Attachment 7 – Arc Flash Boundary

The Flash Boundary is the distance at which the incident energy equals 1.2 cal/cm2.

The preferred method for determining the arc flash boundary is by referring to the arc flash warning label on the equipment to be serviced. For systems where the arc flash hazard analysis has not been completed, Tables 130.7(C)(a) and 130.7(C)(b) may be used. Under engineering supervision, the Flash Protection Boundary shall alternatively be permitted to be calculated in accordance with the following general formula:

$Dc = [2.65 \times MVA_{bf} \times t]^{1/2}$

or

$Dc = [53 \times MVA \times t]^{1/2}$

Where:

Dc = distance in feet from an arc source for a second-degree burn
MVA_{bf} = bolted fault capacity available at point involved (in mega volt – amps)
MVA = capacity rating of transformer (mega volt-amps). For transformers with MVA ratings below 0.75 MVA, multiply the transformer MVA rating by 1.25
t = time of arc exposure (in seconds)

NOTES:
From NFPA70E (2012) Section 130.5 and Informative Annex D.