Berry Bypass Urban Design Strategy

Berry Bridge and Northern Interchange

7 March 2012

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Precinct Location Plan

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North St.
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BERRY SMASH REPAIRS
PANEL BEATING SPRAY PAINTING
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GUEST HOUSE
MOTEL
NO RIGHT TURN
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Exhibited Design

Prestressed concrete bridge option – view from Woodhill Mountain Rd

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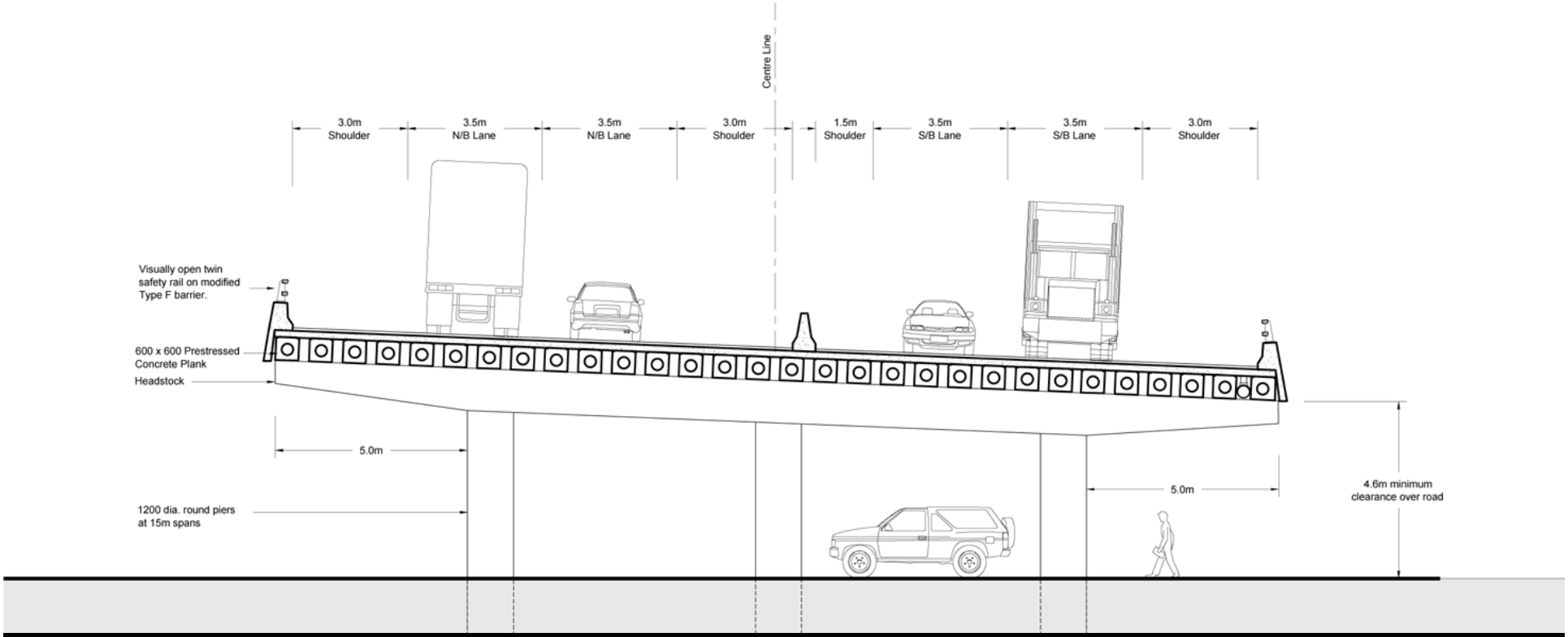
Exhibited Design



Prestressed concrete bridge option – typical cross section

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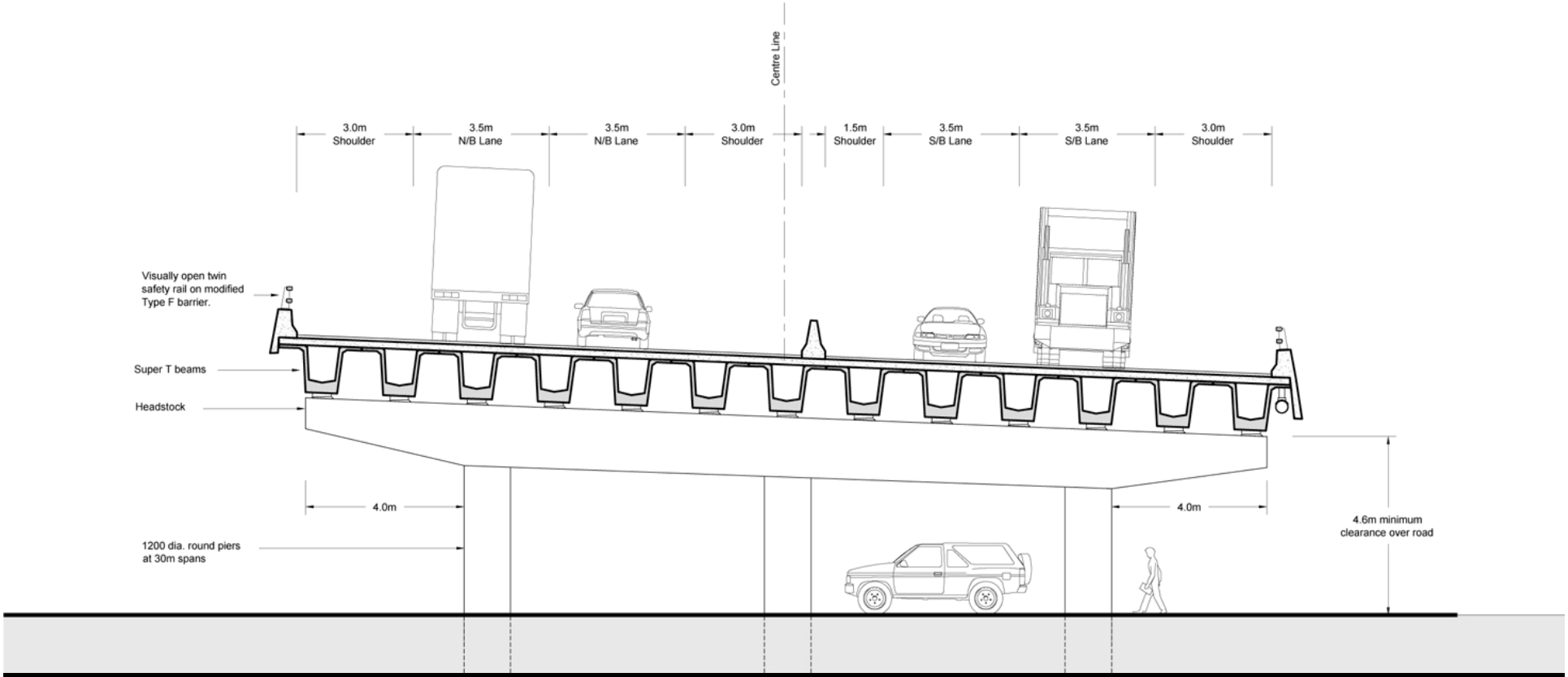
Super T concrete bridge option – view from Woodhill Mountain Rd

Exhibited Design



Super T concrete bridge option – typical cross section

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Exhibited Design

Woodhill Mountain Road crossing bridge height comparison

Figure 6.40 Artist's impression from viewpoint 5 - Bypass of Berry

Berry Bridge

Summary of Berry Bypass Alignment Issues Report, Jan 2012

Issues	Design Response
Visual Impact	Develop urban and landscape reference design, and bridge architecture.
Noise Mitigation	Minimise expansion joints and adopt low noise pavement.
Design Process	Involve NSW Government Architect in design review process.
Heritage Response	Develop design options to clarify preferred community design direction.

Overall Objective

Integrate the Berry Bridge and Northern Interchange structures and earthworks within the landscape of northeast Berry.

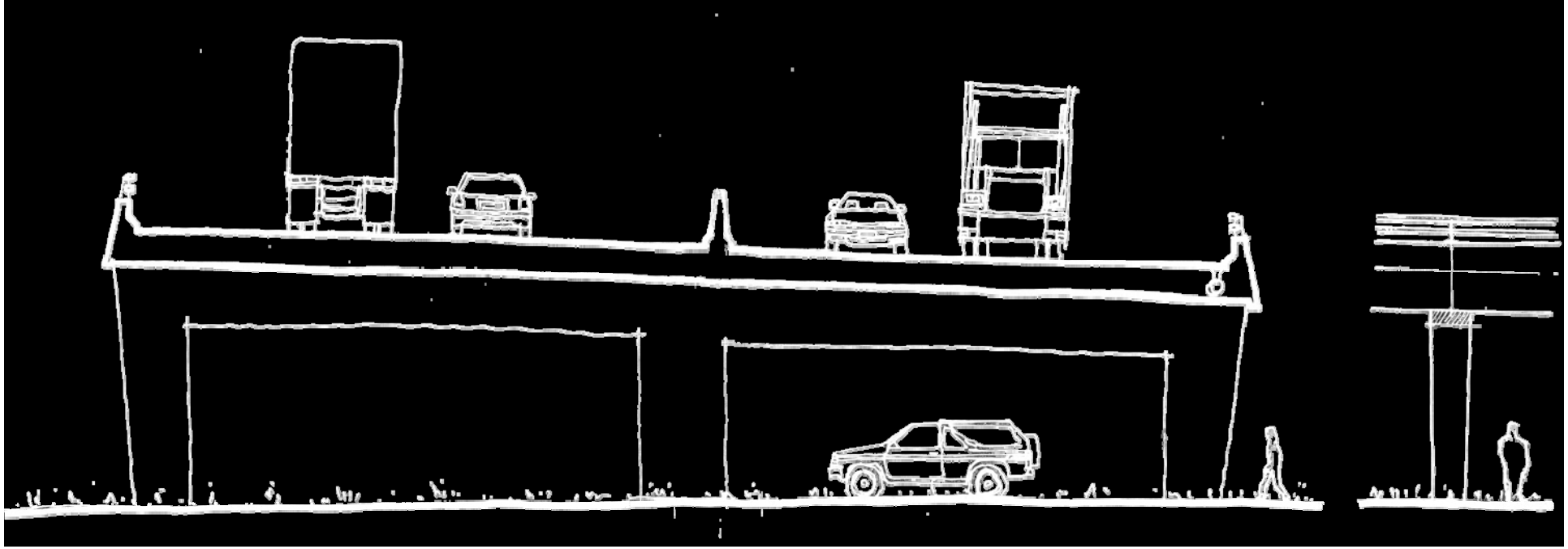
Berry Bridge - Urban Design Principles

- Develop bridge architecture that complements the pastoral setting.
- Maximise retention of existing screen landscape.
- Minimise bridge piers and profile.
- Keep undercroft areas open, ventilated and with access to light.
- Maintain a consistent bridge profile without awkward junctions, steps or faceting.
- Explore opportunities to reflect the unique character of Berry and the Shoalhaven.
- Utilise locally sourced stone for abutment linings and scour protection.

Berry Bridge Sketch Alternative 1

- Prestressed concrete planks (15m span)
- Integrated headstocks
- Cost effective rectilinear frame support.

Typical Cross Section **Elevation at Pier**



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Advantages:

- Smoother vertical curve/less faceted
- Thin profile
- Attractive integrated support piers
- Cost competitive overall

Disadvantages:

- More columns, closer together

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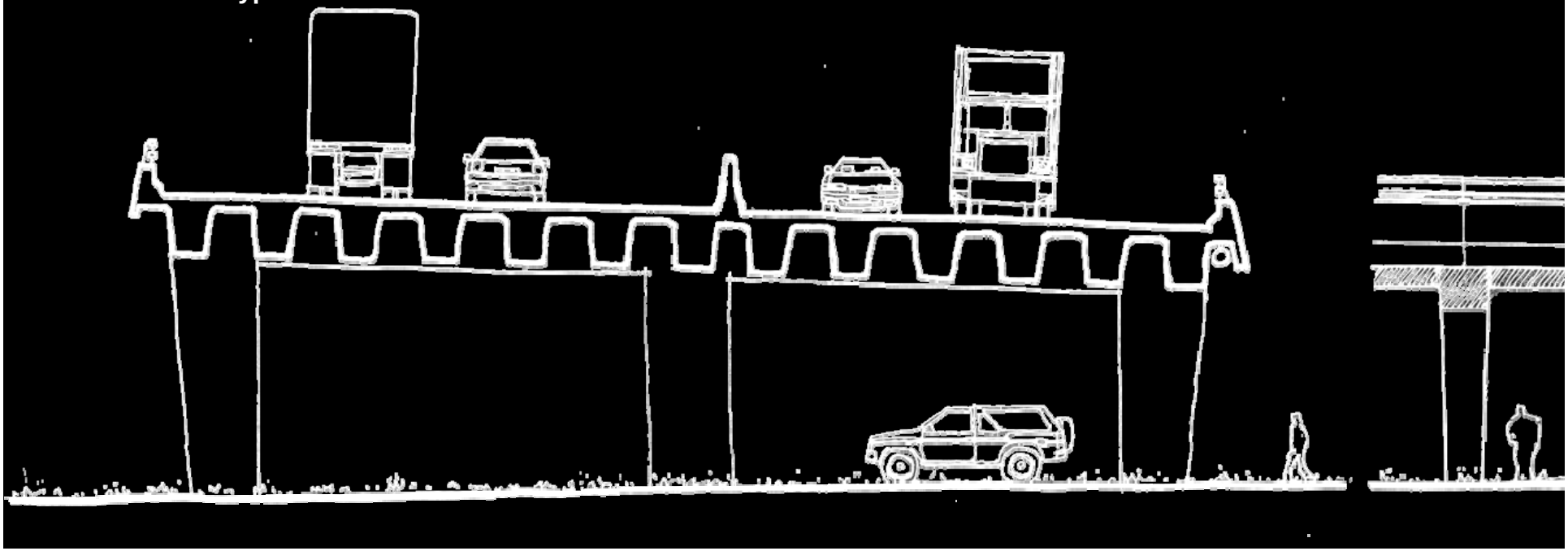
Berry Bridge Sketch Alternative 2

- Super ‘T’ concrete beams (35m span)
- Integrated headstocks
- Headstock recessed in depth of beams
- Cost effective rectilinear frame support

Typical Cross Section

Elevation at Pier



Advantages:

- Attractive integrated/recessed support piers
- Less columns than with Planks

Disadvantages:

- Less columns than with Planks
- Faceting of vertical curve may cause difficult junctions

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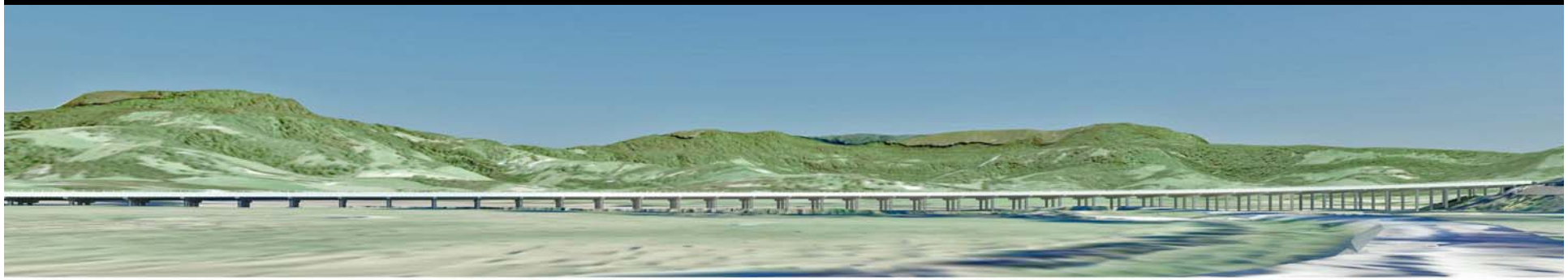

Plank Bridge

Super T Bridge

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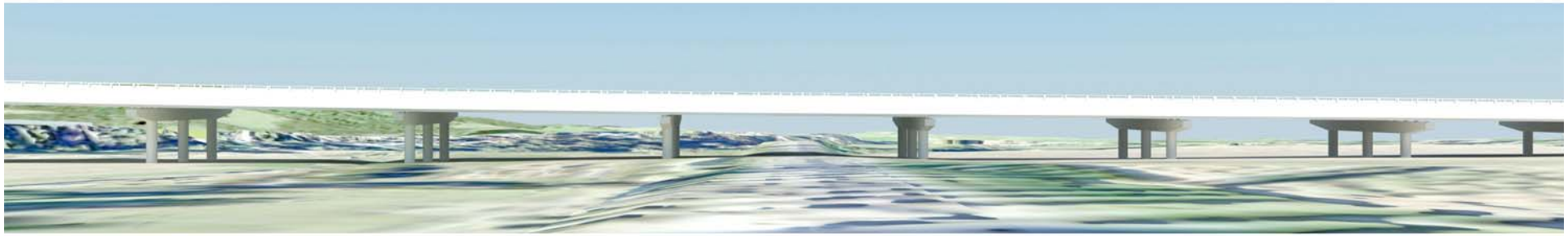
Plank Bridge



Super T Bridge

Northern Interchange

Summary of Berry Bypass Alignment Issues Report, Jan 2012

Issues	Design Response
Second North Bound Off Ramp	Investigate traffic demand for second north bound off ramp.
Truck Noise Impact	Road design optimised to reduce heavy vehicle braking.

Northern Interchange - Urban Design Principles

- Minimise the visual presence of interchange structures.
- Minimise impacts on existing properties and access.
- Minimise the interchange footprint.
- Retain mature trees along the highway.
- Consider the sequential views on the northern approach.
- Contribute to the township arrival/departure experience and to legibility.
- Develop Berry township entry signage strategy.
- Frame rural and township views from elevated vantage points.
- Relocate Berry Memorial sculptures.

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Berry bypass revised alignment 6.12.2011

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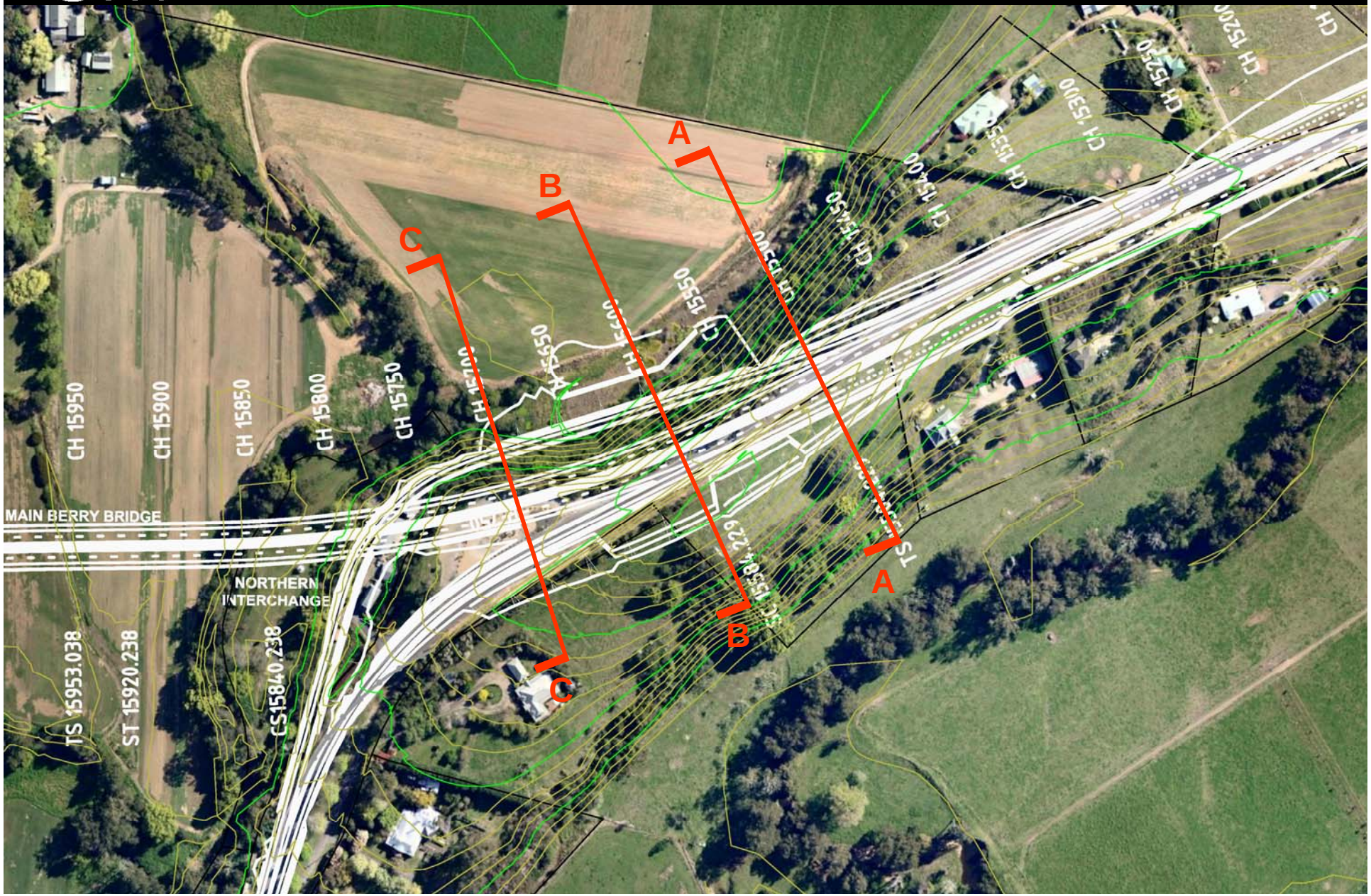
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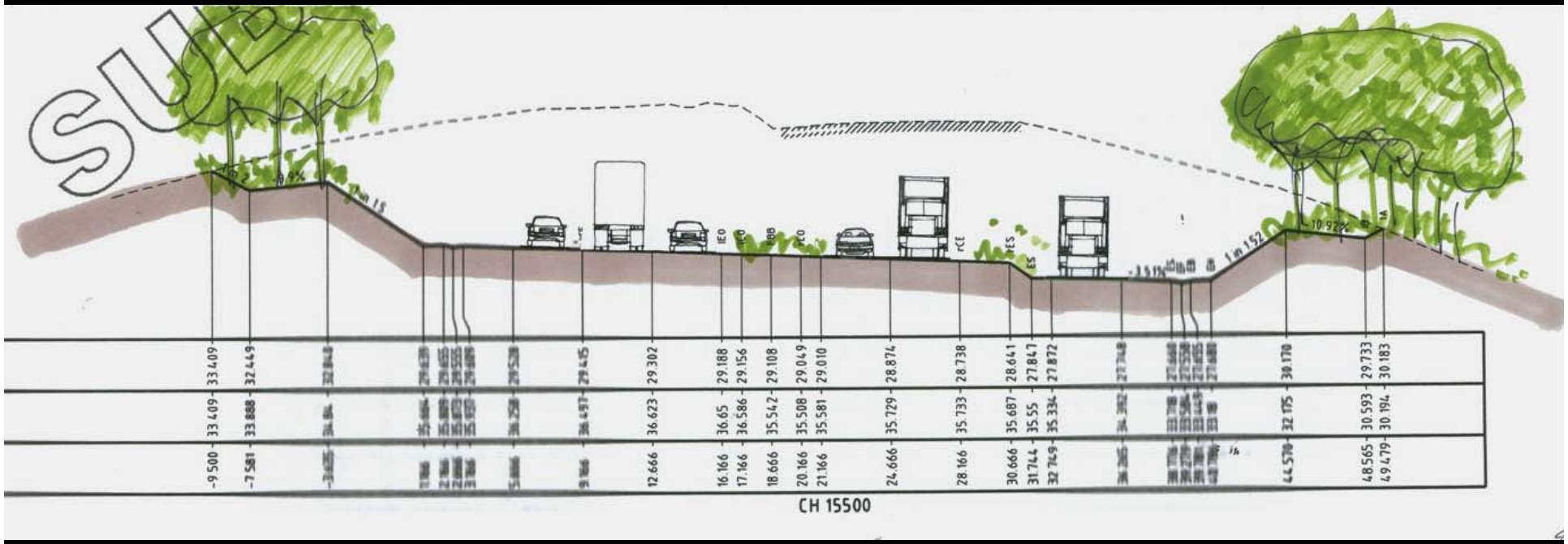

Section A

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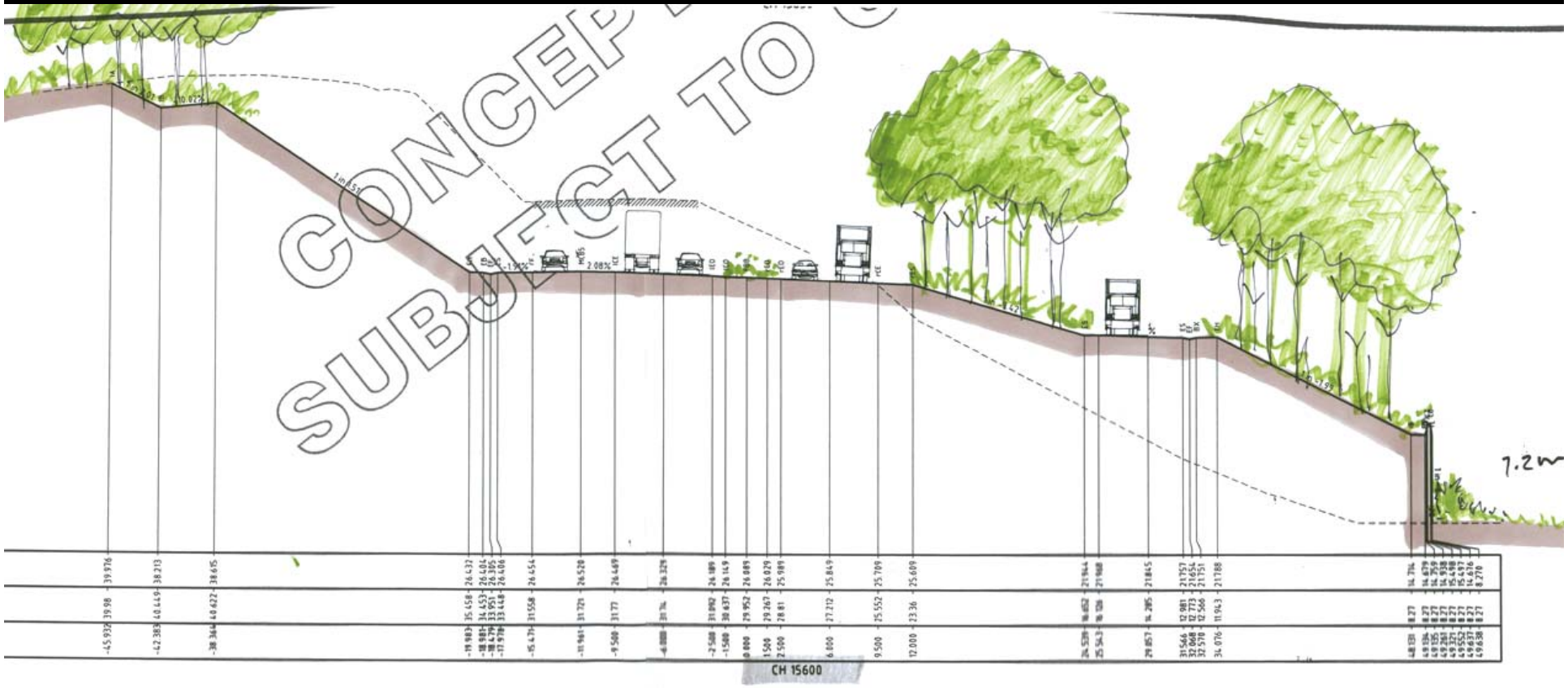

Section B

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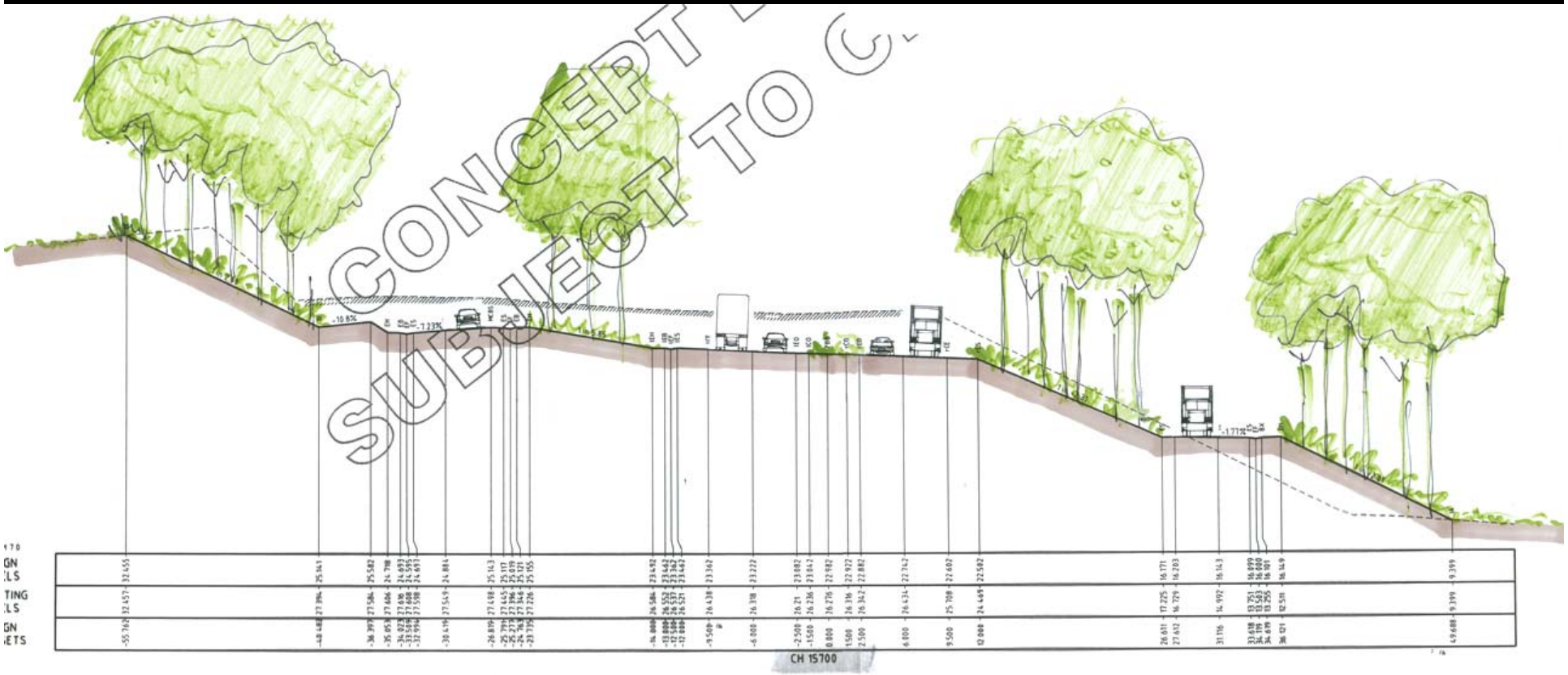

Section C

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