

AS/NZS 1906.1 Update



> Paul Matuschka - Reflective Solutions

The New Zealand/Australian Standard

Retroreflective materials and devices for road
traffic control purposes

Part 1: Retroreflective sheeting

Standard revisions

AS/NZS 1906.1 revisions

- 1993
- 2007
- 2015

What's changing in the 2015 revision?

- Renaming of sheeting Classes
- The introduction of Class 1X

Why the changes?

- To more closely align with sheeting performance.
- To take advantage of the latest technology.

New sheeting class names

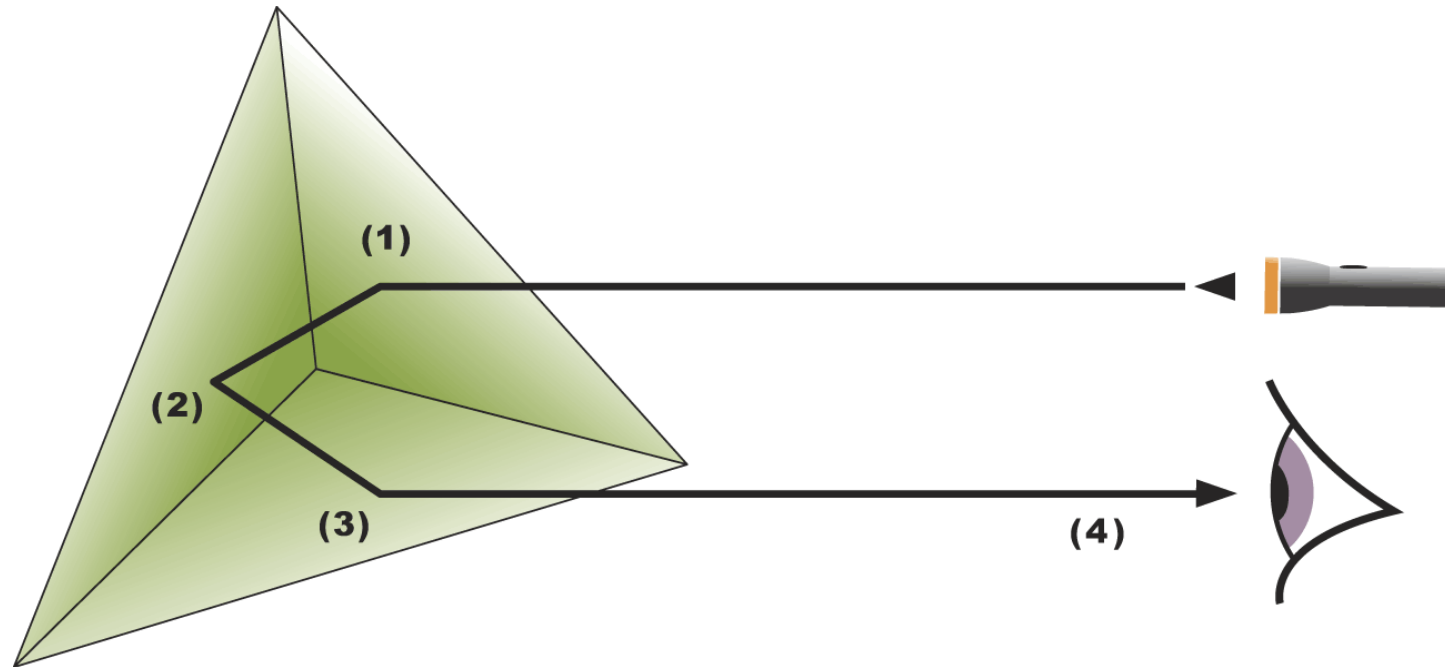
Current sheeting Class	Proposed sheeting Class
Class 2	Class 100
Class 1	Class 200 (HI Glass bead)
	Class 300 (HI Prismatic)
Class 1W	Class 400
Class 1X	Class 500

What is Class 1X?

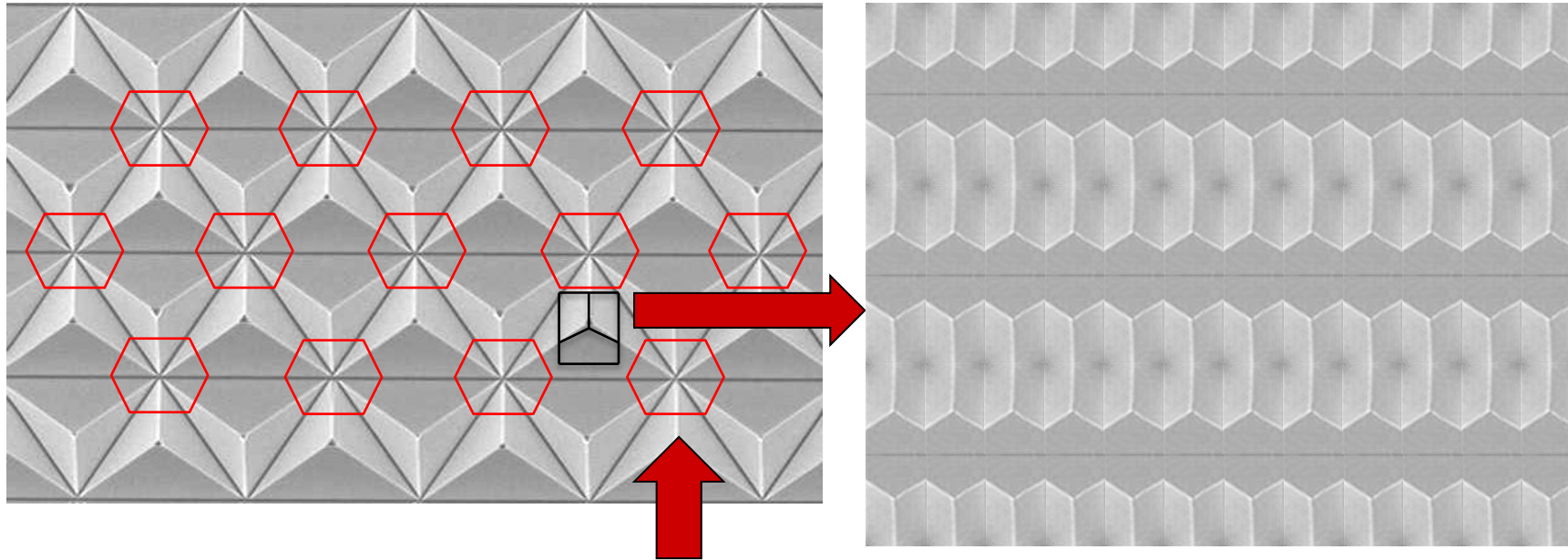
- Class 1X is a true 'WOA' (Wide Observation Angle) specification.
- Class 1X retro reflective sheeting uses full cube technology.

Understanding the Technology – Prismatic

- The light internally reflects 3 times, and optimised geometry of the prisms directs the light back to the light source.

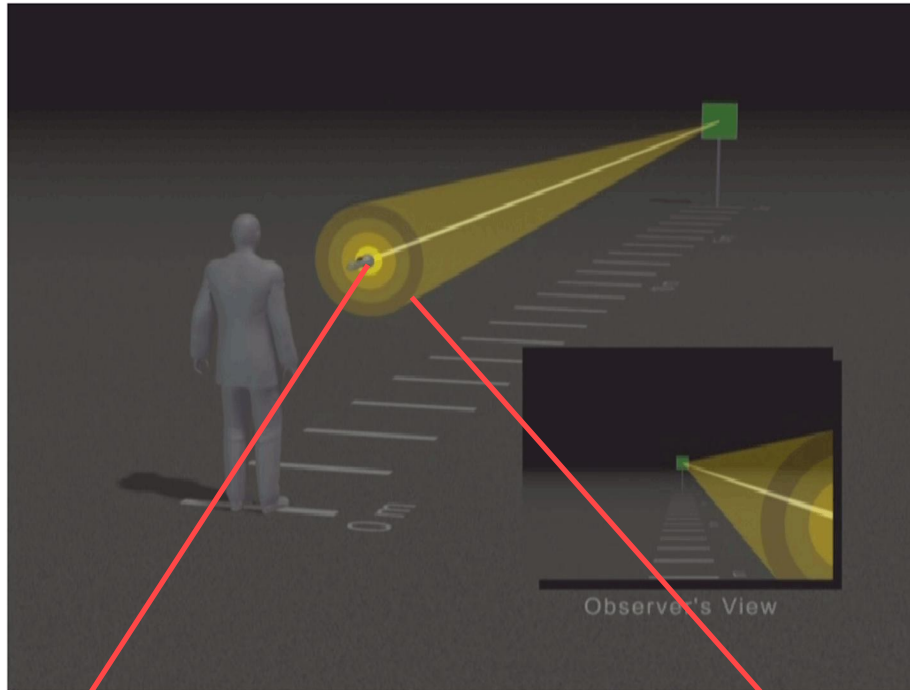


Understanding the Technology – Full Cube



- Traditional triangular prisms have areas of inefficiency
- Only the best parts of a triangular prism are used.
- The resulting rectangular prism (i.e. full cube) is 100% efficient

Understanding the Technology – cone of retroreflection



How Retroreflective sheeting functions:

Sheeting materials return a cone of light to the light source.

To see the sign, the observer (the driver) must be within the cone of light.

Returned light is strongest at the center of the cone
Light intensity weakens towards the outer-edges of the cone

The effect on sign brightness

What does this mean for New Zealand drivers? Will it be too bright?

- Full Cube technology is 100% efficient, so we have more light available to send back to the driver.
- Light intensity at typical viewing angles remains the same.
- The additional light is noticed at wider observation angles.
- Already in use for disadvantaged signs e.g. Overhead gantry signage, and work zone applications.

In conclusion

What does this mean for Traffic Engineers and Road Authorities?

- It doesn't mean you'll get different reflective sheeting products.
- No changes in practice, if the changes to the standard are adopted.
- Pending full adoption by the NZTA, nomenclature changes will be required when writing new contracts.

Questions





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