# High Resolution Motion Detection means further distances, wider field of view, and slower and smaller moving targets.

## 1/3 " Chip

## Field Of View (ft)

$$W = \frac{D \times 4.89}{FL}$$

## Pixel Width (in)

$$PW = \frac{D \times 58.68}{FL \times RES}$$

= Minimum Size of Object

## Velocity Requirement (in/sec)

$$V = \frac{D \times UR \times 58.68}{FL \times RES}$$

= Minimum Speed of Object

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**W** = Width (field of view) in feet.
**D** = Distance from camera in feet.
**FL** = Focal Length of lens in mm.
**PW** = Pixel Width in inches.
**RES** = Resolution (# pixels horizontal).
**UR** = Update Rate in Frames per Second.
**V** = Velocity of object in Inches per Second.

**Typical Chip Formats:**

1/3"  1/2"  2/3"

**Typical Lenses (mm Focal Length):**

2.8  3.7  4  4.2  6  8  12  16  25  35  50  75  100