LOOP RAMPS REDUCING LEFT TURNS

COST $ $ $ $ $

TIME MODERATE/LONG

IMPACT
STATE
REGIONAL
LOCAL
CORRIDOR
SPOT

WHO STATE/CITY

HURDLES RIGHT-OF-WAY

More Information: tti.tamu.edu/policy/how-to-fix-congestion

Description

Bottlenecks can occur when a lot of vehicles exiting a freeway want to turn left at the upcoming intersection. Setting the timing of the signal at that intersection to relieve the left-turn congestion may worsen traffic for the other intersection streets. One solution to reduce delay is to put the left-turning traffic on a loop ramp to access the cross street instead of turning left at a traditional intersection.

The loop ramp design is a practical solution if sufficient right of way is available. The loop design changes a potential stop at the intersection into a merge or yield movement. Loop ramps are often used with collector-distributor roads along a major road to:

- Decrease lane switching on the major road.
- Provide a safe speed change for vehicles traveling between the crossing streets.

How Will This Help?

- **Increases safety** by reducing the number of conflict points.
- **Improves the efficiency** of turning movements.
- **Reduces delay, improves capacity, and simplifies signal timing.**

Implementation Issues

The additional right of way and paved surfaces required to build collector-distributor roads and loop ramps greatly influence cost.

The use of collector-distributor roads can make exiting and entering decisions more complex. Ample signing for road users is important for operational success. A lack of signing can negatively affect a driver's decisions. Designers should consider:

- The anticipated speeds.
- The available sight distance on the approach to and within the merging section.

SUCCESS STORIES

The American Association of State Highway and Transportation Officials *Highway Safety Manual* reports that:

Adding loop ramps can reduce delays by:

▼ **7% to 37%** at freeway ramp intersections **with frontage roads**

▼ **57% to 67%** at ramp intersections **without frontage roads**

Arlington, Texas

Example locations of loop ramps include **FM 157 at IH 20** and **SH 360 at Pioneer Parkway (Spur 303).**