

---- *Self explaining roads for new land development*

**act now for  
tomorrow**  
turning vision into a reality

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**A review of NZS 4404:2004 –**  
NZ Standard for Land Development and Subdivision  
Engineering.

*“it is widely used for technical compliance for the  
subdivision and development of land where these activities  
are subject to the Resource Management Act 1991”(RMA).*

**From this**



**To this**



**Self explaining roads**

*What is the vision and its reality? The challenges  
and the opportunities for tomorrow?*

**The vision –**  
came from New Zealand Transport Agency, Local Government  
New Zealand,

**Reality?**  
NZTA and LGNZ sponsoring a review.

*The challenges and the opportunities for  
tomorrow?*

**The challenge**  
Standard last reviewed in 2004.

**The opportunities for tomorrow**  
to achieve 'self explaining roads'

**What is the vision and its reality?**

*This revision will significantly change reality –*

*The revision committee -  
Made up of representatives selected by 16 organisations.*

**What is the effect of Climate Change on the transport industry?**

**Climate change effects** not considered in NZ 4404

**Changed Standard will** require designers to consider;

- rainfall patterns
- sea level rise
- risk of pollutants
- natural drainage

**What changes do we need to make?**

**Change to**  
*integrate roads  
& storm water  
management*



**What changes do we need to make?**

**Change** from designing  
*earthworks and roads,  
then pipe locations.*



**What changes do we need to make?**

**Change to** storm water  
*management as a  
significant feature.*



**What does the future look like?**

**The current standard focuses road design on;**  
*- achieving movement and capacity*

**The future will encapsulate self explaining roads**

**How do we get there?**

**Road design focused in future on** achieving *safe operating speed links* integrated with *places*.



**How do we get there?**

**The standard encapsulates** self explaining roads



**How do we get there?**

**Recognise a road functions to provide;**

- access to places
- place for interaction.

**Recognising road place function priorities rather than motor vehicle priorities.**

**How do we get there?**

**Recognise** Four *area* contexts;

- rural
- suburban
- urban
- centres



**Plus**

**How do we get there?**

**Four land use types;**

- live and play
- shop and trade
- work and learn
- make, grow and move

**These sixteen places provide the context**

**How can we affect the right outcomes and manage change?**

**NZS 4404 Table 3.1 has a key role in road design;**

- is used as a minimum standard
- becomes a straitjacket
- encourages uniform outcomes ,
- not considers *place* fully and
- *vehicle centric* - not *place centric*.

**How can we manage change?**

by replacing Table 3.1 with a **Place** based table;

- **place context**
- using **place** to set the **operating speed**
- varying widths
- being **place context centric**

**What is urban design – How will we live work and play?**

**The new based on place context will lead to many different road designs.**

For example -

A suburban, **live and play**,

Compared with -

A suburban, **work and learn**,

**How will we live work and play?**

**For Local road link context -**

- live and play has;**
- 15m min reserve width
  - Max grade 12.5%
  - 1.5m footpath both sides
  - parking within 2x2.75 - 3m lanes
- work & learn has;**
- 18m min reserve width
  - Max grade 10%
  - 3m footpath both sides
  - parking & loading bay plus 2x3m lanes

**For both these Local Road Links** however;

**Live and play** has a sealed road 5.5 to 7m wide and 9.5 m for landscape &

**Work and learn** has a sealed road up to 11m wide and 1.0m for landscape

**Note**

**Local Area Traffic Management** to achieve a 40km/h **self explaining roads**.

**Does it take evolution or revolution in how we think about Transport?**

**Will the public like;**

- narrower roads,
- slower speeds and
- shared roadways.

**Will the developer like;**

- little if any reduction in legal width,
- to provide for water systems,
- traffic management and
- parking and loading spaces.

**What will it mean for New Zealand cities ?**

**These new provisions will mean;**

- flexible designs,
- sustainable features,
- innovative solutions and
- less costly processes,

**And for traffic professionals –**

- less need to justify **self explaining roads**,
- better solutions.



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new land development*  
WAKA KOTAHĪ

***What next ?***

***Draft Standard publicly notified later this year***

***Please study the draft and make a submission.***

***Questions?***

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