Newels



Component Dimensional Table

	Standard										Optional				
	Caps					Bases					Pass-Through Caps				
Dimensions	Binelli1	Connelly1	Duran1	Extrados1	Extrados2	Ogle1	Chamfer1	Chamfer3	Cole1	Cove1	Cove2	Verona1	Verona2	Connelly1	Duran1
Y & Z "	15 1/2	15	14	14 1/2	13 3/4	14	14	13 1/2	15	14	13 1/2	16	15 1/4	15	14
X "	7	4 1/2	4 1/4	4 1/2	3 1/2	5 1/2	4	5 1/8	5 1/2	4	4 7/8	5 3/4	4 5/8	4 1/2	4 1/4
ZZ "	12	12	11 1/2	12	12	12	12	12	11 1/2	12	12	12	12	12	11 1/2
Wt/piece # (360, 270, 180, 90)	85	60	50	60	46	74	65	69	93	65	68	95	80	60	50
Wt/piece # (45)	155	107	88	107	85	125	104	111	158	104	110	160	128	107	88
Wt/piece # (half)	45	30	25	30	23	37	33	35	47	33	34	48	40	30	25
CF/piece (Std. connections)	2750	1650	1500	1500	1500	1600	2500	2500	1600	2500	2500	3700	3400	3000	2700
CF/piece (45 only)	4700	2650	2625	2350	2350	2650	4400	4400	2650	4400	4400	5700	5400	5250	4700

See page 6 for photo.

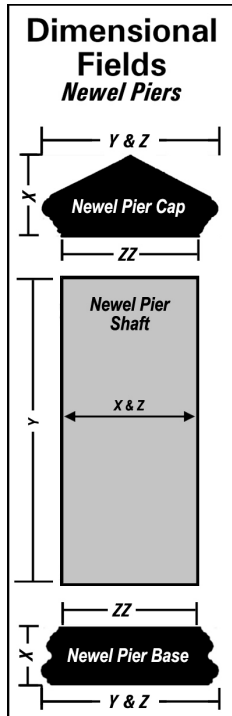
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Standard Newels

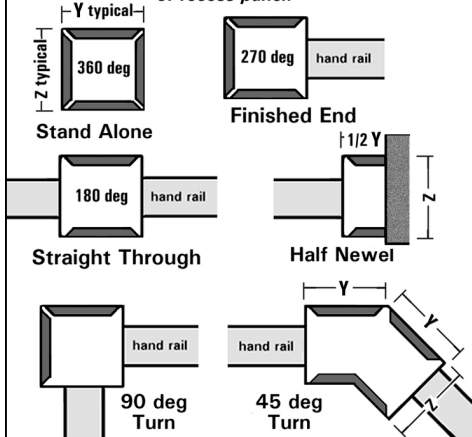
Below are our three standard newel pier profiles shown with different caps and bases. All standard newels are 12" x 12". Only the heights vary to complement the Balustrade style. Therefore, any cap or base may be used with any newel, making customizing easy. All parts can be sold separately. Locations: We suggest locating Newel Piers at all corners, top and bottoms of stairs, end of railings such as openings or against the structure, and at 15-20 feet on center for long straight runs.



Use the drawing above of dimensional fields to determine the part sizes when designing your customized newel piers. All required dimensions are available on the various parts in the tables on the previous page and at right.

Standard Newel Connections

Shaded areas indicate location of recess panel.

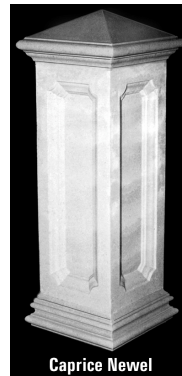


Standard Newel Pricing

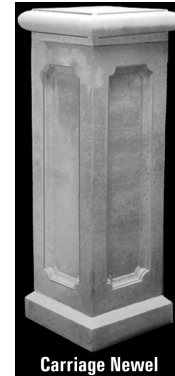
All Profiles

Ht (Y)	12" x 12"		45°	
	CF/ea.	Wt/ea.	CF/ea.	Wt/ea.
18"	6050	195	7865	342
23"	8250	250	10,725	438
25 1/2"	9300	280	12,090	490
26 7/8"	10,100	290	13,130	508
27 1/2"	10,200	295	13,260	517
32"	12,150	345	15,795	604
33 1/4"	12,550	360	16,315	630
38"	13,950	410	18,135	718

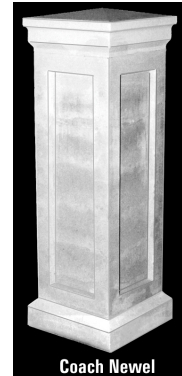
All three Profiles are available in the heights shown for the same price. Remember to specify 360°, 270°, 180°, 90°, 45° or half to determine the locations of the recessed panels.



Caprice Newel



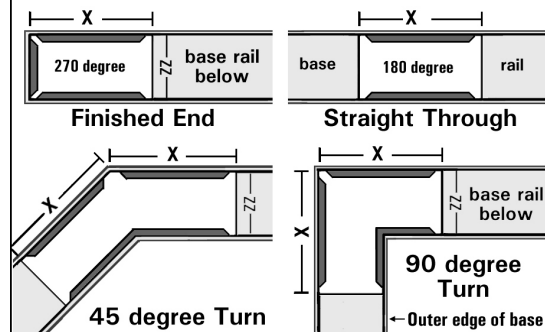
Carriage Newel



Coach Newel

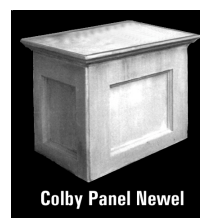
Custom In-Line Newel Configurations

Shaded areas indicate location of recess panel



Custom Newel Options

Standard newel parts can be combined in many ways to achieve different looks. And, Stone Legends offers custom newels to meet your exacting specifications. Colby Panel Newels, left, consist of panel veneers made to any size required. The panels are attached to your substructure to make the newel pier. The corners are mitered. Priced according to your specifications. Other profiles are available.



Colby Panel Newel

For In-Line Newels, above, the newel height must be equal to the baluster height. The depth (or ZZ) must match the "ZZ" of the hand and base rails. In-Line Newels will be priced according to size.



An Optional Pass-Through Newel Pier is shown in the photo at left. For a pass-through system, the height of the newel must be equal to the height of the chosen baluster, but the newel is still 12" x 12". This option requires a special pass-through newel cap, shown on page 5. Prices for each height of newel are noted above right. Any style newel may be used.