

## What is this list of intersections?

Mobility staff created a database of all major intersections in the City. In total, there are 1,025 intersections. Vision Zero Action SD 1.1 is a key part of the Safe Street Design Objective in the plan. The Action states that the City shall “Identify and classify each major intersection within City jurisdiction. Develop a toolbox for improving these intersections and prioritize the list of intersections for intervention, giving greater weight to locations in the high injury network and/or communities of concern.” This list is our first step towards accomplishing this.

## How are the intersections classified?

To classify the intersections, the database includes fields for each that define

- **The functional classification of the intersecting streets.** This is defined as either arterial-arterial, arterial-collector, arterial-local, collector-collector, collector-local, or local-local.
- **The jurisdiction or ownership of the street.** This is defined as either City or State.
- **A rating for Average Daily Traffic (ADT).** The City does not have up-to-date volume data collected for every street; therefore, we used a compilation of previously collected data from different streets to develop an average volume for each roadway classification. The volumes that were used are:
  - Local Street – 2,000 vehicles/day (weighted as 1)
  - Collector Street – 6,000 vehicles/day (weighted as 3)
  - Arterial Street – 10,000 vehicles/day (weighted as 5)

Using these volumes, each intersection was assigned one of the following weights:

- Arterial-Arterial intersection: 25
- Arterial-Collector intersection: 15
- Arterial-Local intersection: 5
- Collector-Collector intersection: 9
- Collector-Local intersection: 3
- Local-Local intersection: 1
- **The presence of a signal at the intersection.** If the intersection is signalized, there is a ‘1,’ if the intersection is stop-controlled (there’s a stop sign) there is a ‘0’ in the signalization column.
- **Crash data.** The crash data is from the Massachusetts Department of Transportation and include crashes in the City from 2016 to 2020. Crashes are separated into the following categories.
  - Fatal and Severe Injury crashes
  - Bike-involved crashes
  - Pedestrian-involved crashes
  - Total number of crashes (includes all of the above categories as well as any vehicle-only crashes)
  - Crash rate (this is calculated as the number of total crashes at a location per the ADT weight assigned to that location)
- **Location in a Community of Concern.** Communities of Concern are defined in the Vision Zero Action Plan as those areas in particular need of new investments in street safety. Compared to people in other neighborhoods, people living in these areas are more likely to have fewer choices about how, when, and where they travel and are at a higher risk for traffic fatalities and

serious injuries. To define Communities of Concern, the Action Plan uses Environmental Justice population data from the 2010 Census based upon criteria developed by the Massachusetts Executive Office of Energy and Environmental Affairs. Refer to the [Action Plan](#) to see the map of these areas in the City.