COLLECTOR-DISTRIBUTOR ROADS

Description
Collector-distributor (C-D) roadways are a supplemental facility between freeway mainlanes and the frontage roads. Their primary purpose is to move the weaving and lane changing away from the high-speed traffic on the freeway mainlanes. C-D roadways are the location where weaving occurs as vehicles move from the freeway to the frontage road or local arterials (and vice-versa). C-D facilities can allow a single freeway exit ramp to distribute vehicles to two or more crossing arterials or collect vehicles from several crossing arterials, so that they can enter the freeway at a single entrance ramp.

Target Market
- Larger freeway interchanges (especially cloverleaf designs) where ramp-to-ramp weaving causes mainlane traffic to slow down unnecessarily.
- Freeway segments through areas where closely-spaced major arterials are present and there is minimal room for freeway entrance and exit ramps.

How Will This Help?
- Increases traffic flow and speed on freeways and their entrance and exit ramps.
- Improves safety through reductions in freeway mainlane merging and weaving intensity.

Success Story
Several major freeway-to-freeway interchanges (IH 35/Loop 1604, IH 35/Loop 410) in the San Antonio area feature C-D roadways. In addition to minimizing weaving and merging on the freeway facility, they can also act as a storage area for exiting traffic waiting at cross street intersections and freeway-to-freeway interchange ramps.

Implementation Issues
The primary design constraint is the need for right-of-way to construct the wider road, especially near larger interchanges. C-D facilities require extra road space, as well as extra shoulders and buffer space.

For more information, please refer to: http://mobility.tamu.edu/mip/strategies.php.