

(The Stockholm Trial  
Congestion Taxes and Improved Public Transport  
for less traffic snarls and better environment)

# Stockholmsförsöket

Miljöavgifter/trängselskatt och utbyggd  
kollektivtrafik för mindre köer och bättre miljö.

- **Improved Public Transport 22 aug 2005**
- **New Park and ride facilities autumn 2005**
- **Congestion taxes 3 jan – 31 july 2006**
- **Referendum 17 sep 2006**



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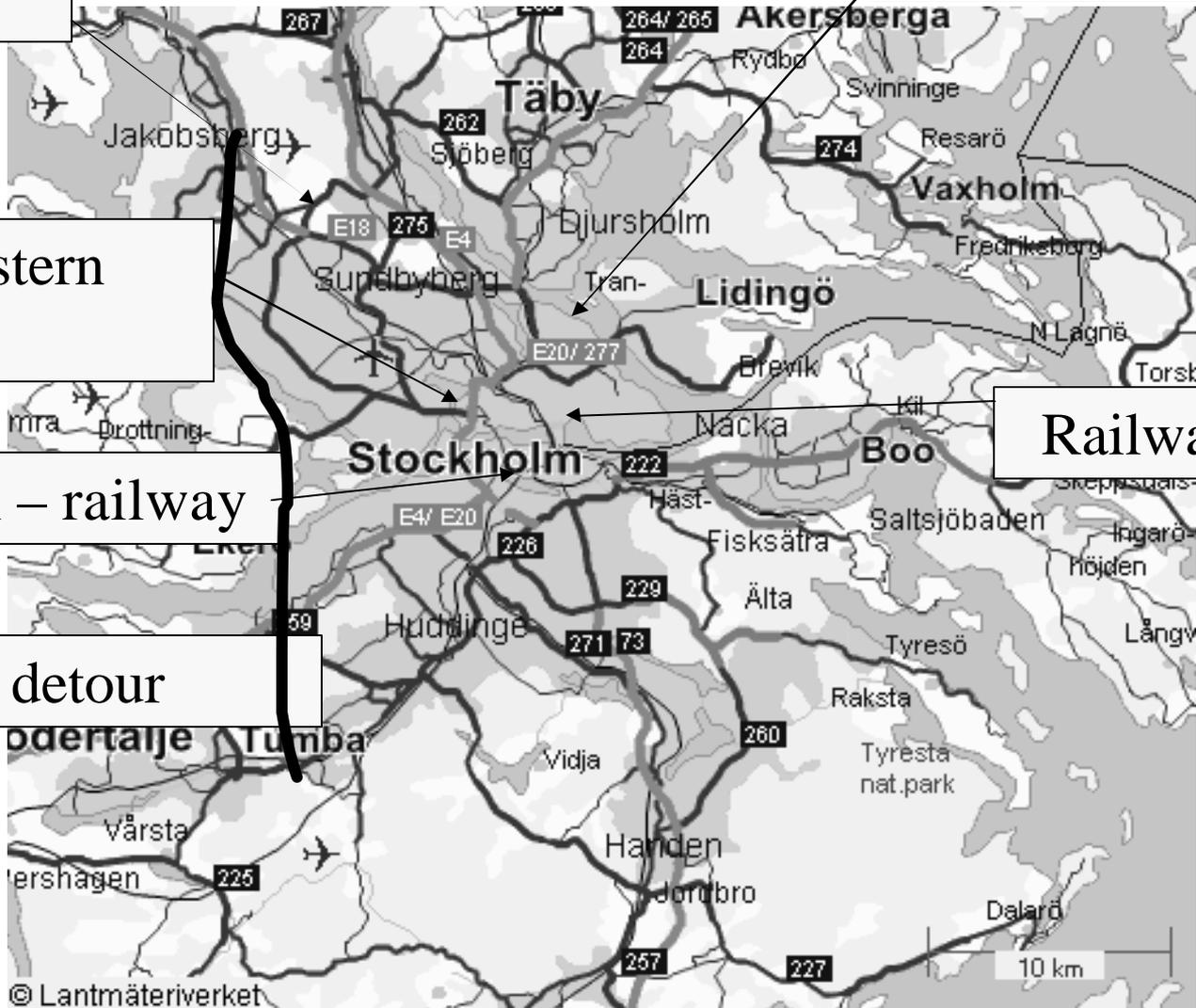
North Link

New western  
bridge

Railway tunnel

Årstabron – railway

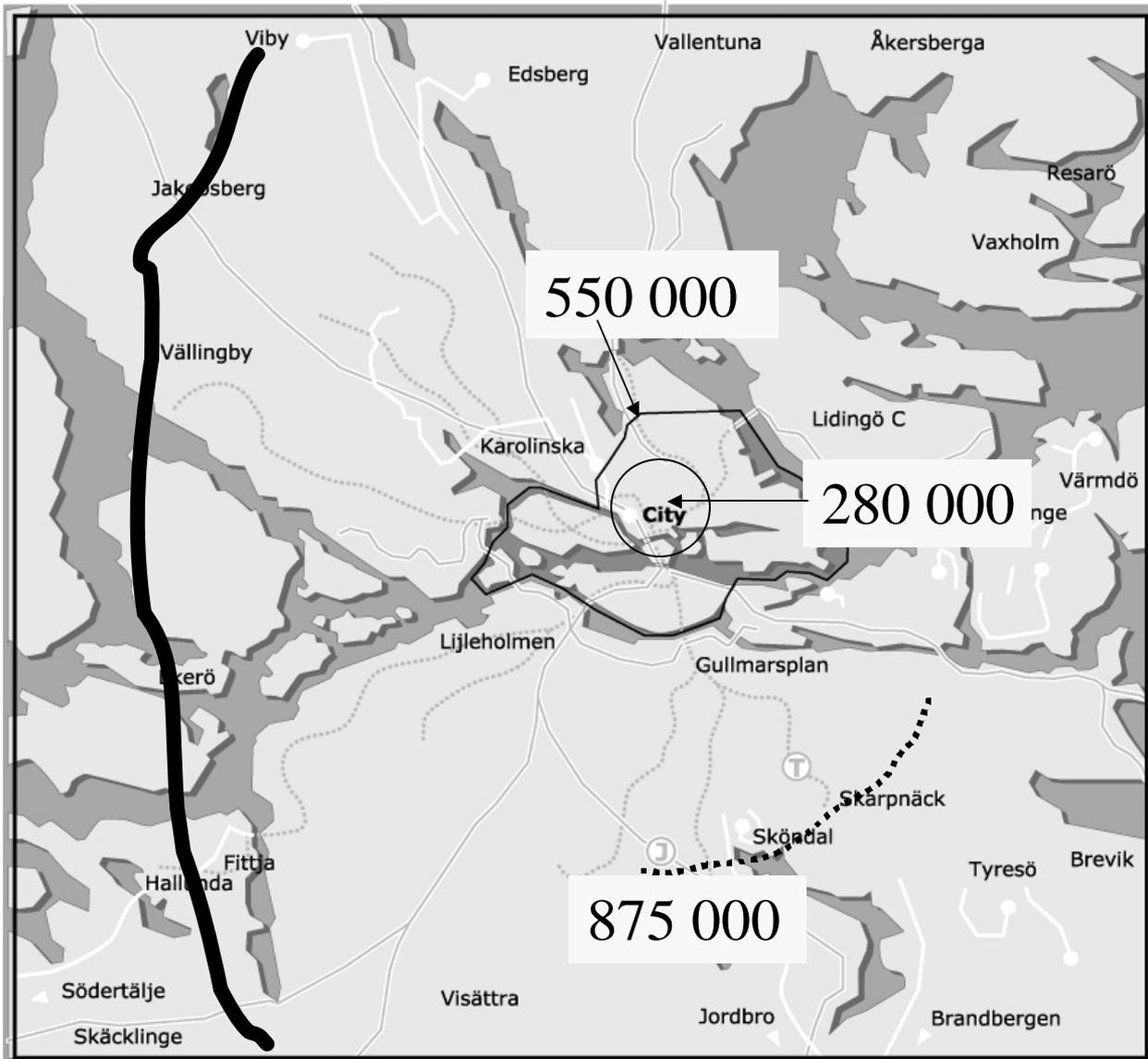
Western detour

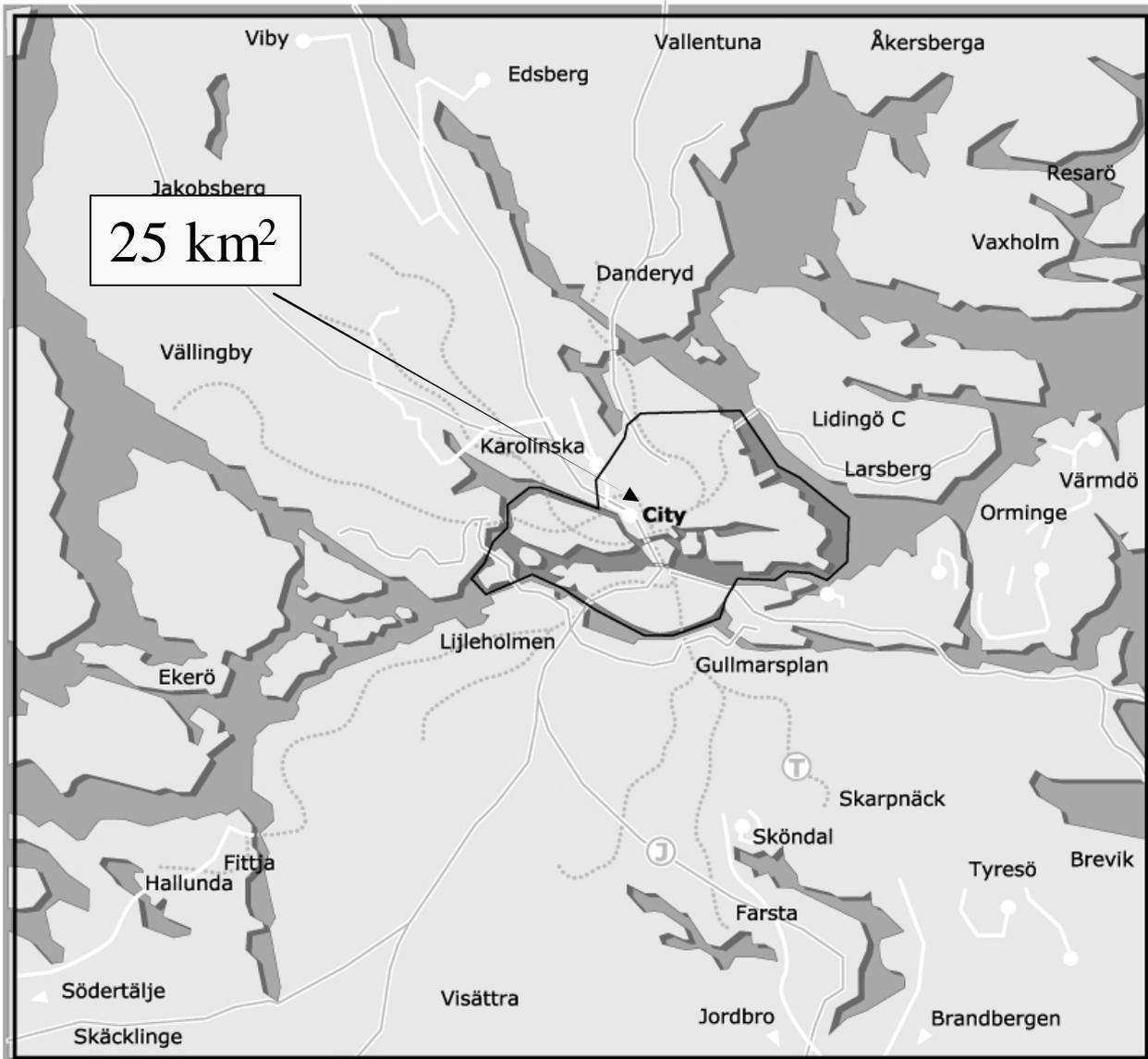


# Congestion charging in Stockholm

- The Stockholm Municipal Council on 2 June 2003 adopted a majority proposal to introduce congestion charges on a trial basis.
- The Swedish parliament adopted The Law of congestion taxes on 16 June 2004
- IBM was awarded the procurement contract for the system on 9 July







# Boundary of the central zone



# Primary objectives of the charge

- Reduce congestion
- Increase accessibility
- Improve the environment.



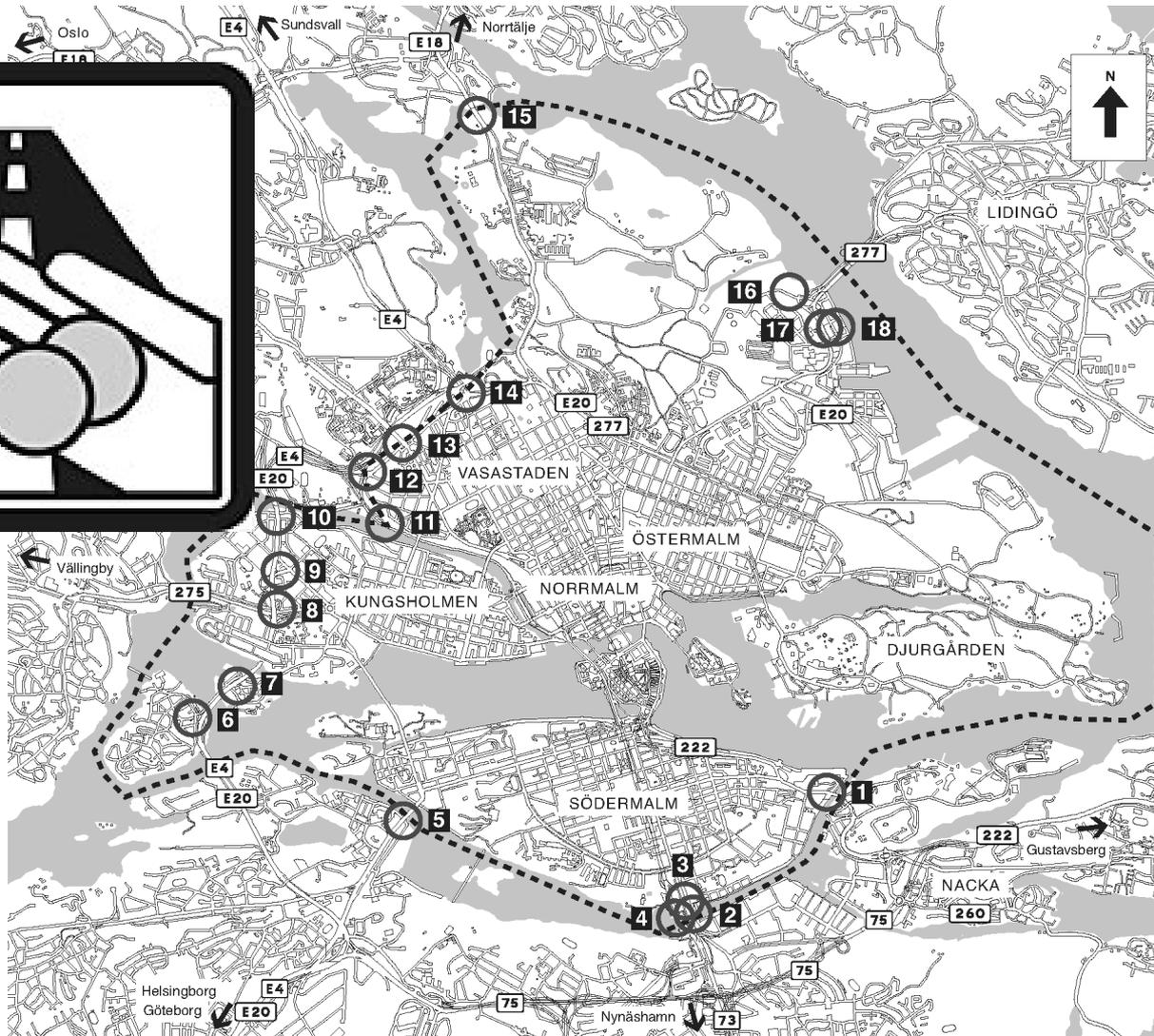
# Secondary objectives of the charge

## Objectives of the trial

- To reduce traffic volume by 10-15 % on the most heavily used routes during morning and afternoon hours.
- To improve accessibility for buses and cars in the inner city.



# Congestion area



## Försök med trängselskatt Betelstationernas placering

\* Placeringen av betalstation Roslagsvägen är inte fastlagd. Riksdagen beslutar i ärendet.

2005-04-25  
Vägverket, Projekt Trängselskatt, 171 90 Solna

Underlagskarta från Stockholms Stadsbyggnadskontor.  
Kartan kompletterad av Vägverket.  
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## BETALSTATIONER

- 1 Danvikstull
- 2 Skansbron
- 3 Skanstullsbron
- 4 Johanneshovsbron
- 5 Lijeholmsbron
- 6 Stora Essingen
- 7 Lilla Essingen
- 8 Trafikplats Fredhäll/  
Drottningholmsvägen
- 9 Trafikplats Lindhagensgatan
- 10 Ekelundsbron
- 11 Klarastrandsleden
- 12 Trafikplats Karlberg/  
Tomtebodavägen
- 13 Solnabron
- 14 Norrtull
- 15 Roslagsvägen\*
- 16 Gasverksvägen
- 17 Lidingövägen
- 18 Norra Hamnvägen



# Charges and times

## PEEK HOURS

07.30-08.30, 16-17.30

SEK 20.00 (3 \$)

## Near PEEK HOURS

07.00-07.30, 08.30-09.00

15.30-16.00, 17.30-18.00  
(2 \$)

SEK 15.00

## MEDIUM-VOLUME HOURS

06.30-07.00, 09.00-15.30

18.00-18.30

SEK 10.00 (1,33 \$)

## MAXIMUM CHARGE:

SEK 60.00/day (8 \$)

Evenings, Saturdays, Sundays, holidays:

NO CHARGE



# Exemptions for specific traffic categories

- Emergency vehicles
- Vehicles with disability permits
- Foreign Cars
- Transport services for the disabled
- Taxis
- Motorcycles
- Buses over 14 tons
- Vehicles with alternative fuel



# Principles for the charging

- Charge for every passage
- Charge for traffic in to and out from the congestion area
- One tax decision a day
- The car owner is responsible for the tax
- No request or other notice to the car owner that he/she has to pay – or how much
- If no payment in 5 days an extra fee of 70 sek (10 \$)
- If no payment in 4 weeks additional charge of 500 sek (70 \$)
- Some possibilities to remission
  
- Cash payment in some shops
- Cars with an OBU – automatic payment from bank account



# Use of the revenue

- Congestion charges, by definition a national tax, will be returned to the Stockholm region for investments in public transport and infrastructure connected with the trial.
- The national government responsible for all costs
- In the long run also new roads



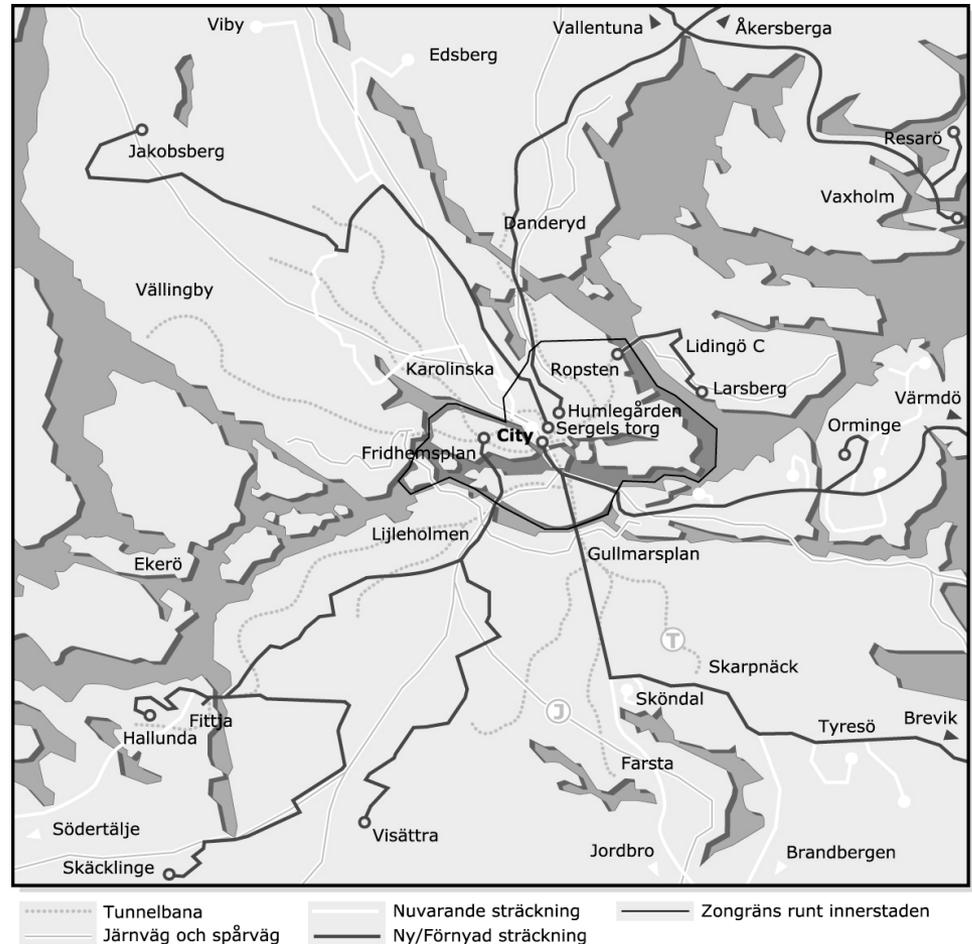
# How the responsibility is divided

- SRA tax collection, system and information how to pay tax
- The city of Sthlm
  - General information
  - Evaluation
  - Park-and-ride facilities
- SL
  - Public Transports



# Improved Public Transport

- 12 new express bus lines
- 18 bus lines with extended service
- Improvements of rail-bound lines
- 1800 new park-and-ride places



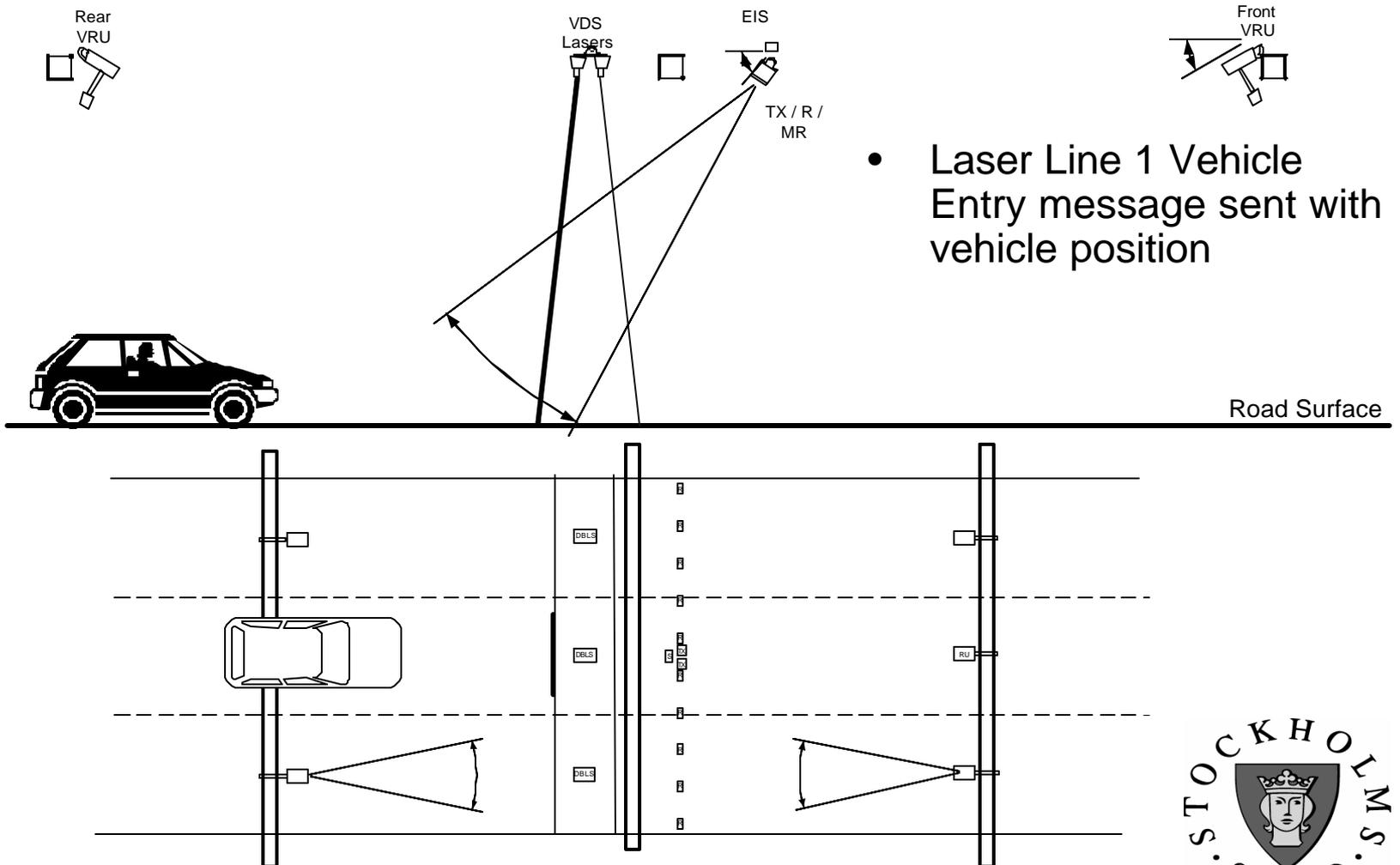
# Charging Point – Process Sequences

- The sequence of processes that occur at a Charging Point during a vehicle passage can be classified into;
  - EIS - OBU Process Sequences
  - Detection and Imaging Process Sequences
- These two types of processes are independent systems



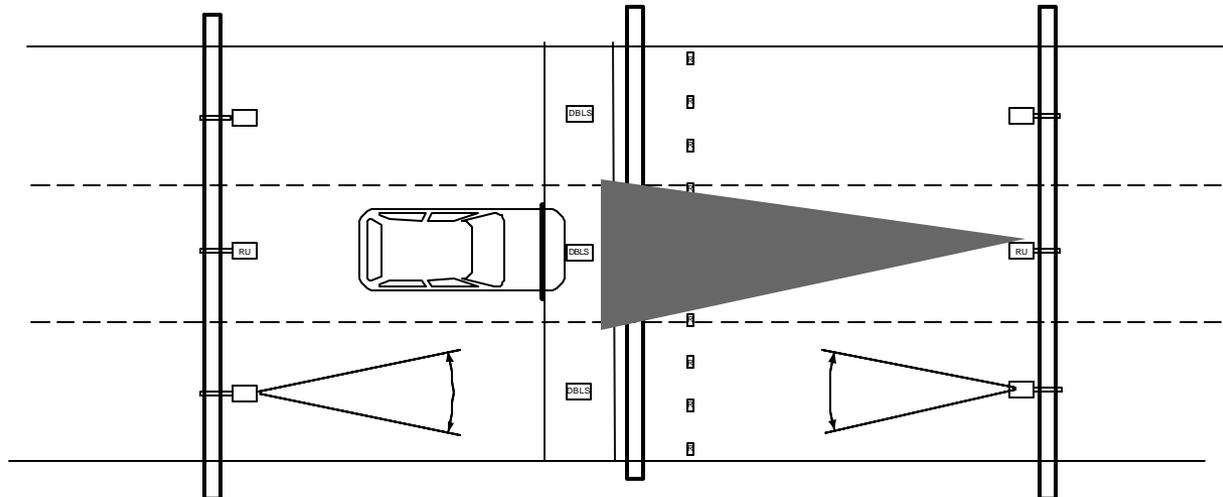
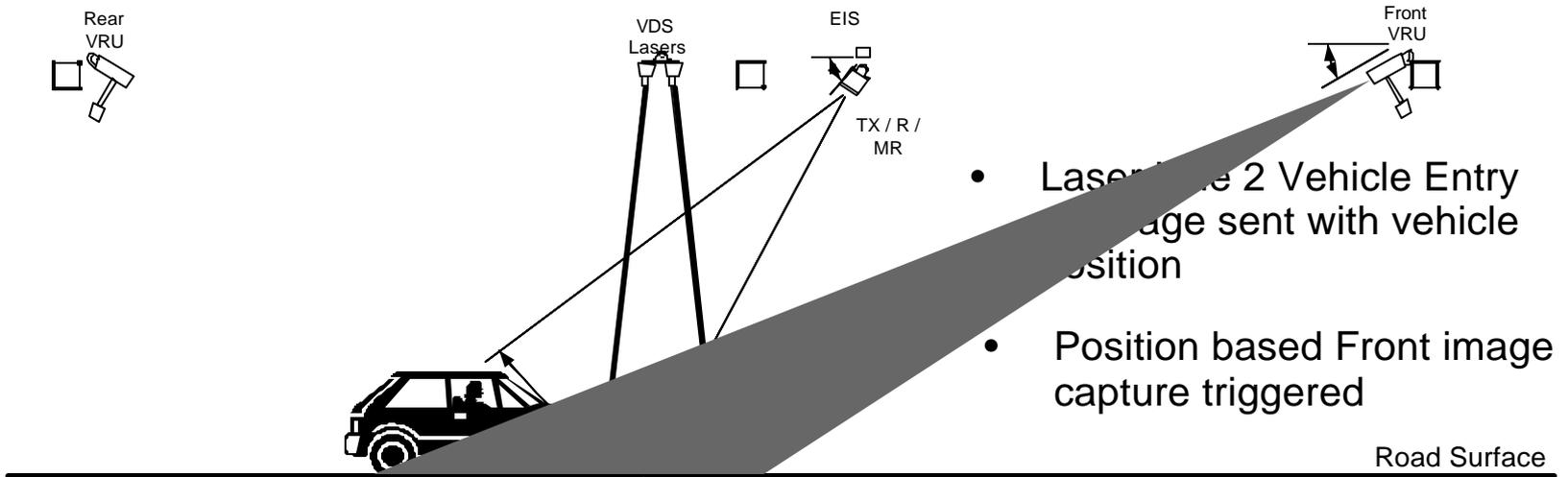
# Charging Point – Process Sequences

- Vehicle Enters first detection line



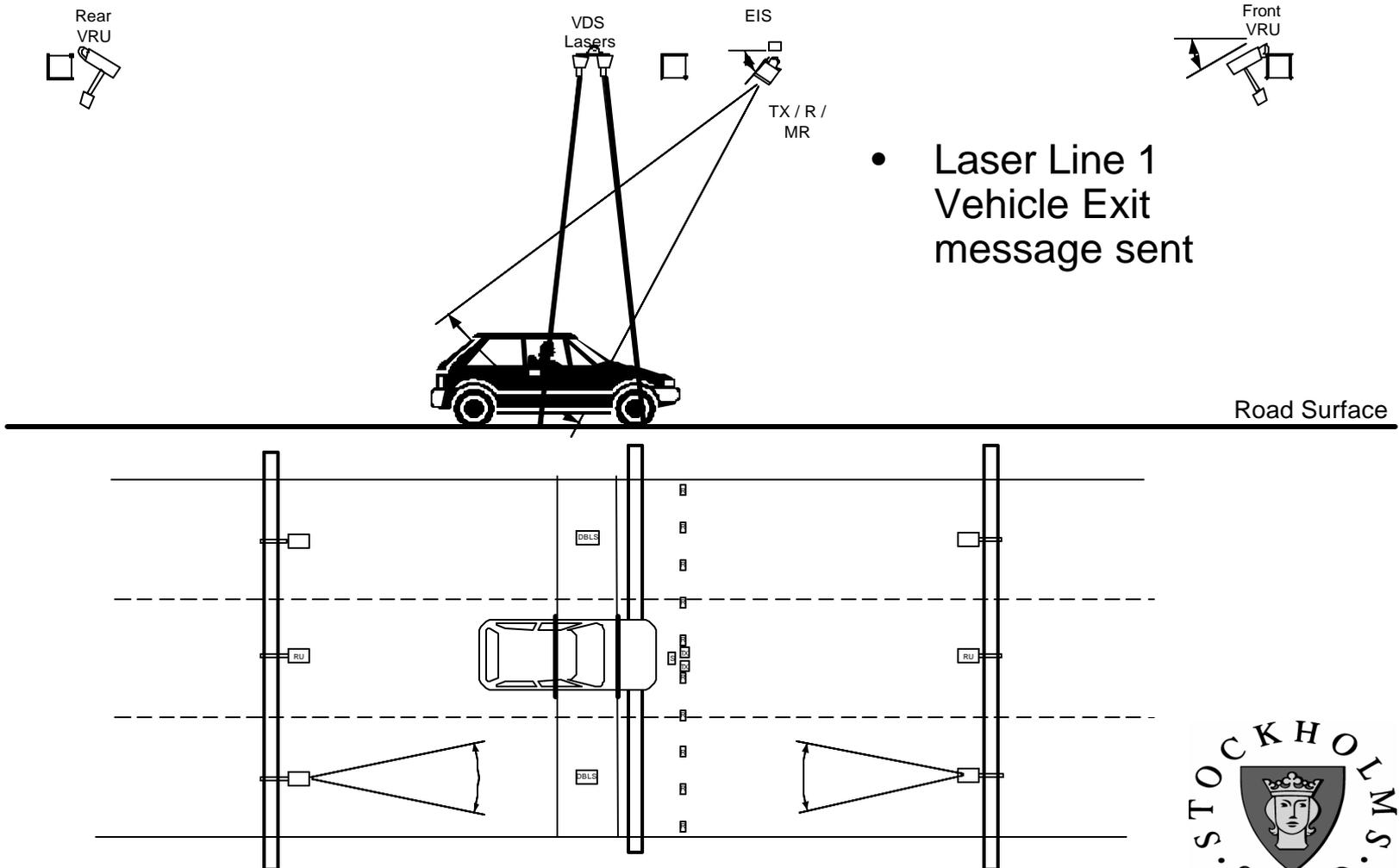
# Charging Point – Process Sequences

- Vehicle Enters Second detection line



# Charging Point – Process Sequences

- Vehicle Leaves First detection line

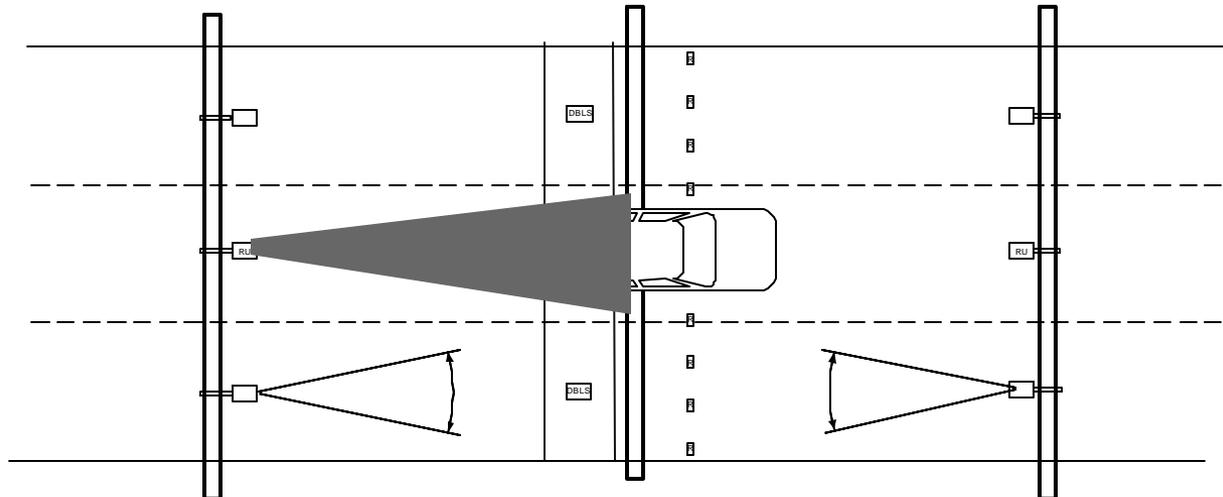
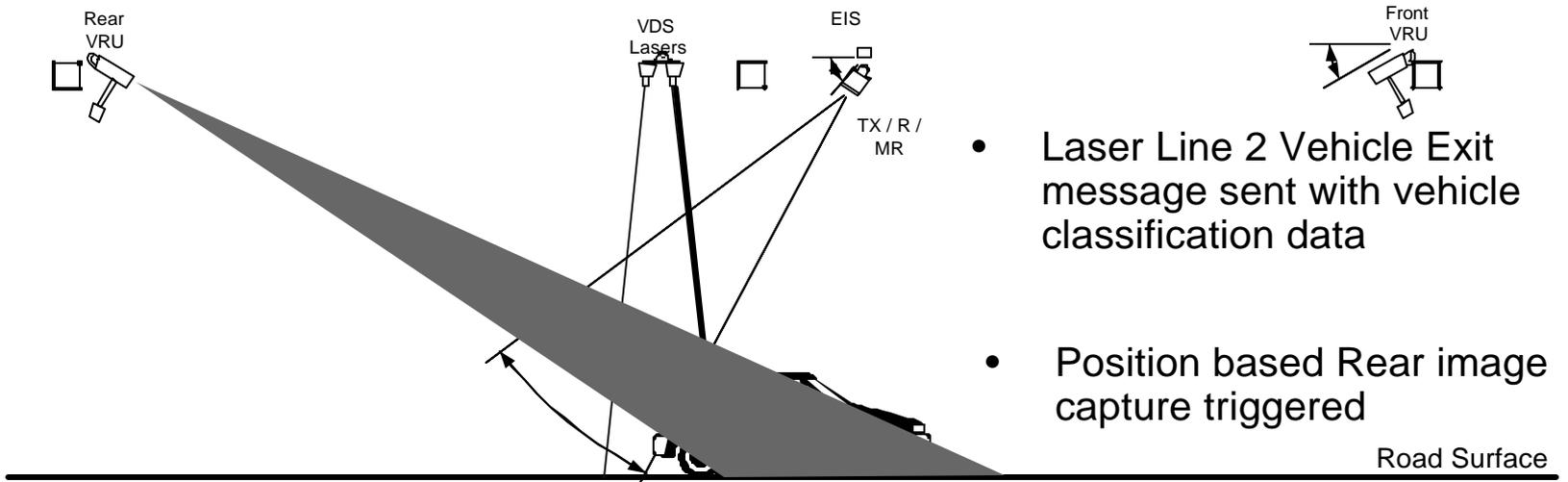


- Laser Line 1 Vehicle Exit message sent



# Charging Point – Process Sequences

- Vehicle Leaves Second detection line



B BXH-796

BVT 107

M JAC-184

SF0-657

SAF-513

FIN XYJ-358

BKT 450

S MLB  
803

H CCG-628

126

284 ACC

ÅLAND  
ÅLN 713

EST 003 ATN

MLB 803

LT ZPK  
777

102 97 AGI

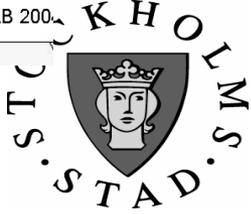


## Charging Point - Vehicle Registration System

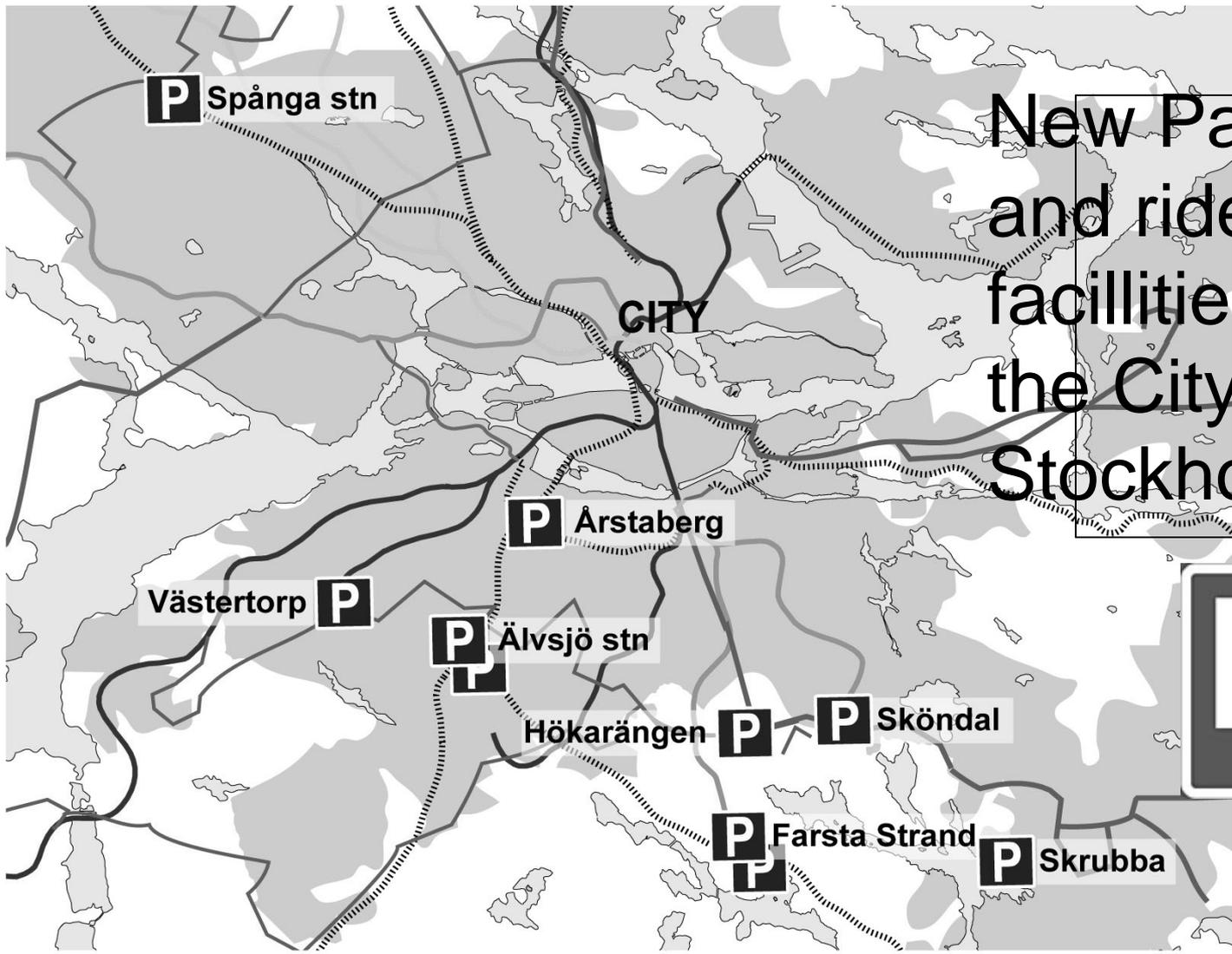
- Each registration picture is signed with a digital signature to assure non epudiation/legal evidence.
- Each picture contains information about the actual detected width of the vehicle. Unnecessary information in the picture can be deleted.

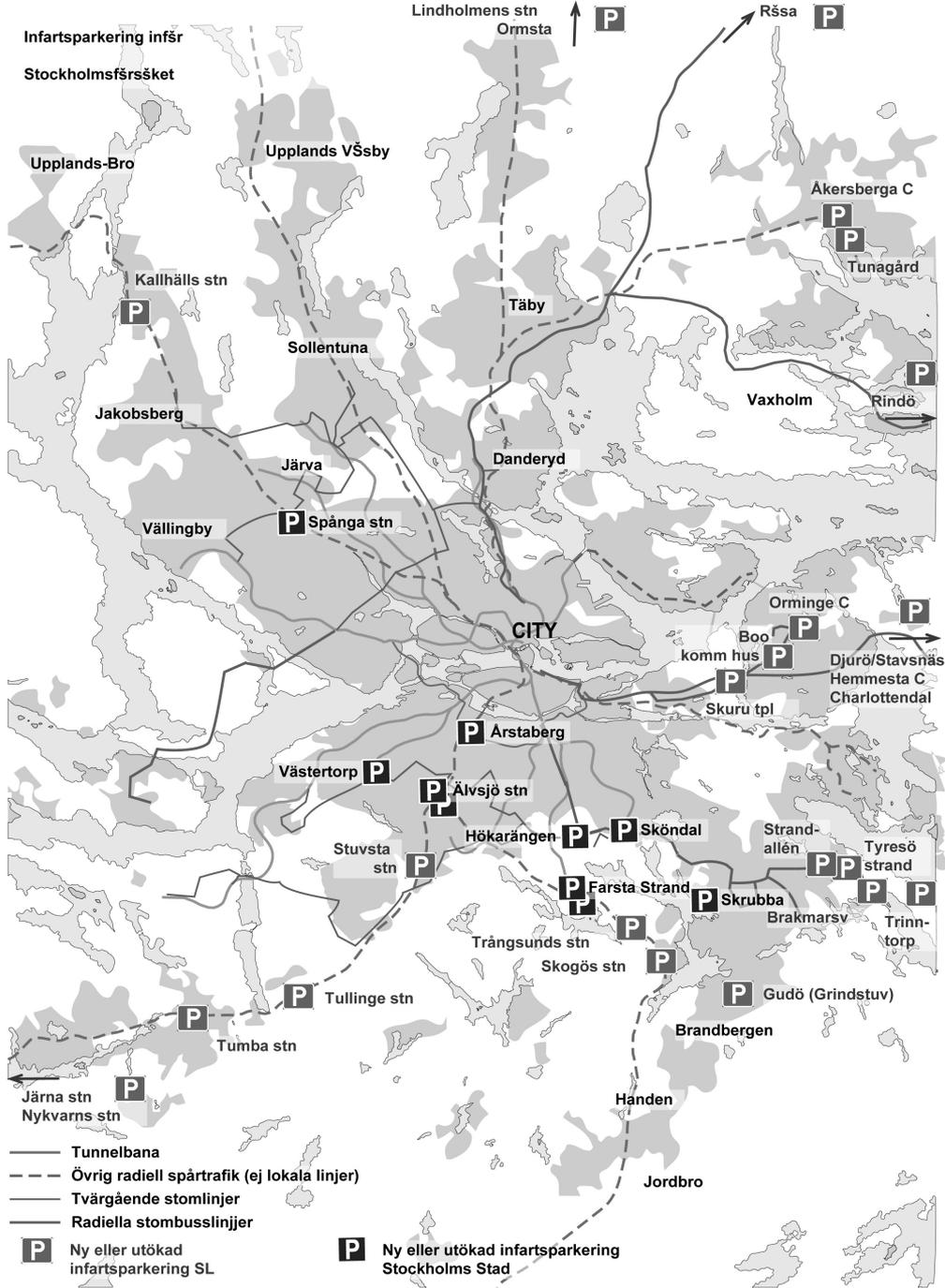


# Changed trafficflows



# New Park and ride facilities in the City of Stockholm

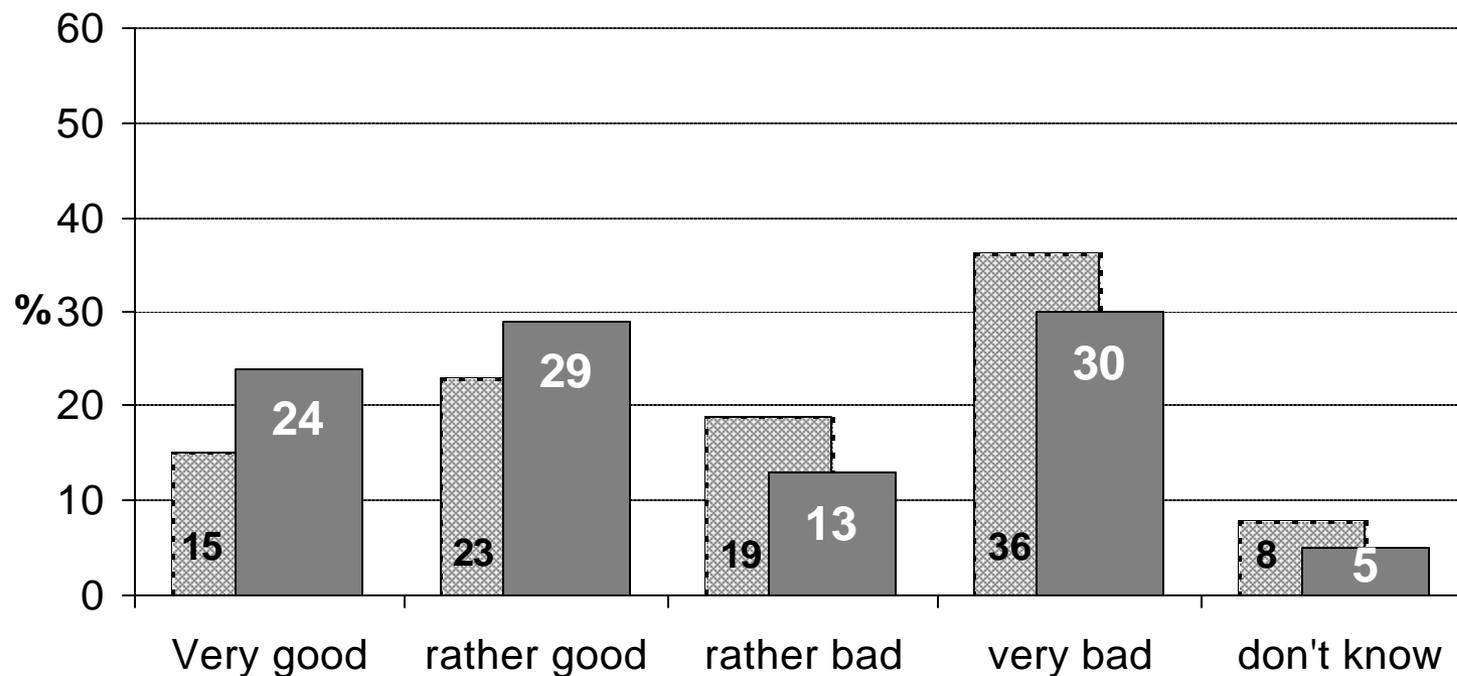




# New park and ride facilities in Stockholm County



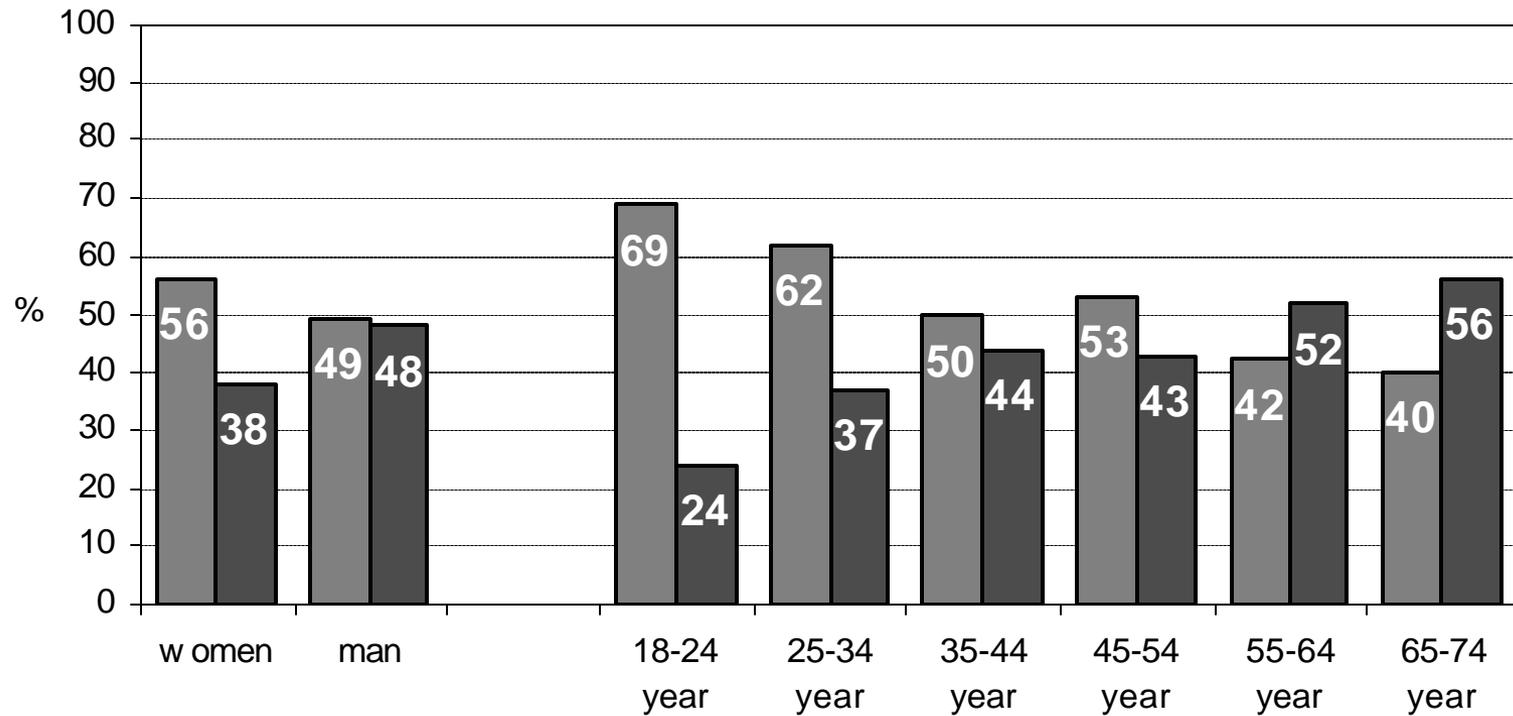
# Do You think it is a good or a bad decision to have a trial with congestion taxes in Stockholm?



# Attityd till försöket med miljöavgifter

(bas samtliga = 1600)

■ positiv ■ negativ



# Evaluation program

- Before and during the trial
  - Measuring period
    - before autumn 2004 (spring 2005)
    - during spring 2006
  - More complete analysis
- Monthly indicators
  - Measuring period
    - Monthly indicators starting in October 2005, ends June 2006
  - Selected indicators
- Go live
  - Measuring period
    - Public transport reinforcement, 22 august 2005 during the first 2 weeks daily
    - congestion charge, 3 January 2006 during the first 2 weeks daily



# Car Traffic

- Traffic flows/volumes (200 measuring points)
- Vehicle type distribution
- Vehicle-kilometres
- Car speed
- Travel times
- Share of parking spaces occupied
- Turnover from parking facilities



# Public transport (bus, underground, commuter train), bicycle and pedestrian

- Travel time on selected routes
- Speed on selected routes
- Number of passengers
- Vehicle occupancy
- Experienced quality
- Cycle traffic
- Pedestrian traffic



# Travel survey

- Longitudinal panel data, 36 000 respondents (greater Stockholm 1.7 millions)
- Travel diary
- Frequency, means of travel, starting point and final destination, purpose etc...
- Measuring period autumn 2004, autumn 2005 and spring 2006



# Business and Economic impacts

- Retail sales
- Trade and businesses with large numbers of visitors
- Sales turnover
- Contractors and driving schools
- Effects on taxi and transport services/delivery services
- etc



# Environment, Health effects, etc

- Air quality (oxides of nitrogen, fine particle matter and carbon dioxide)
- Emissions
- Exposure
- Noise levels
- Urban environment
- Traffic safety
- Attitude surveys (citizens and businesses)
- Cost benefit analysis
- Effects on regional economy
- Events affecting the evaluation program

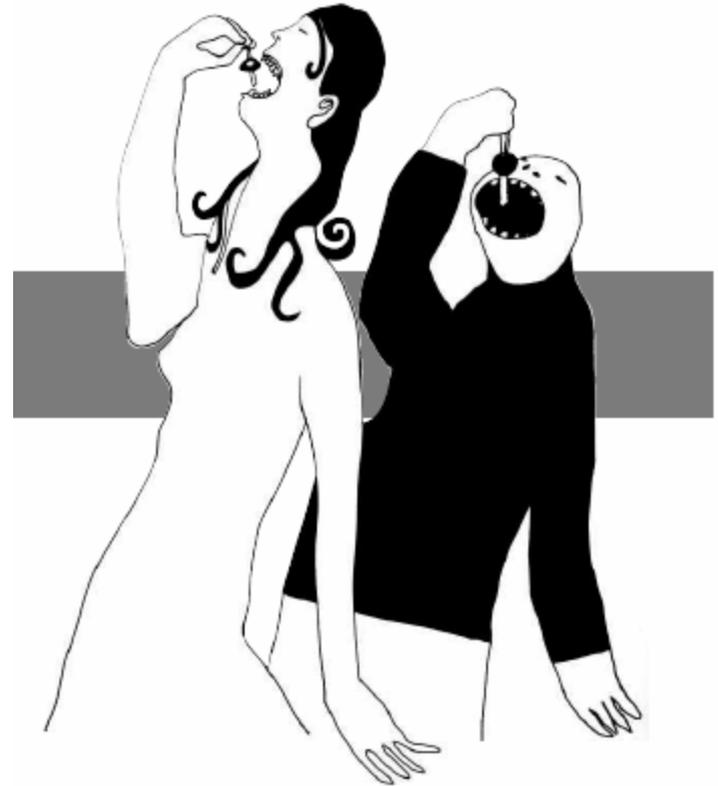




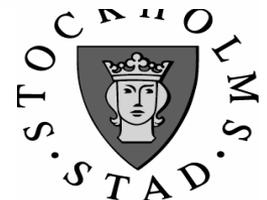
# What happens next?

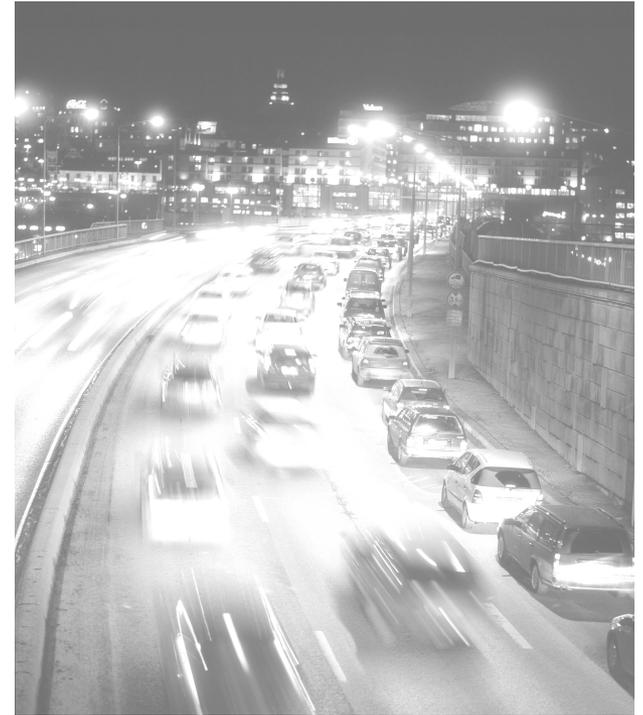
- Public Transport starts 22 aug
- Go live evaluation
- Congestion taxes
- Go live evaluation
- Monthly reports
- Summer 2006 final report
- 31 july 2006 Congestion taxes ends
- 17 sep referendum in Stockholm ( same day as the general election)

SKA INTE JAG KÖRA  
MIN BIL SÅ SKA INGEN  
ANNAN DET KELLER.



Stockholmsförsöket genomförs med målet att öka framkomligheten och förbättra miljön - inte stoppa bilarna.





# Information on the web

[www.stockholm.se/miljoavgifter](http://www.stockholm.se/miljoavgifter)

[www. Stockholmsforsoket.se](http://www.Stockholmsforsoket.se)

