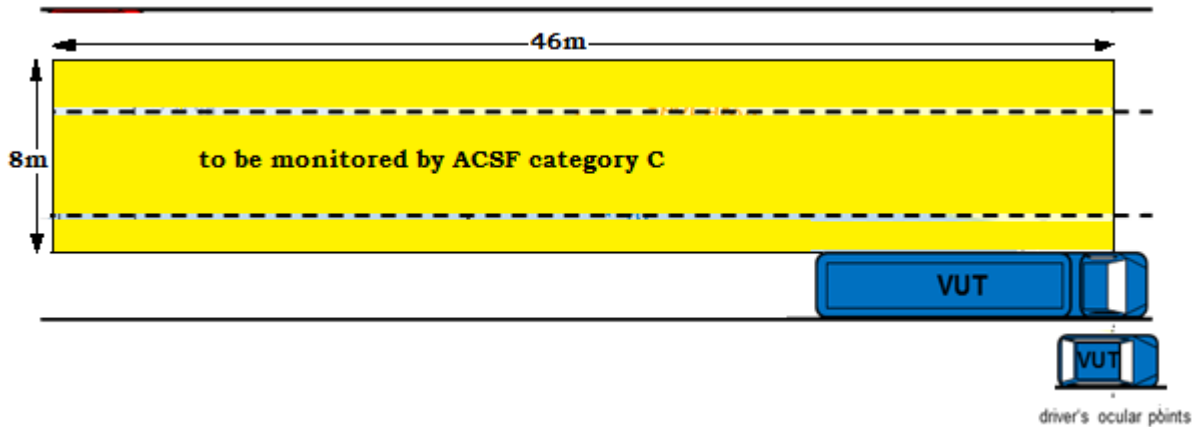


Enhanced Blind Spot Area to be monitored by a category C system

A range of 8m to the side and 46m to the rear of the vehicle shall be monitored by the system. This area is based on the requirements of field of vision in R-46 (devices for indirect vision).

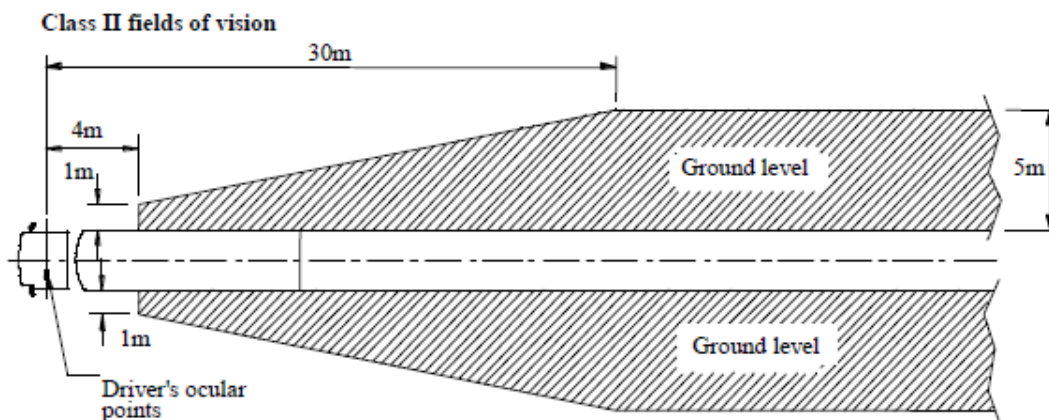


Background:

Trucks:

According to R-46 the main rear-view device on the driver's side shall be such that the driver can see at least a 5 m wide, flat, horizontal portion of the road, which is bounded on the passenger's side by a plane parallel to the median longitudinal vertical plane of the vehicle and passing through the outermost point of the vehicle on the passenger's side and which extends from 30 m behind the driver's ocular points to the horizon.

In addition, the road shall be visible to the driver over a width of 1 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 4 m behind the vertical plane passing through the driver's ocular points.

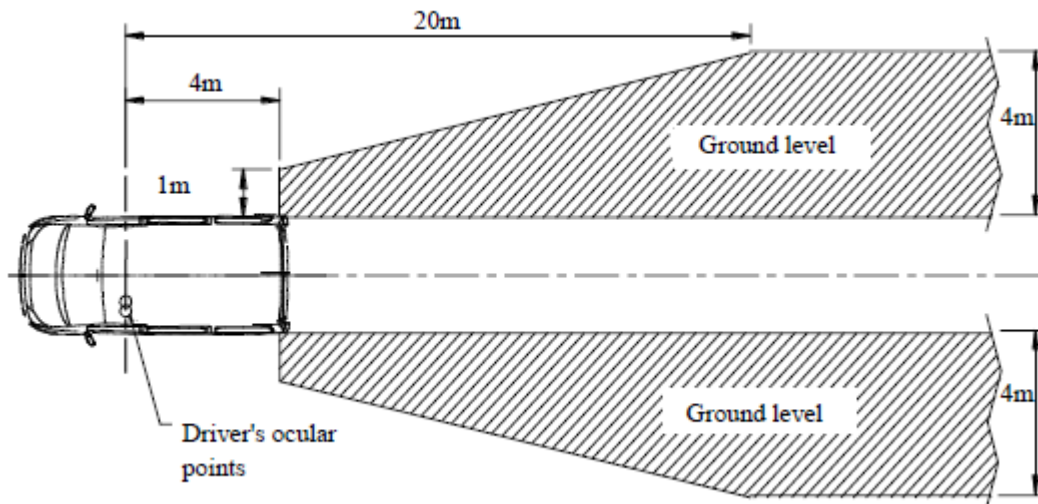


Passenger cars:

According to R-46 the main rear-view device on the driver's side shall be such that the driver can see at least a 4 m wide flat, horizontal portion of the road which is bounded by a plane parallel to the median longitudinal vertical plane passing through the outermost point of the vehicle on the passenger's side and which extends from 20 m behind the driver's ocular points to the horizon (

In addition, the road shall be visible to the driver over a width of 1 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 4 m behind the vertical plane passing through the driver's ocular points.

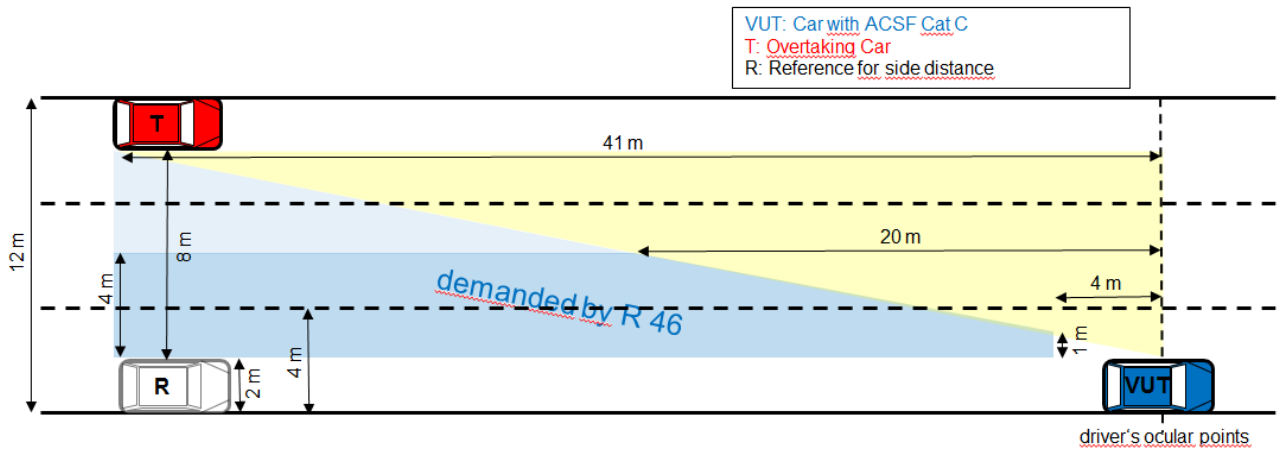
Class III fields of vision



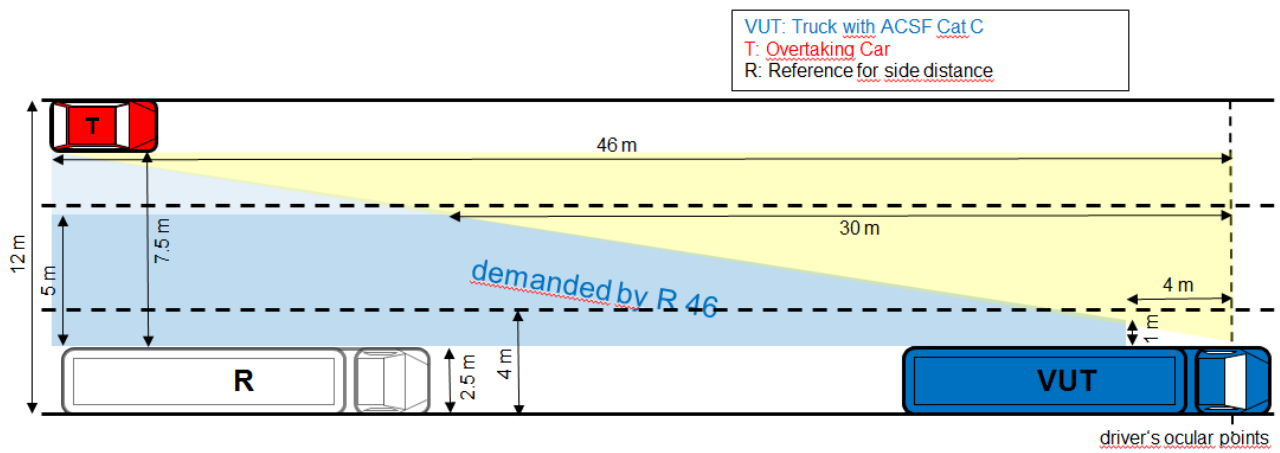
Based on the assumption that the category C system shall monitor a width of 2 lanes to the side (=7,5m for N2, N3 and 8m for M1), we adapted the field of vision (see sketches above) from 4m and 5m respectively to 8m (M1) and 7,5m (N2, N3). In consequence the width of 8m is reached at a length of 41m and the width of 7,5m is reached at a length of 46m to the rear.

Hence – depending to the vehicle category – a minimal range of 46 x 7,5 m or 41 x 8 m should be monitored by the system (measured from the driver's ocular points).

For simplification the worst case values were taken to define one general minimal monitoring range of a category C system, which shall be valid for all vehicle categories.



Calculation for M1, N1



Calculation for M2, M3, N2, N3