Diverging Diamond Interchange (DDI) in Odense, Denmark

Interchange 52, Odense SV on E20
<52> Odense SV
Existing diamond interchange Odense SV (from 1985)
2 signalized intersections on Assensvej
Traffic forecast 2028

Vehicles per hour (morning)
No bikes
Original plan (additional lanes)
Alternative plan (DDI)
Original plan:
11 primary points of conflict

DDI:
4 primary points of conflict
Road safety and capacity in a DDI

Road safety:
• US evaluation (DDI in Springfield, Missouri)
  • 67 % reduction in injury crashes
  • 46 % reduction in all crashes

VISSIM traffic simulation:
• 30 % reduction in total travel time compared to the original plan
• 70 % reduction in total delay time compared to the original plan

And not the least:
• The DDI removes the queue from the exit ramp out on the motorway
Challenges

• How to make the design self explaining

• How to make the road users familiar with the new design
Schedule

- Detailed design: September 2015 – March 2016
- Tendering: April – June 2016
- Construction: July 2016 – June 2017

Estimated costs

- 26,4 million DKK (3,5 million EUR)
A second DDI in Aalborg?