

Diverging Diamond Interchange

A Safer Interchange Design

A [Diverging Diamond Interchange \(DDI\)](#) is an intersection and interchange design that enhances and simplifies the operation of diamond-style interchanges by moving the crossroad traffic to the opposite side of the roadway at the on- and off-ramps to the interchange. Intersection and Interchange Geometrics is a Federal Highway Administration (FHWA) Every Day Counts Round 2 (EDC-2) innovation that Pennsylvania championed.

What are the benefits?

- Improves **safety** and **mobility** by **reducing the number of conflict points**
- Provides a **timely, cost-effective design solution** by often being able to be constructed at a much lower cost compared to conventional interchange designs
- **Requires fewer lanes** than a conventional design to handle the same amount of traffic

How does it work?

Use of a DDI eliminates having to make left turns across oncoming traffic. At the interchange, traffic in both directions is transitioned or crossed over to the left side at a signal-controlled point, and then transitioned back to the right side at a second signal-controlled point after passing through the interchange. At the second point, left turns can be made without crossing oncoming traffic. The road configurations, signage, and pavement markings assist drivers to move through the intersection simply.



How do I learn more?

To learn more about this innovation, visit www.penndot.pa.gov/stic or email penndotstic@pa.gov.