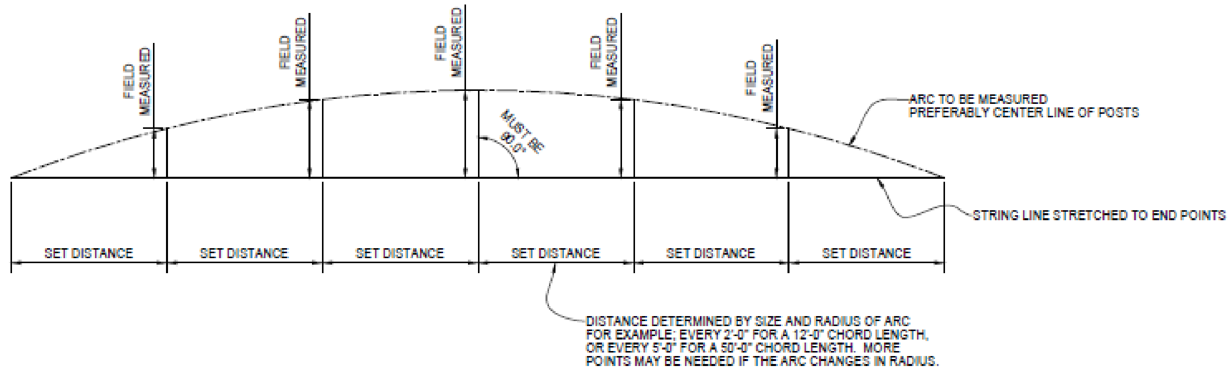
Field Dimensions for arcs and radii

Taking field dimensions for arcs and radii can be accomplished by two processes.

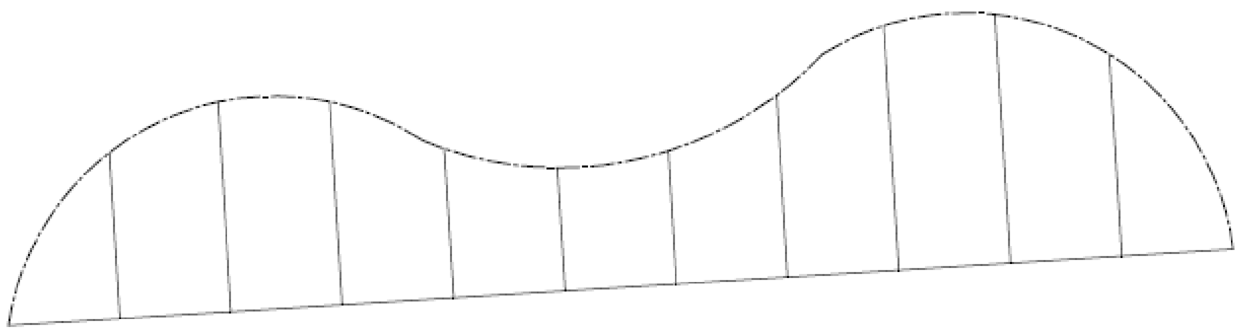
1. The first process is for small verifications where you can use cardboard or a roll of cardboard to trace the radius. Unfortunately, at some point someone may have to interrupt the traced arc to place into CAD. However, many fabricators have simply used these tracing as their template to build from.
2. The second process is for larger verifications or if you are planning to plug this information into CAD. It involves a series of steps but the premise is simple. It is based on establishing a baseline and pulling interval dimensions from this baseline to outline the arc or radii. The critical consideration is where to pull those interval dimensions. Whenever there is a change in the arc, you must pull several dimensions from both sides of the point of change. The more interval dimensions, the more accurate your as-built.

Below are the steps for completing this arc field verification.

1. Taking field dimensions for a radius or an arc will require a tape measure, a string line (and stakes), a framing square, and usually at least two people.
2. Stretch a string line between the two endpoints of the arc(s). This is called the chord.
3. Measure and record the chord length.
4. Determine the spacing along the chord from which you will be pulling interval dimensions. If needed, these intervals can be marked on the string with a marker or flagging tape.
5. If more than one arc or a change in the arc, identify the intercepting point of the change in arc(s) and take an interval dimension. Make sure you note this as the change in arc on your as-built.
6. At each interval dimension, measure the distance from the string to the arc using the square to make sure that the measurement is perpendicular to the sting.
7. The more interval dimensions, the more accurate your as-built.
8. Record all this information on your as-built. Be sure to include.
    a. Chord length
    b. Length between interval dimensions using coordinate dimensions
    c. Length of each interval
9. Below are some examples of a single arc and multiple arc as-builts.



ARC / RADIUS FIELD DIMENSIONS



CHANGING OR MULTIPLE RADII

SAME IDEA AS A SINGLE ARC, WE HAVE FOUND THAT IT IS BETTER TO USE ONE LONG STRING INSTEAD OF TRYING TO BREAK IT INTO INDIVIDUAL ARCS.