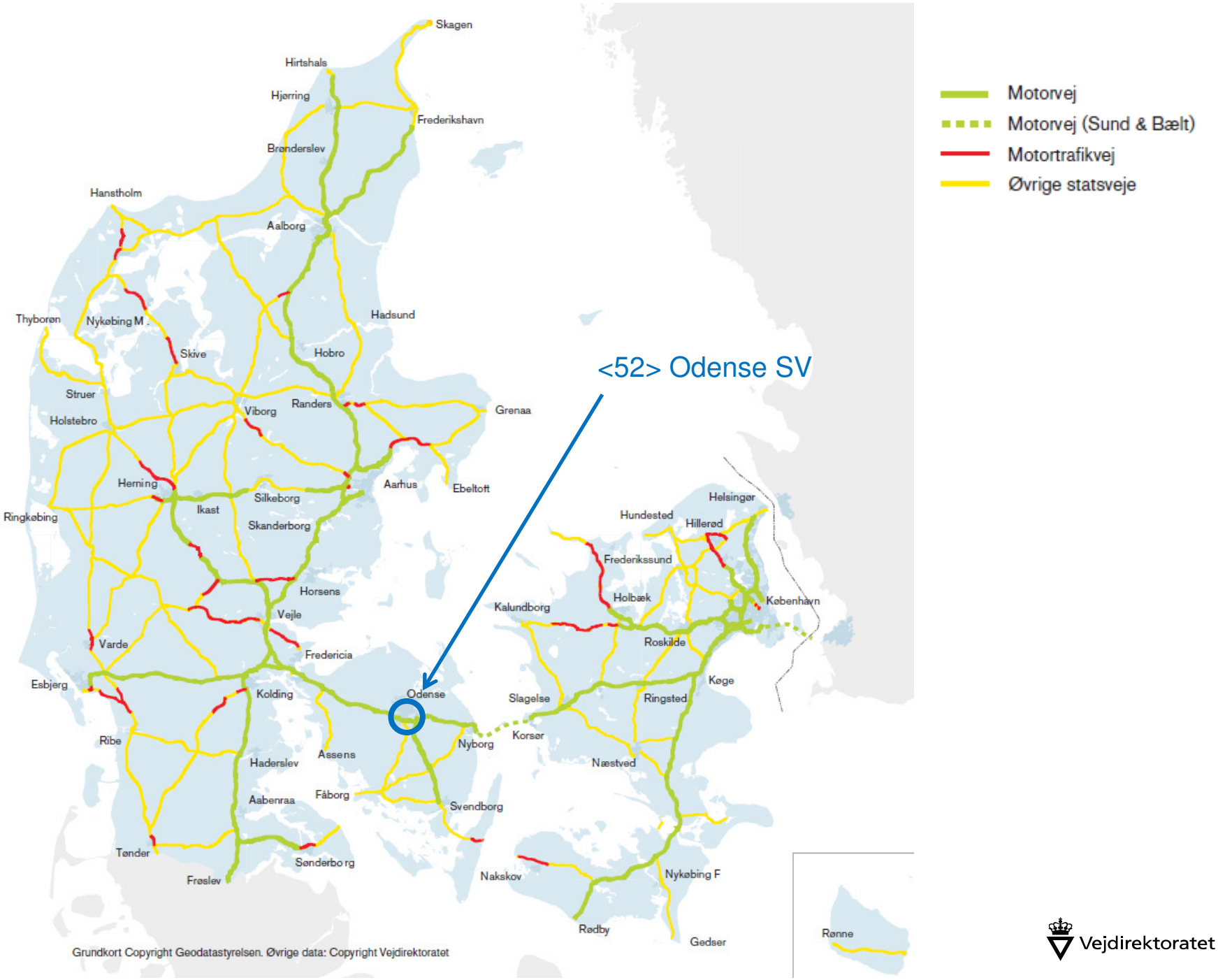
Diverging Diamond Interchange (DDI) in Odense, Denmark

Interchange 52, Odense SV on E20

Vejdirektoratet



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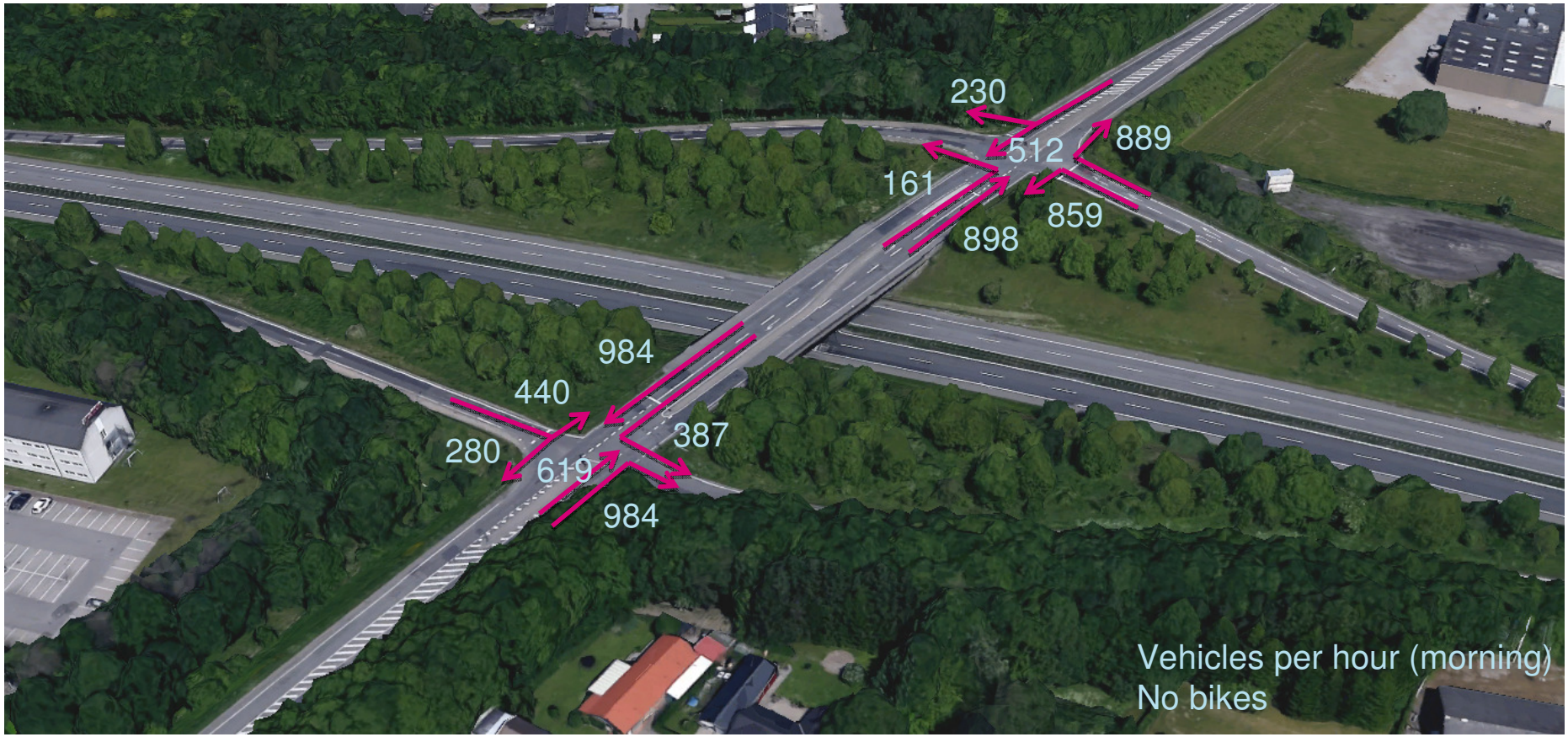
Existing diamond interchange Odense SV (from 1985)

Vejdirektoratet

2 signalized intersections on Assensvej
Traffic forecast 2028



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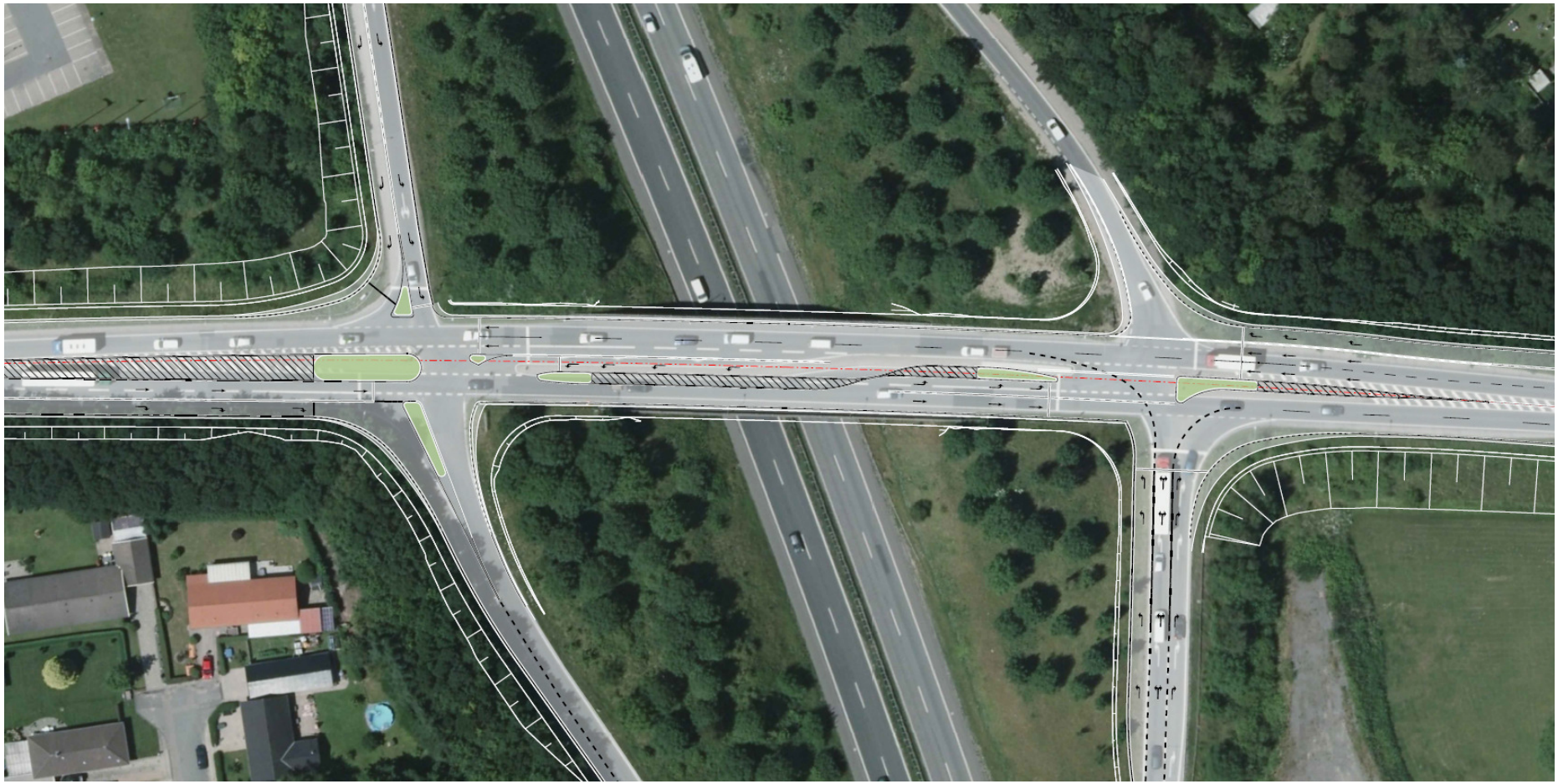
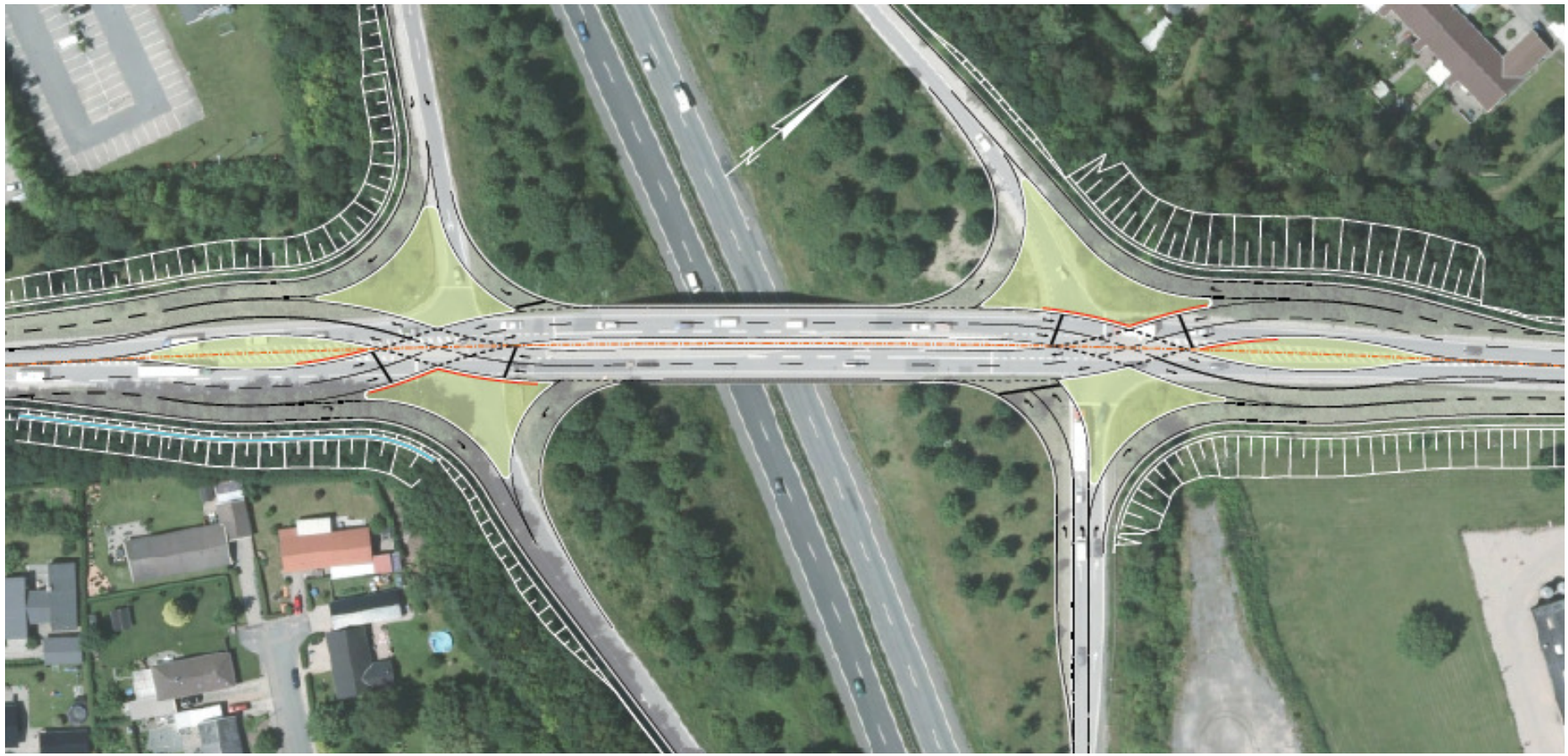
Original plan (additional lanes)

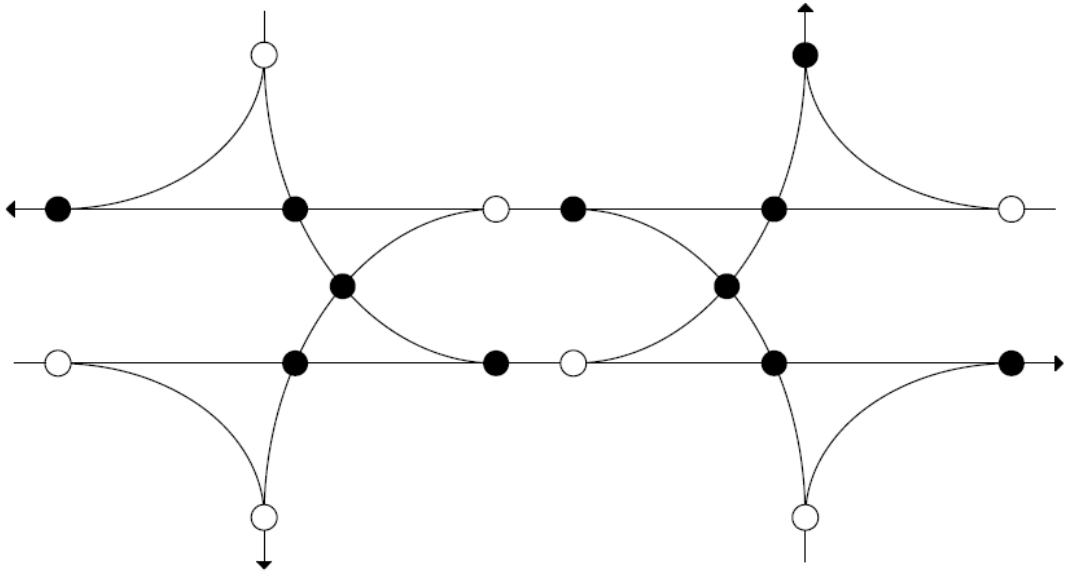


Alternative plan (DDI)

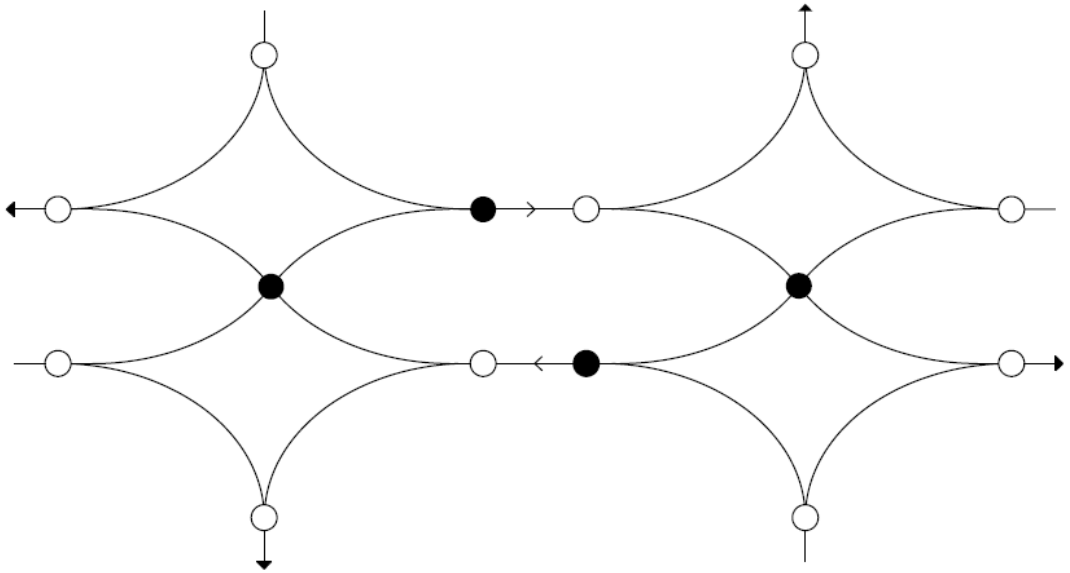


Conflict points

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:

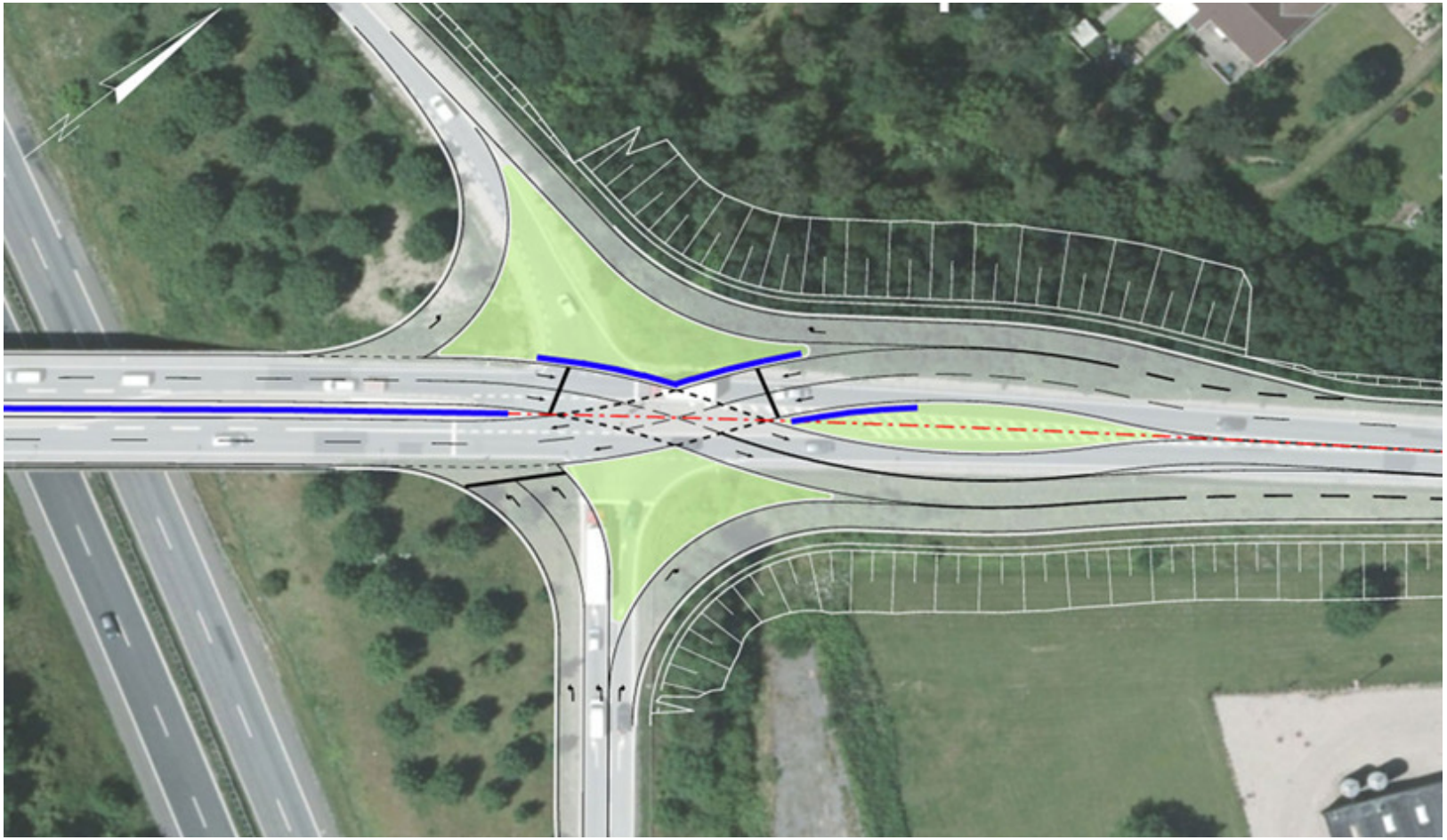
- 30 % reduction in total travel time compared to the original plan
- 70 % reduction in total delay time compared to the original plan

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



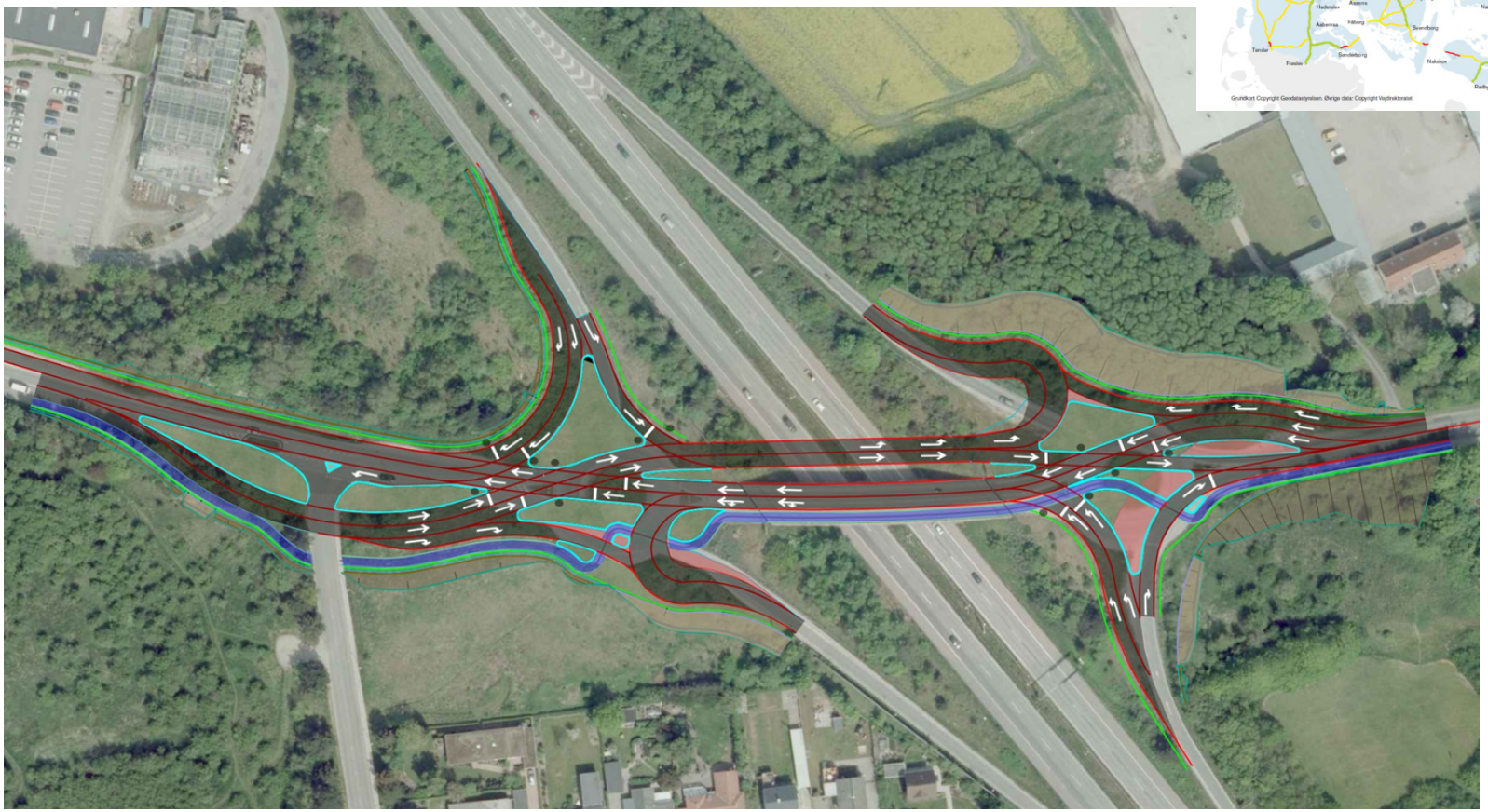
Schedule

- 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?



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