**Crashes**

Functions:

* Fiveplus
  + Input
    - Unsignalized nodes
  + Function
    - Find nodes with at least 5 crashes in latest 3 years.
  + Output
    - Subset of unsignalized nodes
* too\_long
  + Input
    - Unsignalized nodes
  + Function
    - Find nodes with exactly 5 crashes in longer than 365 days.
  + Output
    - Subset of unsignalized nodes
* Verified
  + Input
    - Unsignalized nodes
  + Function
    - Find nodes with 5 or more crashes in less than 365 days.
  + Output
    - Subset of unsignalized nodes
* Check
  + Inputs
    - unsignalized nodes
    - too\_long
    - verified
  + Function
    - Take unsignalized nodes – too\_long – verified
    - Retrieve all crashes in 3 year period for each node
    - Find day difference between crash and 4th preceding crash (5 crash window)
    - Five\_yr = 1 if < 365 days
      * Window = 1 for crash and 4 preceding crashes
  + Output
    - Crashes at nodes with at least one five\_year window with window Boolean
* Verified\_crashes
  + Input
    - Verified subset of unsignalized nodes
  + Function
    - Grab all crashes

**School Match**

* Input: unsignalized nodes
* Function: Match nodes to school buildings within radius
* Output: matched nodes

**Legs/Angle**

* Input: unsignalized nodes
* Function: Crosstab of node+segments
* Output: nodes with each segment listed as column
* Input: nodes with geom and segments as columns
* Function: Angle of all geoms
* Output: Angle values