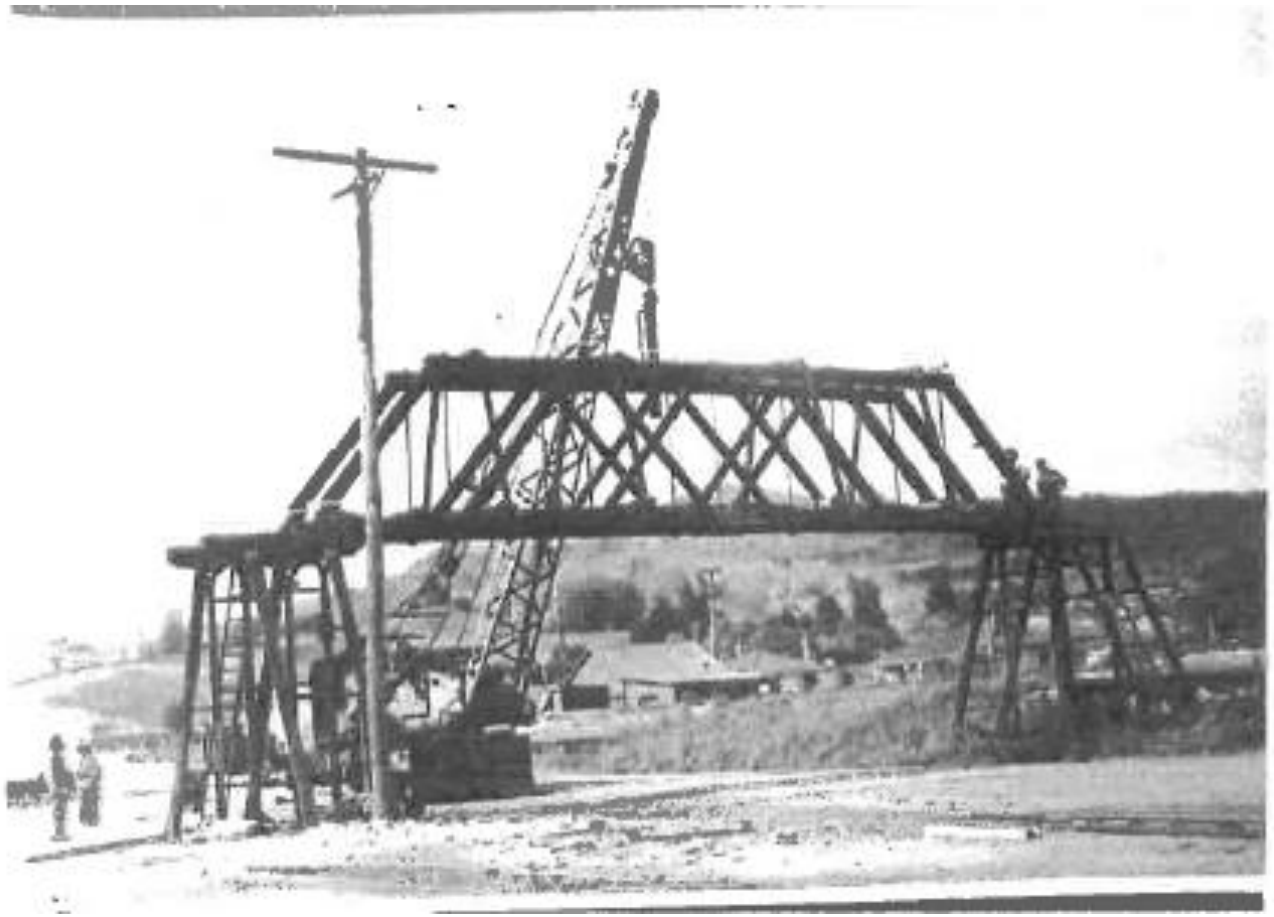
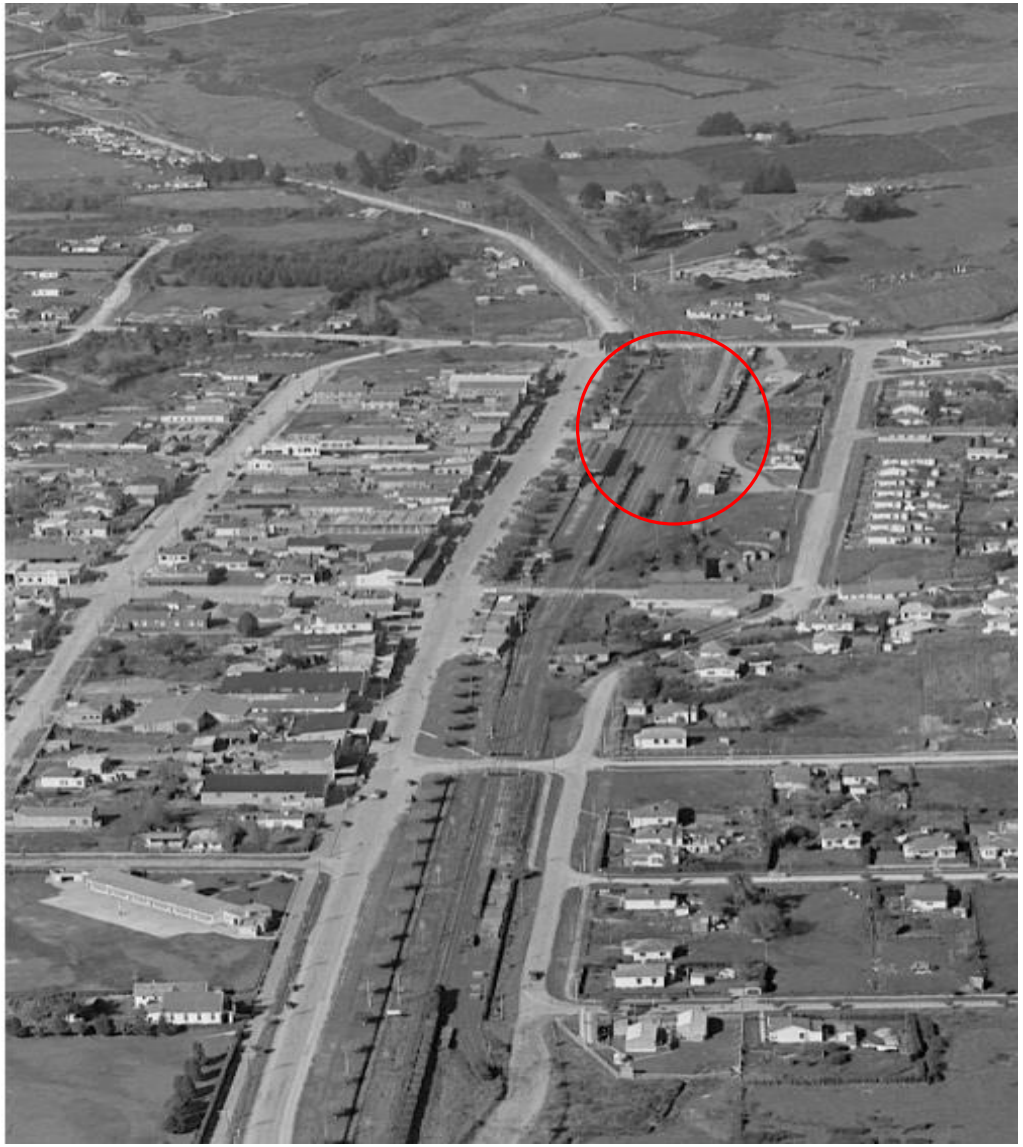
Pedestrian Bridge Replacement Project
Te Kuiti

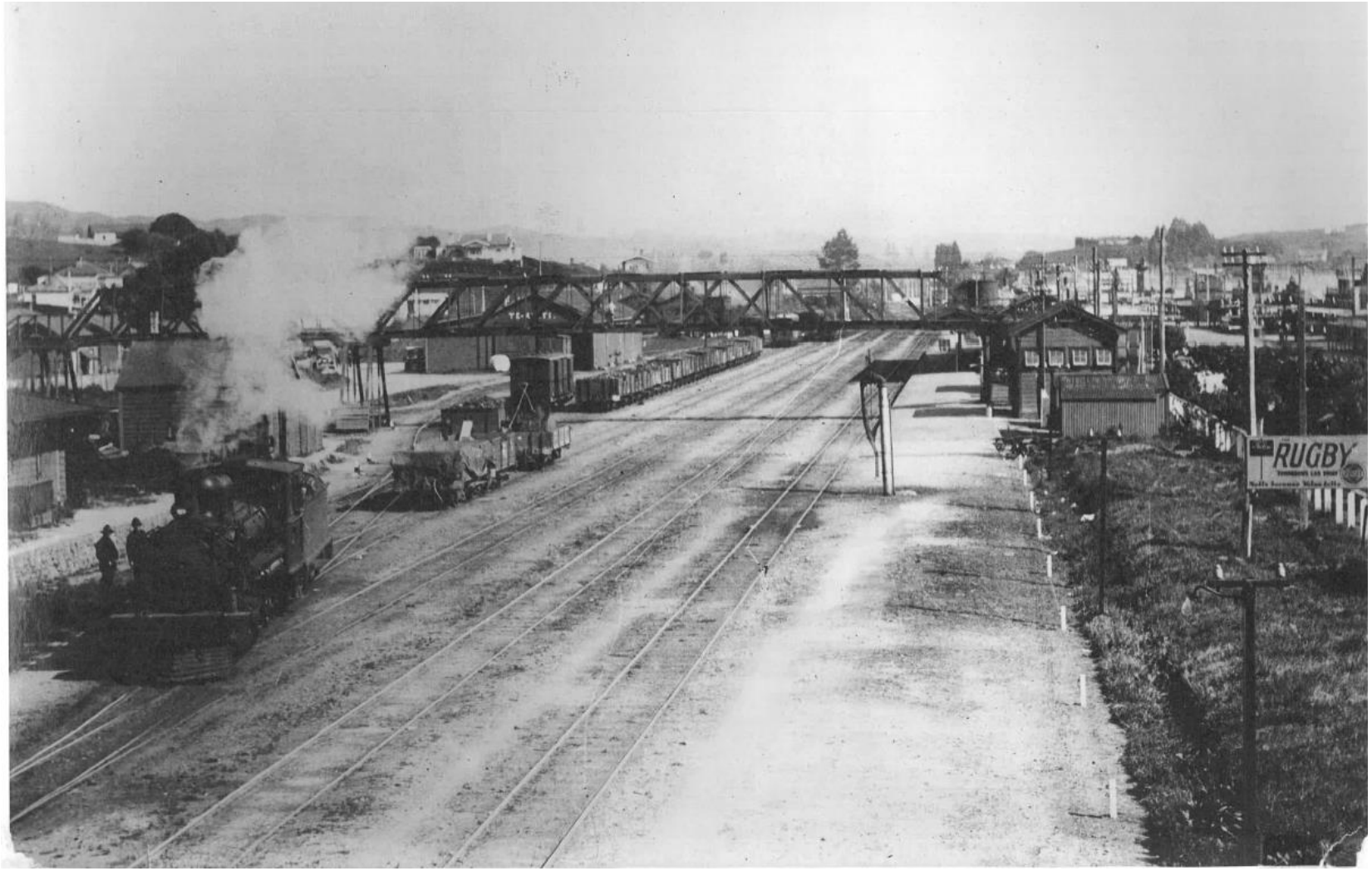
Some history…..the original, late 1800's



Te Kuiti – 1947. Looking south. Original bridge location

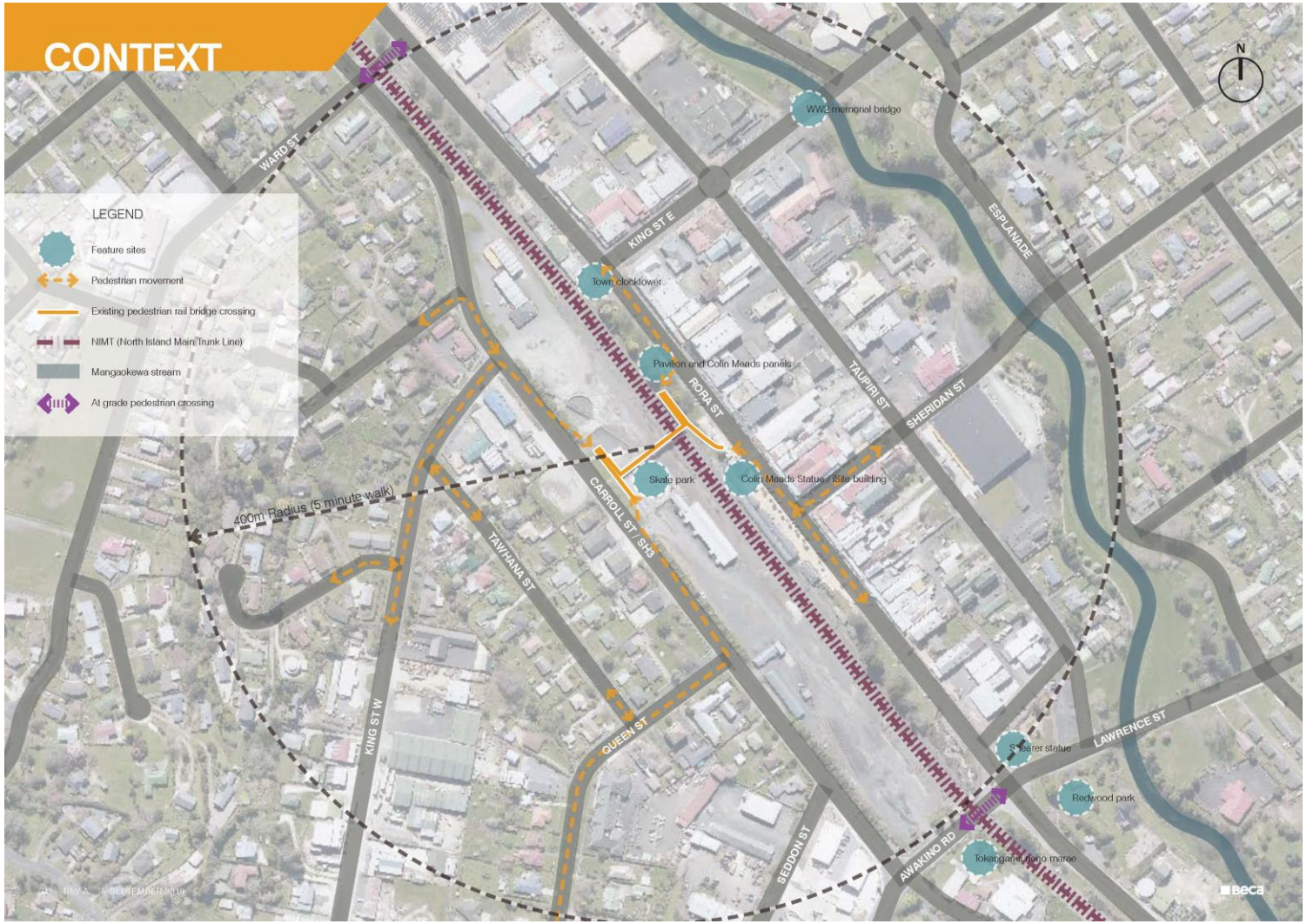


Original bridge - late 1940's. Looking north



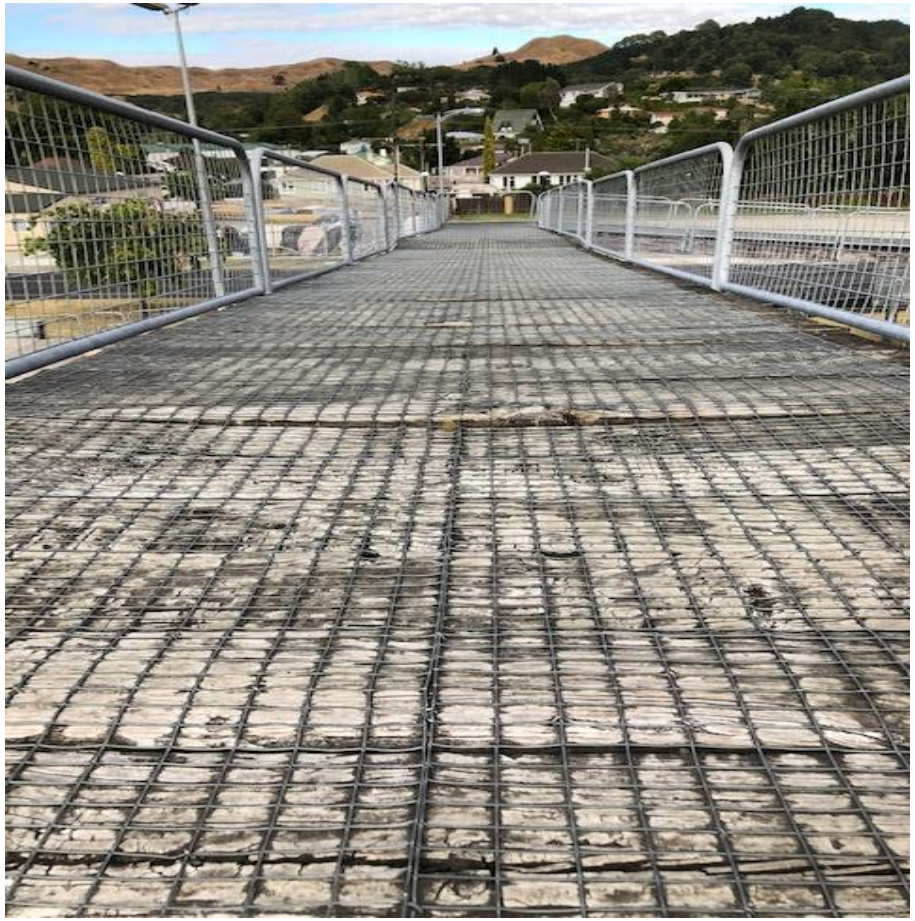
Current structure - built 1988

Bridge catchment – 5 minute walk (400m radius)



Current condition - examples

Ramp decking creep



Decking decay - underside

Post vertical cracking

Damage to safety shroud

Bolts loose/missing from top chord spacer

Delamination of ramp beams

Post/transom decay

Recent background

- Bridge replacement was scheduled for 2019/20. Now 20/21
- Project started mid-Feb 2019
- KiwiRail access agreement in place
- Budget estimate $1.65m
- NZTA subsidy 73%

Design essentials

- Structurally sound
- Vertical/horizontal protection/separation for rail and electrical transmission
- Same crossing alignment as existing structure
- Retention of existing piers
- Additional pier mid-span
- New bridge superstructure, ramps and stairs
- Affordable

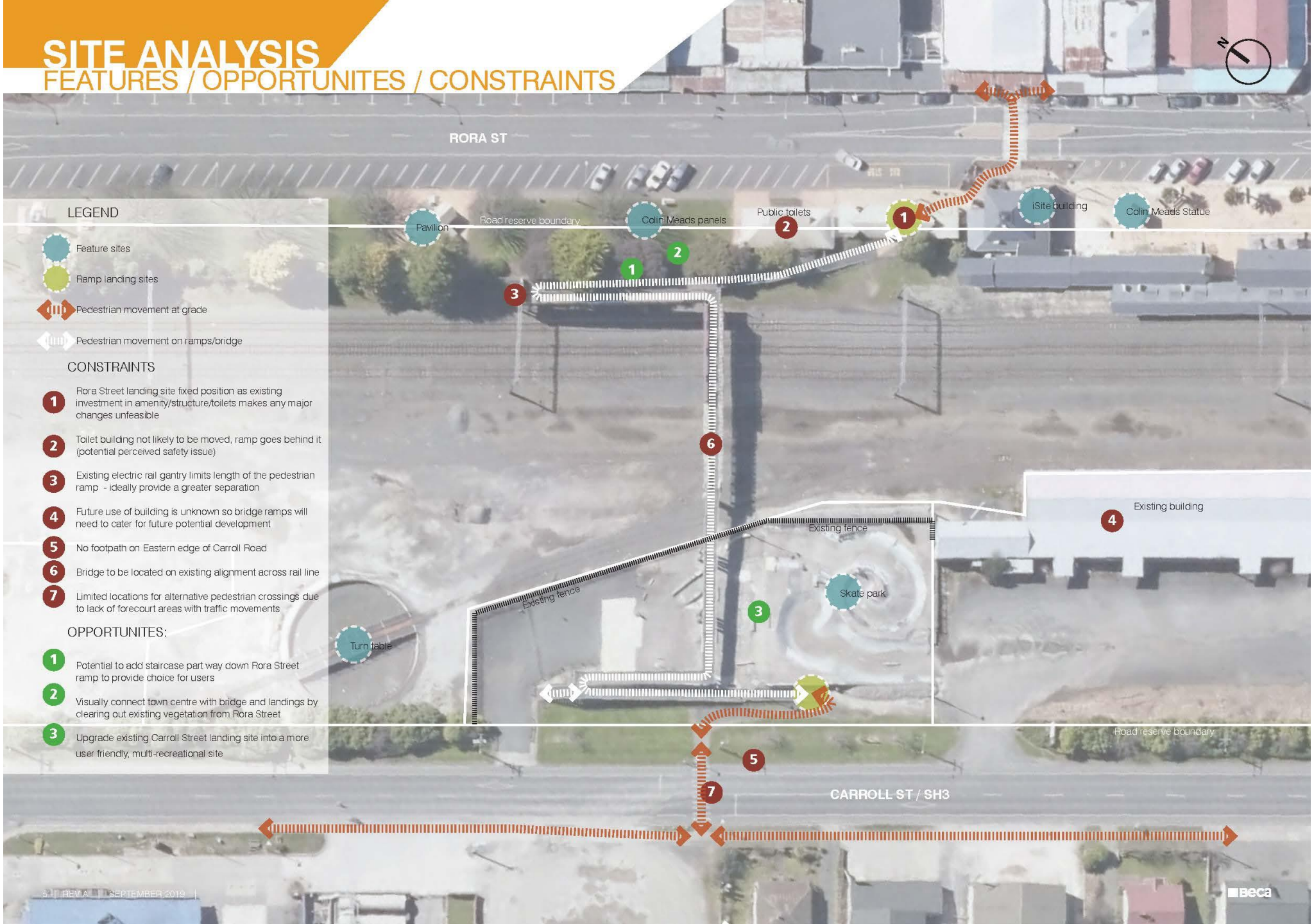
Bridge design outcomes

- Fully engineered
- Signature structure
- Contemporary design
- Elegant
- Relevant
- Open/visible
- Resilient
- Durable – low maintenance
- Compatible with local materials, themes, TK concept plan

Considerations for landing design

- Carroll St side
  - Pedestrian “gateway” to Te Kuiti CBD
  - Limited to land owned by Council, and available
    - Skatepark fixed
  - Improved access to and usability of WDC owned land
    - Positioning of ramps to achieve that
  - Future proofing of design for opportunities, either side
  - Better connection with skatepark
  - Better connection with SH3 pedestrian crossing and adjoining parking areas
  - Improved amenity – skatepark, entrance, lighting, planting, parking

SITE ANALYSIS
FEATURES / OPPORTUNITES / CONSTRAINTS



LEGEND

- Feature sites
- Ramp landing sites
- Pedestrian movement at grade
- Pedestrian movement on ramps/bridge

CONSTRAINTS

1. Rora Street landing site fixed position as existing investment in amenity/structure/toilets makes any major changes unfeasible
2. Toilet building not likely to be moved, ramp goes behind it (potential perceived safety issue)
3. Existing electric rail gantry limits length of the pedestrian ramp - ideally provide a greater separation
4. Future use of building is unknown so bridge ramps will need to cater for future potential development
5. No footpath on Eastern edge of Carroll Road
6. Bridge to be located on existing alignment across rail line
7. Limited locations for alternative pedestrian crossings due to lack of forecourt areas with traffic movements

OPPORTUNITES:

1. Potential to add staircase part way down Rora Street ramp to provide choice for users
2. Visually connect town centre with bridge and landings by clearing out existing vegetation from Rora Street
3. Upgrade existing Carroll Street landing site into a more user friendly, multi-recreational site

Preferred option – Rora Street landing

- Retain existing alignment of lower ramp - already connects with centre of town
- Good connection with Visitor Information, pedestrian Xing, café, toilets
- Ramp length controlled by existing KiwiRail electric gantry
- Ramp gradient 1 in 12
- Switch-back of upper ramp to avoid existing signal cabling
- New stairway to shorten walk length
- Thin/replace existing planting to improve visibility

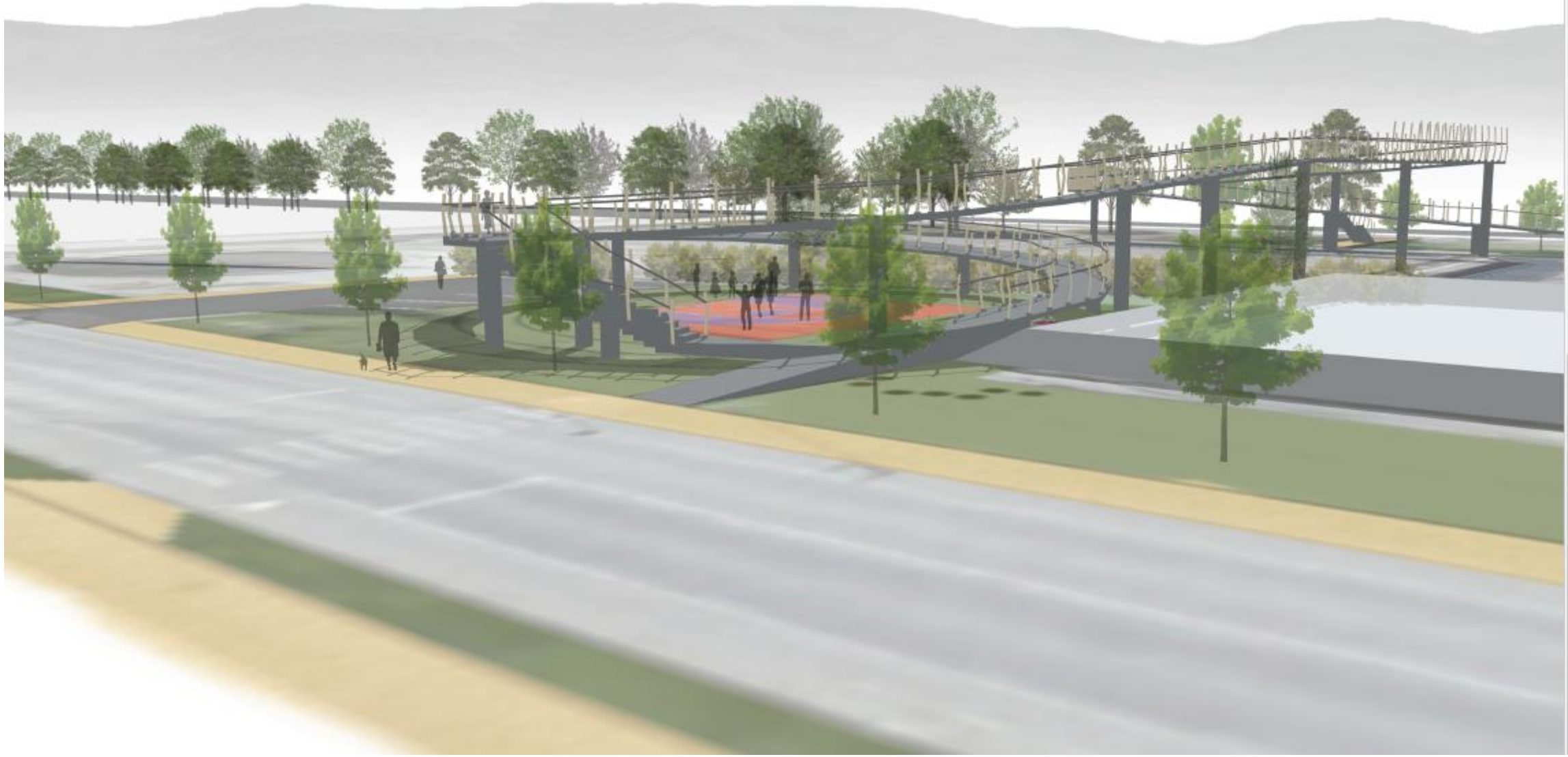
Preferred option – Carroll St. landing

- Stairs plus 1 in 18 ramps
- Intermediate landings at transitions
- Spiral design, references rail turntable
- Contemporary, signature structure at pedestrian gateway
- Feature courtyard area with basketball half-court at centre of spiral
- Low planting to soften edges
- Ramp connects to SH3 pedestrian Xing
- Consistent with Youth Council suggestions

PREFERRED OPTION
CONCEPT PLAN

PREFERRED OPTION
PERSPECTIVE VIEW

**Concept image only. Further detail to be explored in future stages*



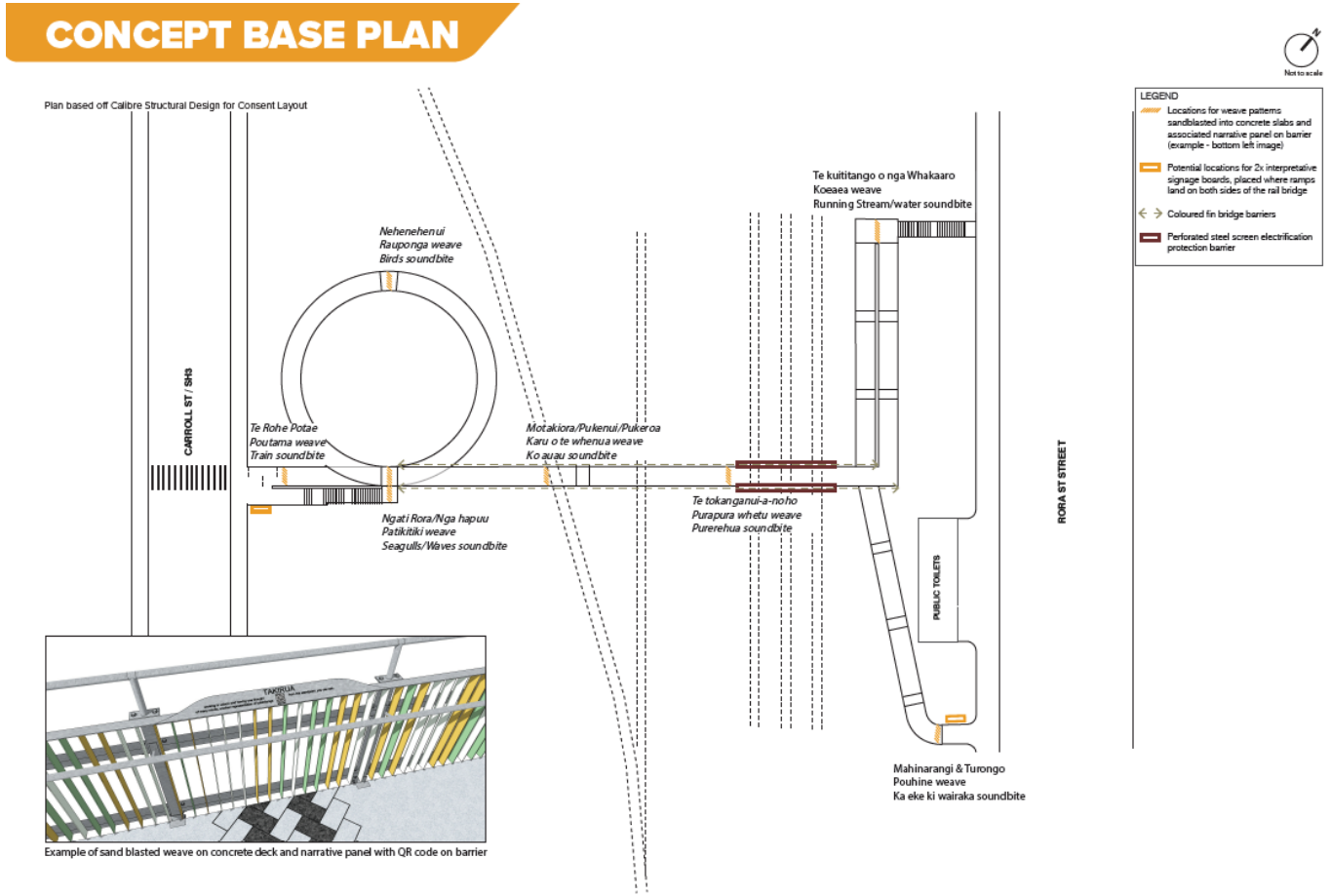
Handrails and pathway

- “Open” design to enhance visibility, both directions
- Colours to reflect seasonal hues and natural landscape
- Lighting to accentuate shape and form of bridge durin night-time
- Factors include:
  - Safety
  - Durability
  - Shared pathway design (2.1m clear width)

Proposal for cultural connection

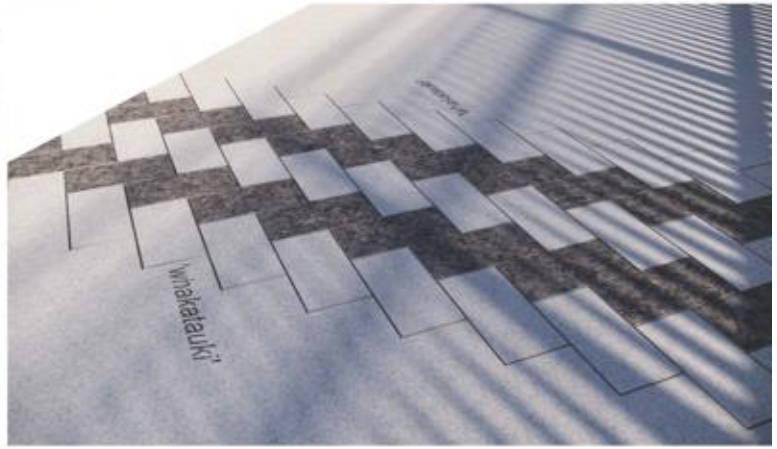
- Artistic elements in the form of weaves and narratives across bridge
- People, history, landscape, places of interest
- Recognises original ownership of land crossed by bridge
- Positioning of weaves and narratives at view points
- QR codes for additional information

Handrail and weave elements – proposed concept

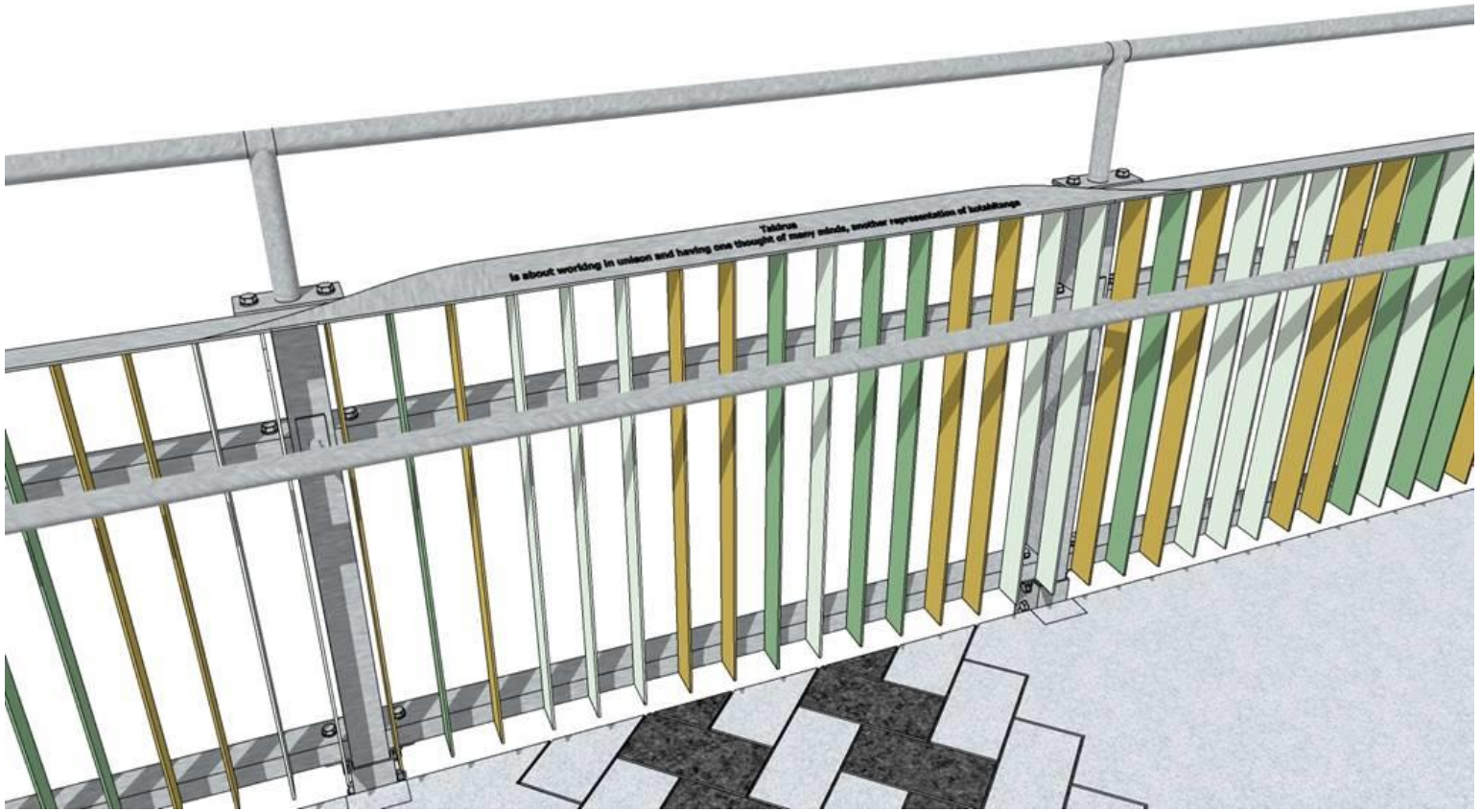


Handrail, weave patterns and narratives

- coloured flat bar fins fixed to upright posts
- posts fixed to side of the bridge slab, allowing for a clear, open passage of 2.4m
- coloured fins, referencing contextual elements in the Te Kuiti landscape - orange referencing the autumnal colours of the town, green referencing the surrounding hills, and the pale white referencing the limestone mining history of Te Kuiti



Handrail and weave concept



Proposal for bridge name

- Te Ara Tika
- Proposed by Ngati Rora
- Means “the pathway of our history”
- Complemented by weaves and narratives across bridge

Next steps

- Consider public feedback from consultation (21 April 2020)
- Decide concept design for landings (28 April 2020)

Then:

- Obtain design approval for KiwiRail corridor (May)
- Final design (June 2020)
- Building consent (June 2020)
- Procurement (July 2020)
- Construct (August/September 2020)