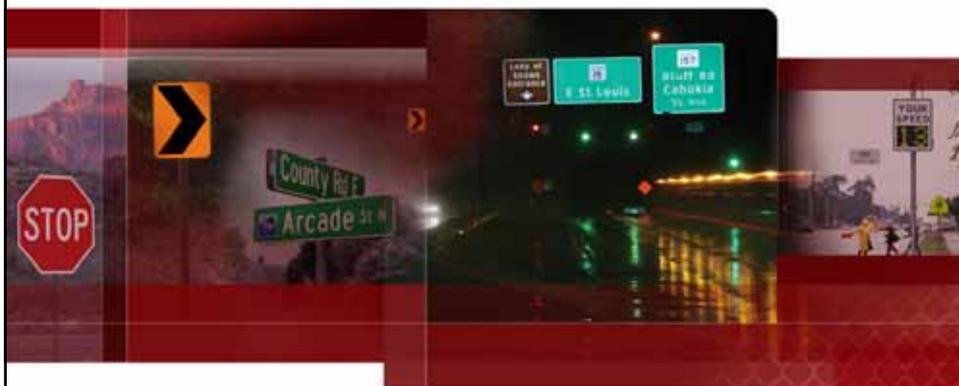


Wide Observation Angle

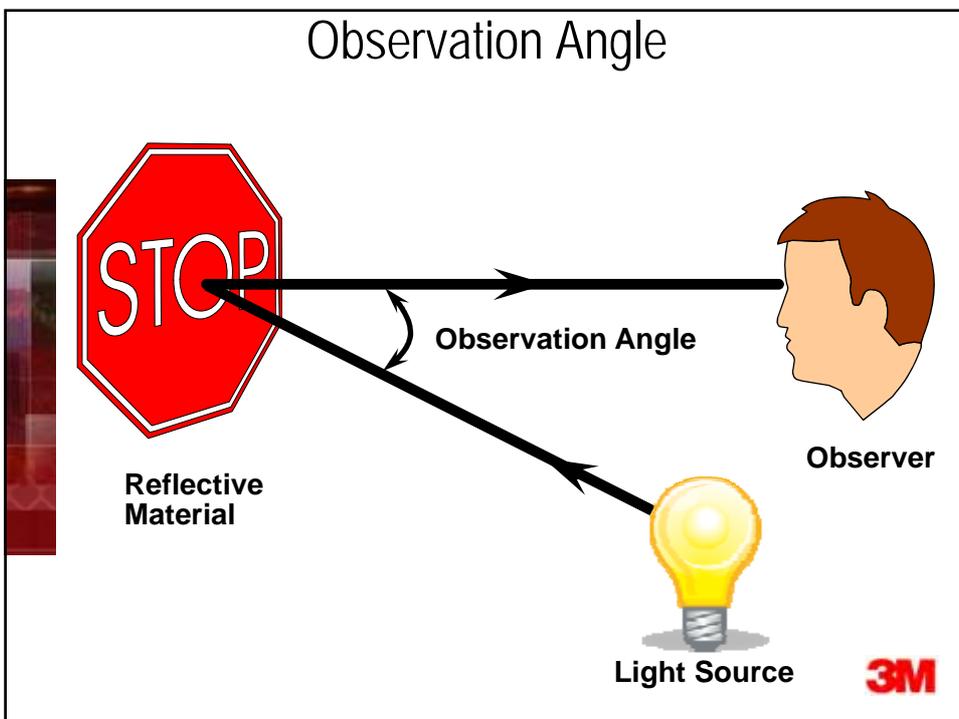
Getting The Reflective Sheeting You Really Want

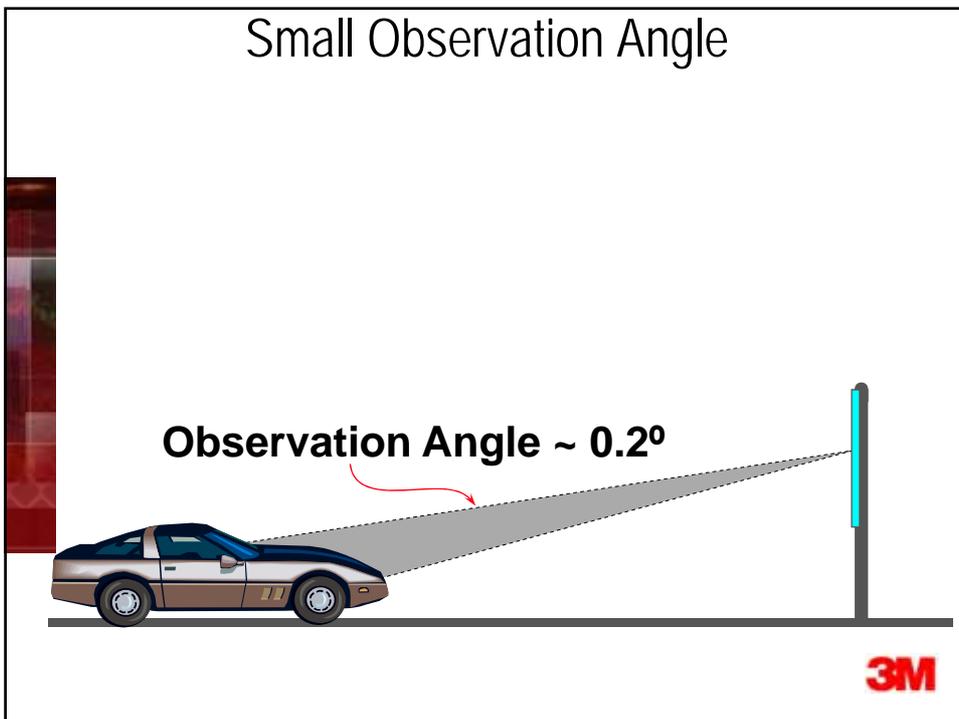
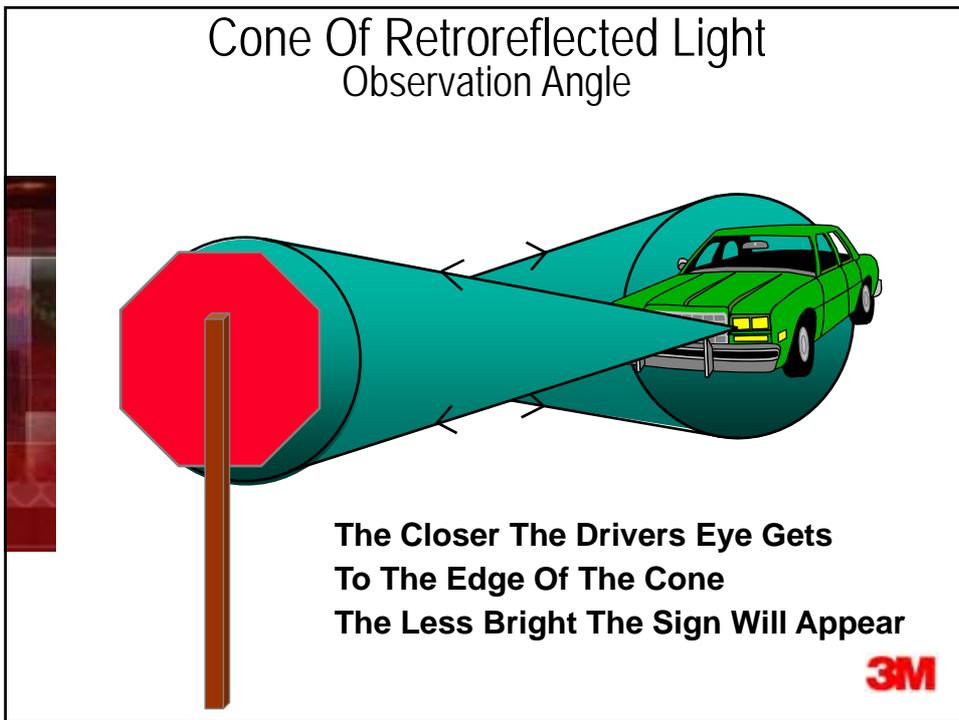


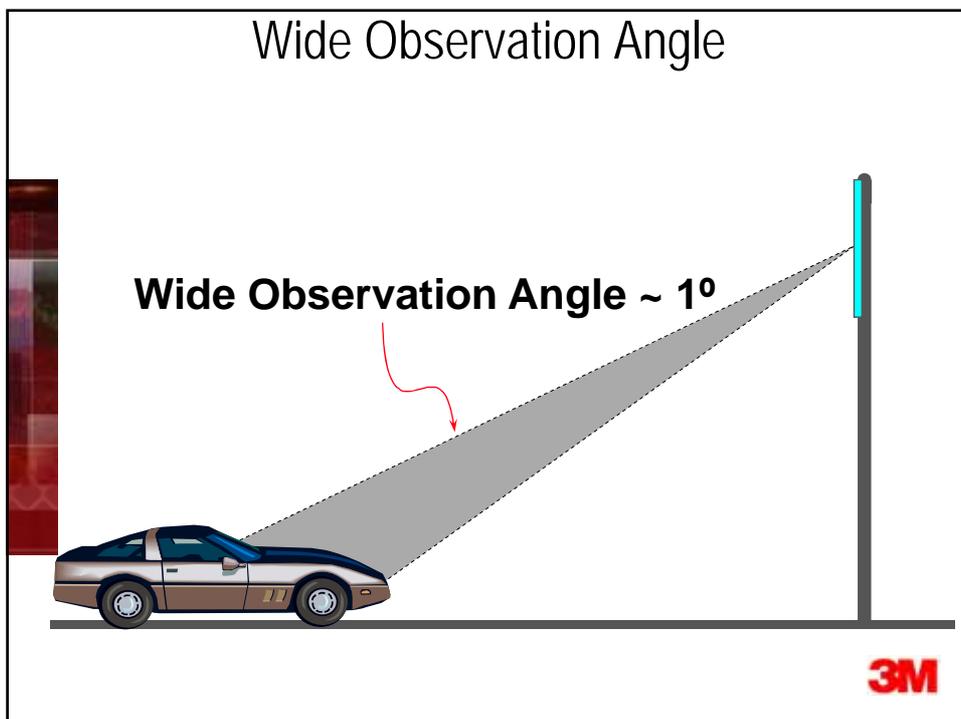
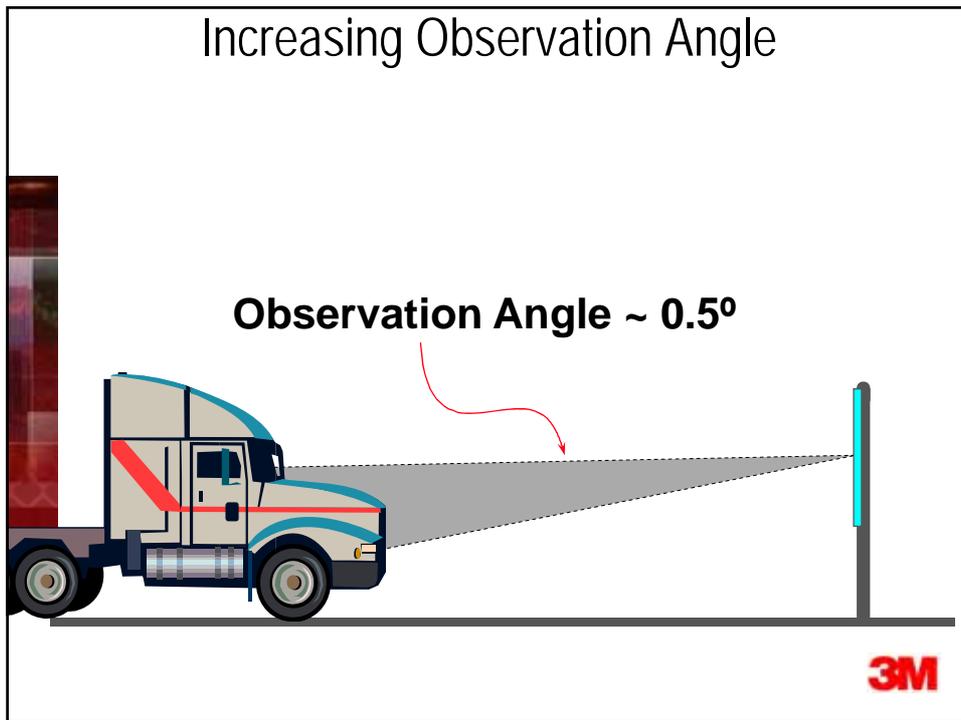
Michael Holderness, 3M New Zealand Ltd.



Observation Angle





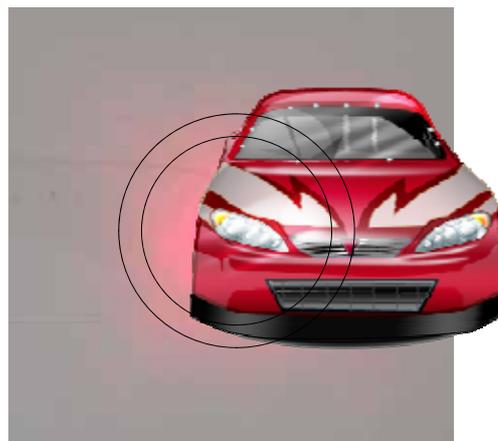


Laser Demo of Observation Angle



3M

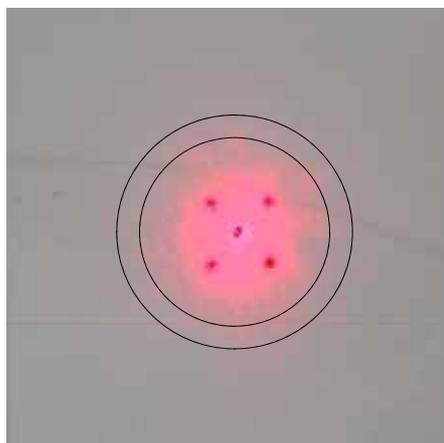
3M Diamond Grade DG³ Reflective Sheeting



Exceeds Class 1W

3M

Competitive Product



Meets Class 1W



So Where is Wide Observation Angle Important?

- Signage needing wide observation angles include:

- Motorway Signage
 - Overhead Gantries
 - Ground Mount (from the inner lanes of a multi-lane highway)



- Regulatory signs
 - Stop
 - Give Way



Reflective Performance

- For a reflective sheeting to perform adequately for all drivers at all observation angles it must be engineered that way
- 3M Diamond Grade DG³ Reflective Sheeting exceeds the requirements of Class 1W of the current standard

Observation Angle	Reflectivity of DG ³ *	AS/NZS 1906.1 Class 1W*
0.2°	570	380
0.5°	400	275
1.0°	120	55

* At 0.4° Entrance Angle



AS/NZS 1906.1:2007

- Class 1W was added in the last update of the standard in 2007
- There was discussion within the committee at the time over the figures in the table
- AS/NZS 1906.1 Class 1W does not accurately reflect the current needs of the driver
- The result was a table that had lower numbers than comparable standards in other countries like the US or Europe
- Consequently many RCA's in both NZ and Australia ask for signage to be compliant to both this Standard and the US ASTM standard or the RCA's release their own table for compliance
- Industry has called for a review of the current standard with a submission from a number of Australian RCAs



Get What You Want

- To get the reflective performance you really want
You need to:
 - Choose the correct sheeting for the job
 - Apply wide observation angle only to signs that need it
 - Specify it in your tender document
 - Preferably with performance metrics like the tables from higher performing standards like ASTM or the Australian RTA specification
 - Check for compliant tenders
 - Audit the final signs in the field

