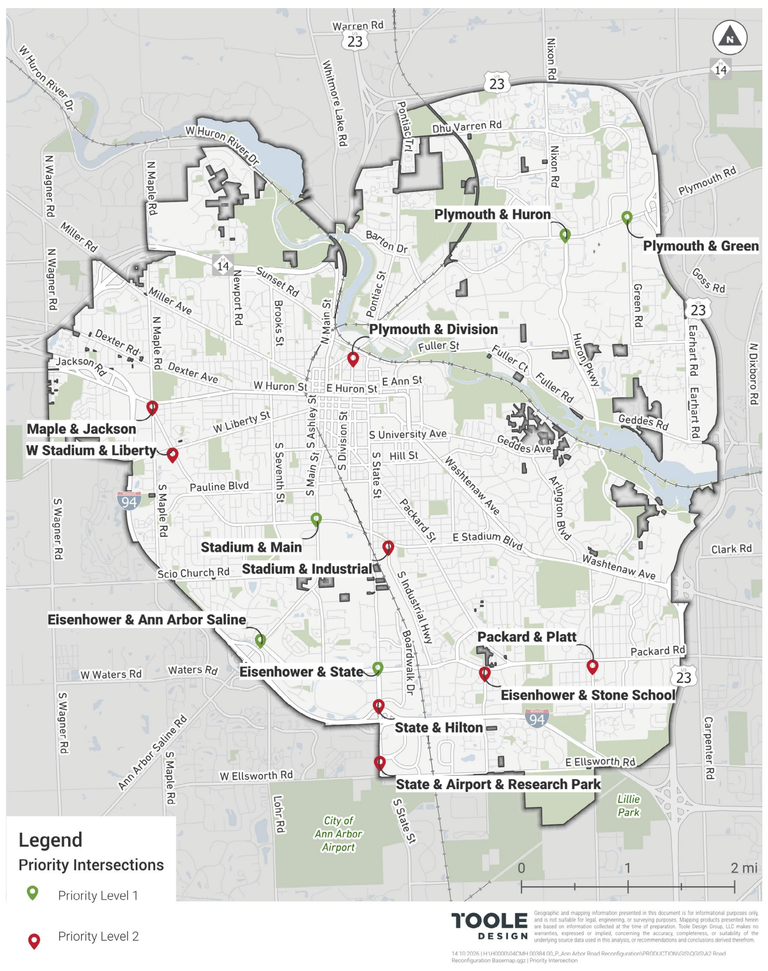
PRIORITY INTERSECTIONS



MAP 1: PRIORITY INTERSECTIONS

When a roadway reconfiguration is being considered, the major intersections along the corridor are often the most important locations for several reasons:

Safety Intersections are the sites of most crashes, especially for those involving vulnerable travelers (people walking and bicycling). These are the locations where reconfiguration can make the most difference in achieving Vision Zero.

Capacity Intersections along a major arterial corridor, such as those being evaluated in this study, are the places that constrain or limit the amount of traffic a roadway can handle during peak hour (see map). The capacity of a traffic signal on a major roadway to handle peak hour traffic depends on both the number of lanes and the amount of time that a traffic signal is green. Our approach for this project is to not focus solely on an intersection's capacity to handle peak hour traffic, but to consider the negative consequences of excess capacity that affects speeds and safety throughout the day.

Traffic Operations Major or complex intersections often determine how much traffic a corridor can serve during the busiest hours. Their performance depends on lane configuration, signal timing, turning movements, and other conditions. A2R2 considers these busy periods while also looking at how the roadway design affects speeds and safety throughout the rest of the day.

INTERSECTION TOOLBOX

Intersections can be improved to make them safer and work better for everyone.

Short Term

- **Signal timing and phasing changes** to improve safety and efficiency
- **Shorter cycle lengths** can reduce how long people wait to cross or receive a green light
- **Lane reassignments** for more efficient operations, such as changing a shared through-left turn lane to a left-turn-only lane.
- **Protected Intersections** provide shorter, more protected crossings and reduce turning conflicts

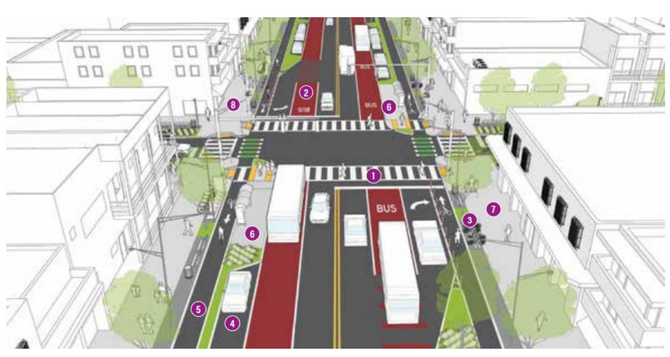
Medium Term

- **Curb extensions** to reduce crossing distance for pedestrians and maintain shorter signal cycle lengths
- **Roundabouts** single lane or flared entry (when a single lane flares out to two lanes at the roundabout) can reduce conflict severity and maintain efficient traffic flow; entry lanes can be tailored to demand

OPTIONS TO PRIORITIZE TRANSIT AT INTERSECTIONS

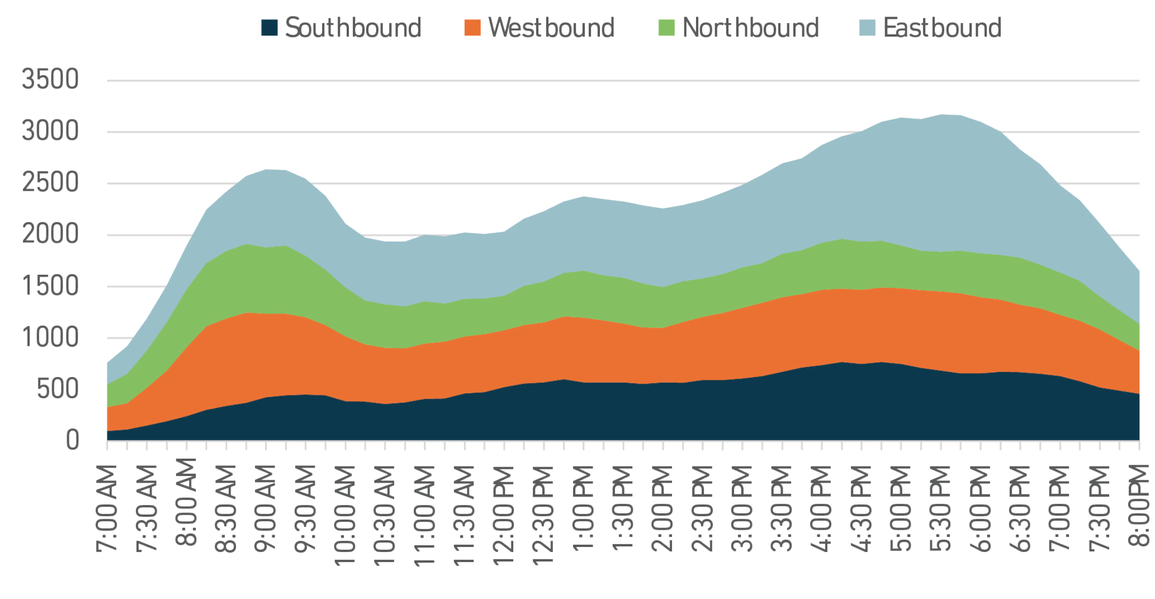
Intersections can be a big source of delay for bus transit. For corridors with frequent transit service, or where higher frequency service is planned, there are several ways to reduce delays to transit vehicles so that it becomes competitive with driving, and leads to the City's zero emission goal.

- **Bus Lanes at signals** - Buses have an exclusive lane
- **Queue Jump Lanes at signals** - Buses have a separate lane as they approach an intersection so that they can get around vehicles waiting at the signal.
- **Bus Lanes at roundabouts** - Buses have their own lane along most of the corridor, but merge into the general purpose traffic lane as they approach the roundabout.



1. High-Visibility Crosswalk
2. Dedicated Bus Lane
3. Furnishing Zone
4. On-Street Parking
5. Separated Bike Lane
6. Curbside Bus Stop
7. Sidewalk Zone
8. Intersection Lighting

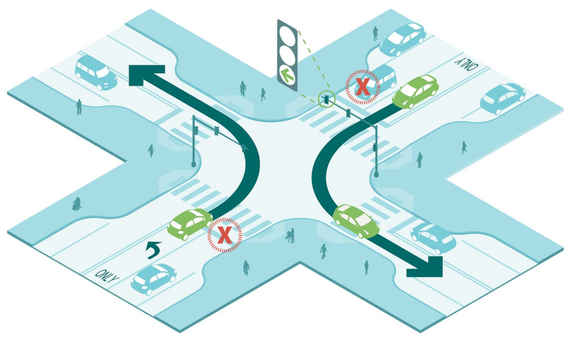
Hourly Traffic Volumes at Packard St & Platt Rd



What this chart tell us: Traffic demand is concentrated in a limited number of peak hours; intersection design can help address those periods without allowing them alone to determine the street design for the full day."

INTERSECTION TOOLBOX VISUAL GUIDE

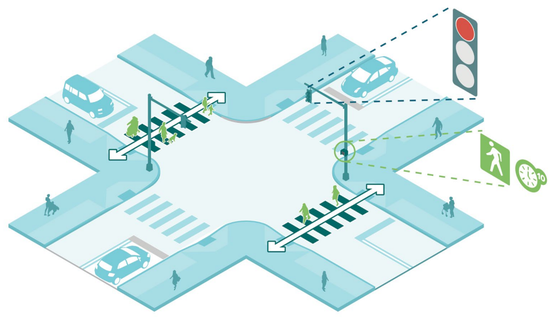
SHORT TERM



Protected Left Turn Phase to reduce conflicts



Reduce Pedestrian Crossing Distance

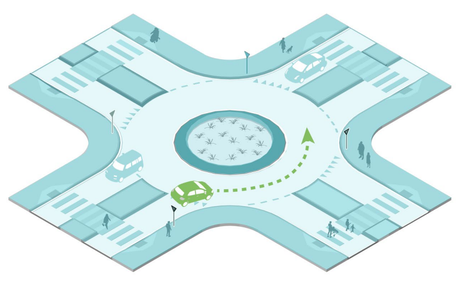


Short Cycle lengths

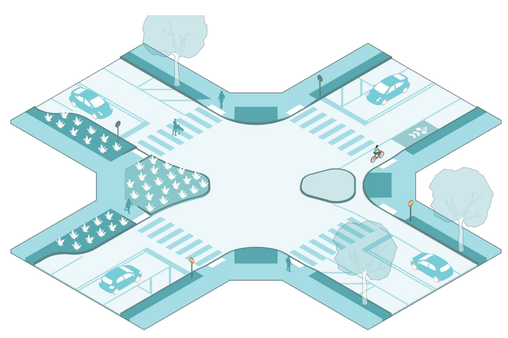


Lane Reassignment

MEDIUM TERM



Single Lane Roundabout



Protected Intersection