What are Transit Priority Measures?

Transit Priority Measures (TPMs) are techniques that are used to reduce delays for buses on congested roads. They can include a wide variety of treatments, ranging from modification of signage and traffic signal phasing to the addition of dedicated bus lanes. TPMs prioritize the movement of buses over other vehicles in the transportation network, making public transit service more efficient and reliable for users and providing an incentive to take the bus rather than drive.

Common examples of transit priority measures include:

Queue Jump Lane

A lane on the approach to an intersection that allows buses to bypass queued traffic, enabling them to move to the front of the line and gain an advantage at signalized intersections.

How do they work?
Approaching buses exit the queue of vehicles and enter the queue jump lane. Buses either proceed through the intersection on a green signal phase into a dedicated transit lane or use a bus priority signal to get a head start on other traffic and merge into the general traffic lane.

Where are they useful?
Transit queue jump lanes are particularly useful where there are long queues of vehicles at a signalized intersection. In many cases, queue jump lanes are installed in ‘right turn only’ lanes, and buses are allowed special permission to proceed through the intersection while all other traffic must turn right. These are typically designated by signage indicating ‘Right Turn Only (Except Buses).’

Transit Signal Priority

Transit signal priority uses signal technology to provide an advantage to buses at signalized intersections. It can be used to provide buses with a head start at queue jump locations, as well as to adjust traffic signal phasing to provide additional green time for approaching buses.

How does it work?
When buses waiting at or approaching an intersection are detected by special vehicle sensors, traffic signal phasing is adjusted to make it faster and easier for buses to move through the intersection.

Where are they useful?
A common use of transit signal priority is where dedicated transit lanes or transit queue jump lanes are not continuous through a signalized intersection. A transit priority phase – indicated by a white vertical bar above the signal head – is displayed during a red phase, allowing buses to proceed during this phase while other vehicles must wait (typically 5-10 seconds) for the green phase.

Dedicated Bus Lanes

Lanes that are dedicated for the use of transit only, allowing buses to bypass queues over longer distances.

How do they work?
Dedicated bus lanes are designated for transit only using signage and pavement markings to restrict other vehicles from use of the space. They can be used in conjunction with transit signal priority to improve flow through signalized intersections along a corridor.

Where are they useful?
Dedicated bus lanes are particularly useful along congested corridors where delays and queuing are common. They can provide a high level of priority to transit that enables improved travel time and service reliability.