

Basic Accident Prediction Formula and Calculation

Source: Railroad Highway Grade Crossing Handbook - Revised Second Edition, 2007

Formula

$$a = K * EI * MT * DT * HP * MS * HT * HL$$

where:

a = collisions per year

K = formula constant

EI = factor for exposure index

MT = factor for number of main tracks

DT = factor for number of trains in daylight

HP = factor for paved highway

MS = factor for maximum speed

HT = factor for highway type

HL = factor for number of highway lanes

Barnhart Road:

$$a = 0.002268 * 17.93 * 1.23 * 1.78 * 1.00 * 1.47 * 0.82 * 1.0 = \underline{\underline{0.1073}}$$

N Stevens Road:

$$a = 0.002268 * 16.21 * 1.23 * 1.78 * 0.54 * 1.47 * 0.82 * 1.0 = \underline{\underline{0.0524}}$$