

Utilizing Renaissance® Masonry Units in Curved Walls

Occasionally, architectural designs will incorporate walls that are "curved" or "radiused". These curved walls can include Renaissance® Masonry Units economically, with some minor considerations.

When straight stone units are set in a curved wall, there will always be some amount of projection or overhang between the courses of stone. Generally, approximately $\frac{1}{4}$ " of projection is not objectionable; however, the actual amount of projection allowable is a decision that should be left to the designer.

The amount of projection is determined by the following formula.

$$P = \frac{L^2}{(96 \times R)}$$

Where P is the amount of projection in inches

L is the stone unit length in inches; and

R is the radius of the wall in feet.

From the above formula you can see that the larger the radius of the wall, the smaller the projection. Also, shorter stone lengths will yield smaller projections.

It is possible to cut full length units into shorter lengths in order to accommodate a specified radius.

For example:

For a 12 ft. radius wall and an allowable projection of $\frac{1}{8}$ ", what length of stone should be considered?

Using the formula from above:

$$P = \frac{L^2}{(96 \times R)}$$

Therefore:

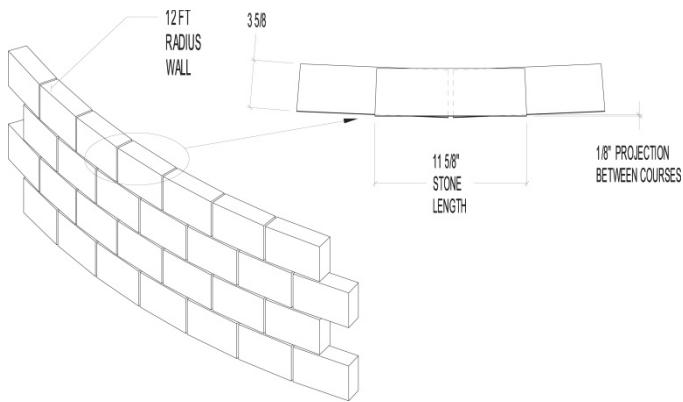
$$\frac{1}{8} = \frac{L^2}{(96 \times 12)}$$

Solve for L:

$$L^2 = 144$$

$$L = 12"$$

Thus it would be necessary to cut the units into 12" lengths to keep the projection at $\frac{1}{8}$ ". This result is depicted here:



Notes:

- Full length units (24 inch nominal) can be used for any radius greater than 24 feet presuming a $\frac{1}{4}$ inch projection is acceptable;
- The projection in the masonry wall is less noticeable with rocked texture units compared to sandblasted or dressed finish units;
- Where budget considerations allow, and for column conditions (i.e. very small radii), the face of the Renaissance® Masonry Units can be "curved" to a specified radius rather than using shorter stones.

Consult with the Technical Services Department of Arriscraft for additional assistance.