

Northern Outlet & CBD Study

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Northern Access and CBD Study

Topics

- **Project Objectives**
- **CISP**
- **Signals vs Roundabout**
- **Intersection Options**
- **Recommendations**



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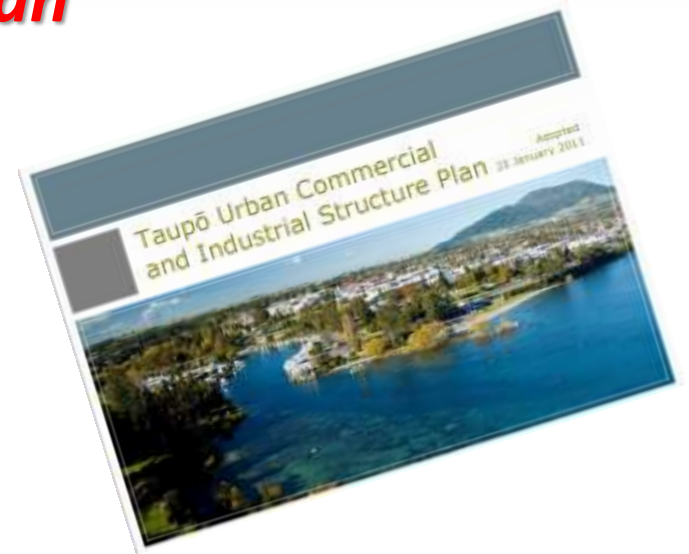
Objectives

- Improve access into CBD from the north
- Improving movement through the CBD
- Confirm CISP traffic patterns



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Commercial and Industrial Structure Plan



Northern Access and CBD Study

Commercial and Industrial Structure Plan



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Signals v Roundabouts

Roundabout – pros

- **Simplify conflicts**
- **Safer for vehicles**
- **Good where high proportion of right turns**
- **Enable continuous flow**
- **Have islands for planting**
- **Cheap to maintain**

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Signals v Roundabouts

Roundabout – cons

- Only work where flow on each leg is approximately equal (inequality causes delays to low flow legs)
- Not pedestrian or cycle friendly (or motorcycles)
- Need space

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Roundabout Design

- NZ uses Austroads standards
- Austroads, US, UK have very similar standards
- Minimum 30m inscribed circle, 38m preferred for arterial roads
- Similar as Tongariro/Spa and Ruapehu roundabouts

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Signals v Roundabouts

Signals – pros

- Can remove conflicts
- Safer for pedestrians and cyclists
- Preferred if high pedestrian activity
- Preferred for freight routes
- Best treatment for high volume sites
- Create gaps
- Equalise delays

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Signals v Roundabouts

Signal – cons

- **Not aesthetic**
- **Ongoing maintenance costs**
- **Most traffic get some delay**

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Focus areas

- Norman Smith St
- Control Gates Bridge
- Tongariro St / Spa Rd
- Spa Rd
- Titiraupenga Street
- Paori Hapi Street



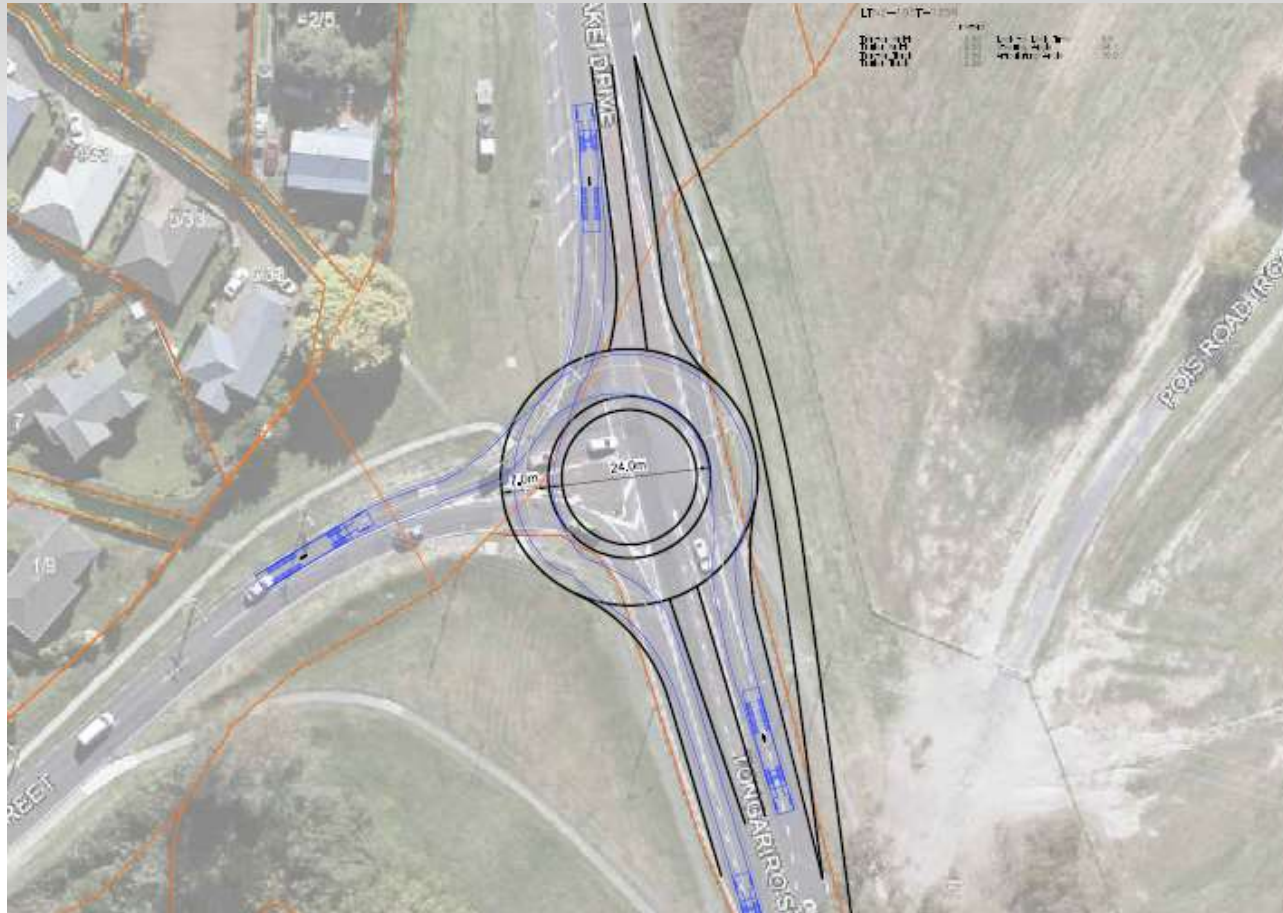
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Norman Smith Street / Wairakei Drive Intersection



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Norman Smith St



[Video](#)

[Video](#)

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Norman Smith St



[Video](#)

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Norman Smith St

Conclusions

- ***Single lane roundabout will not solve the problem of queues on Norman Smith Street***
- ***Double circulating roundabout works but expensive and outside road reserve***
- ***Signals work and within road reserve***
- ***Signals will balance out morning peak delays and can be phased to favour Wairakei Drive outside the AM peak***



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Norman Smith St

Conclusions

- ***Signals will***
 - ***balance out morning peak delays and can be phased to favour Wairakei Drive outside the AM peak***
 - ***make provision for pedestrians***
- ***But there will still be delays***

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Control Gates Bridge



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Alternative Crossings

- *New bridge to Opepe Street*
- *Alongside existing to Nukuhau Street*
- *Alongside existing using Wairakei Drive*



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Control Gates Bridge

Conclusions

Funding for feasibility study work on the location of the bridge allocated in the 2018/19 financial year



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Tongariro Street/Spa Road Intersection



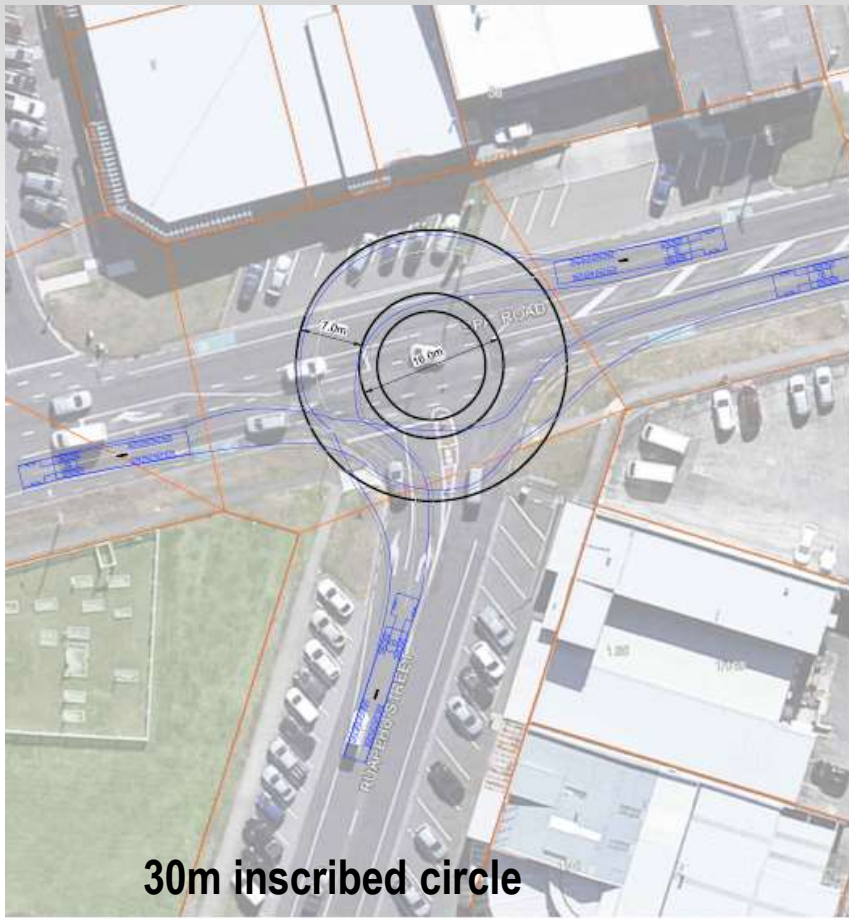
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Spa Road

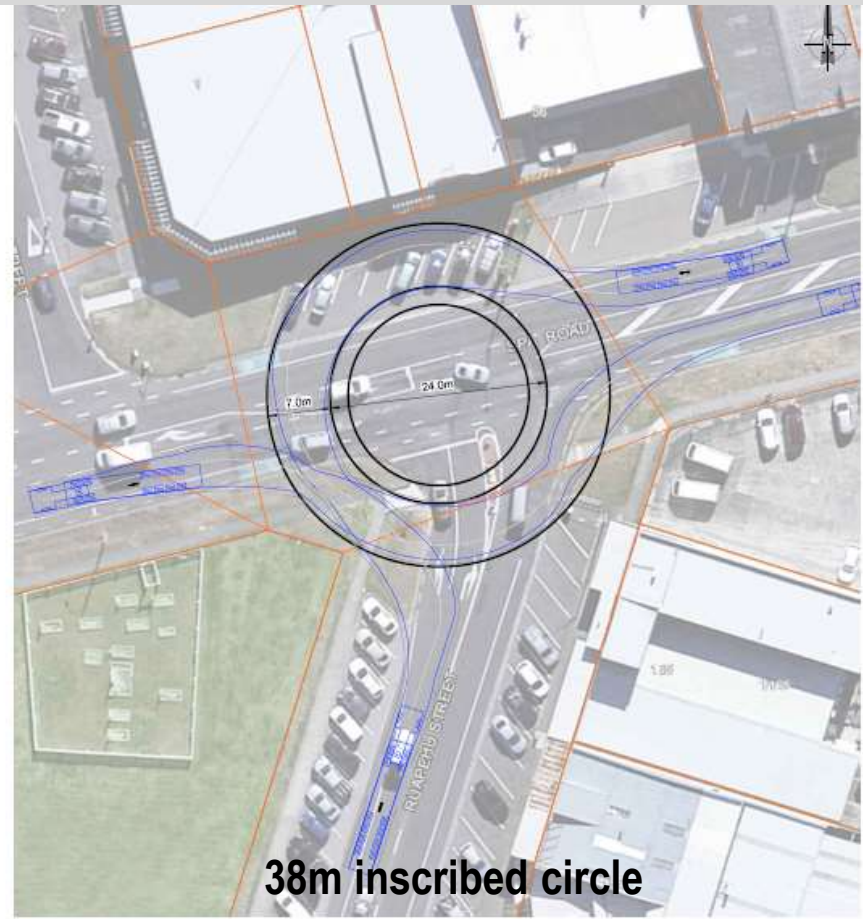


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Spa / Ruapehu Intersection



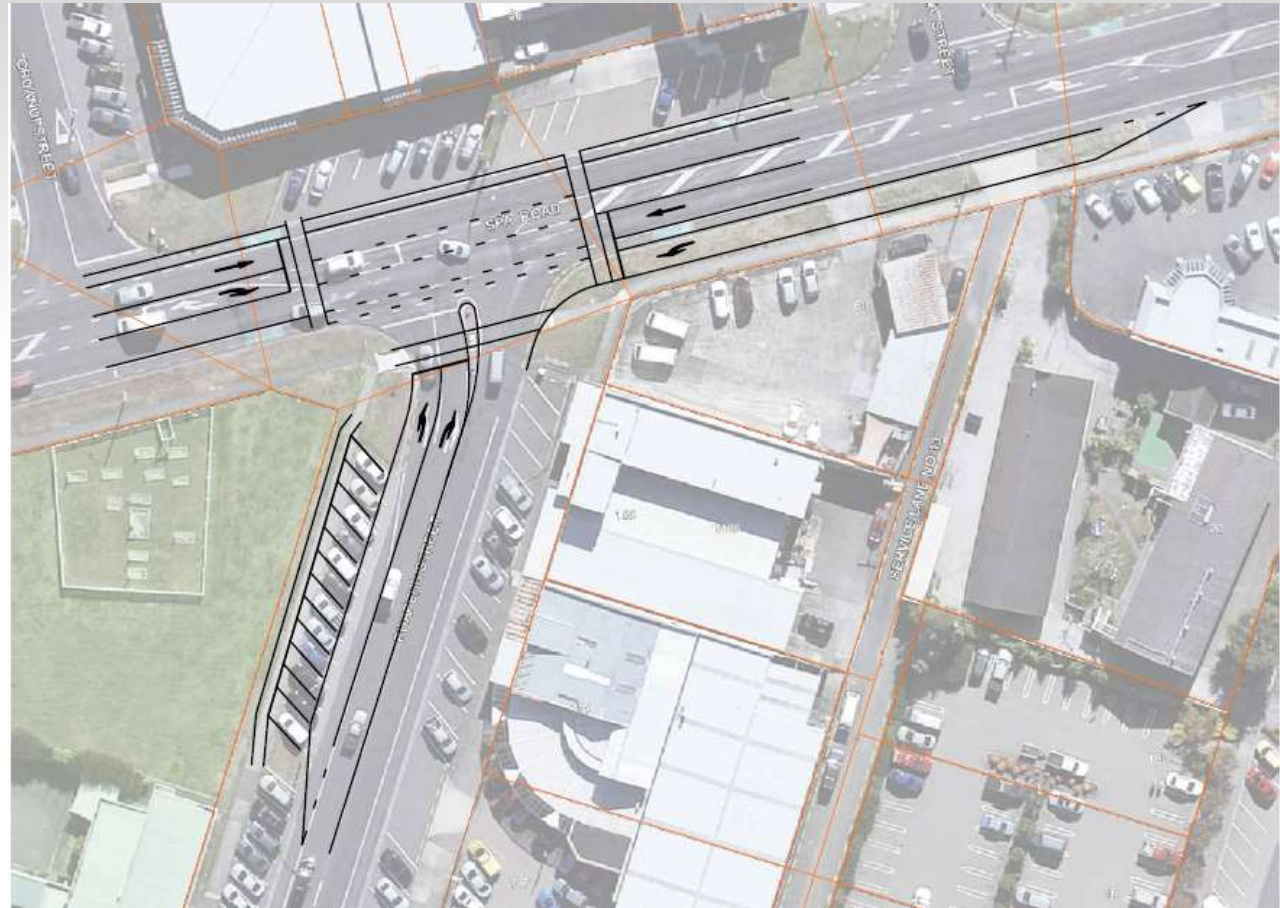
30m inscribed circle



38m inscribed circle

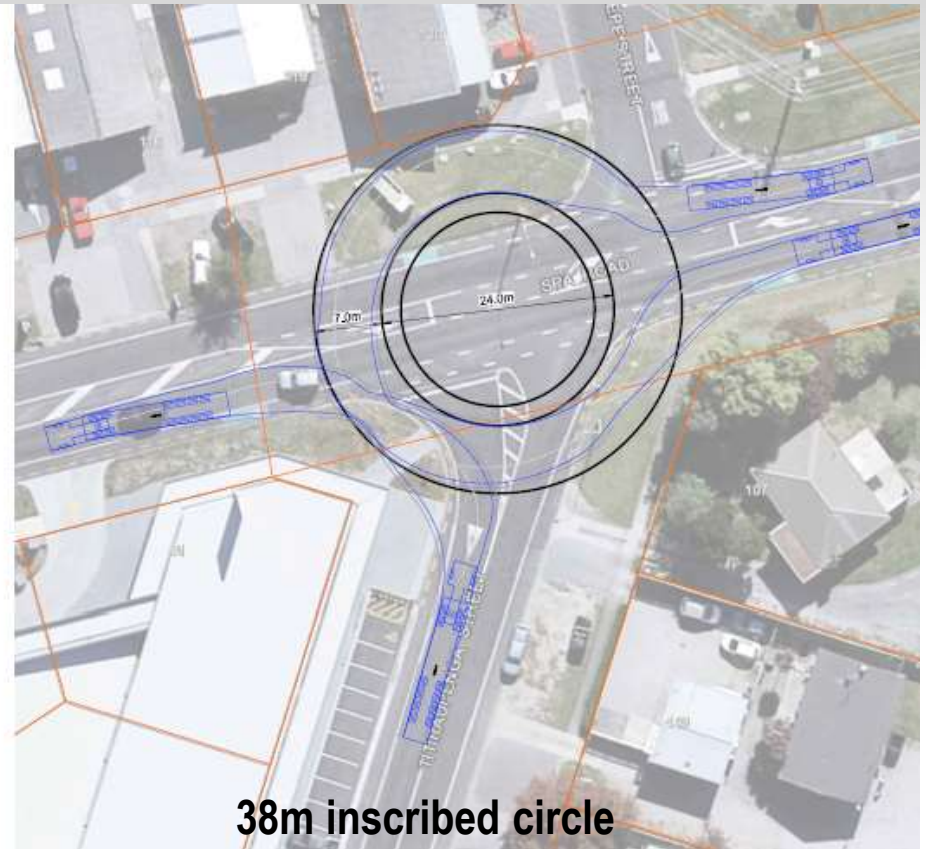
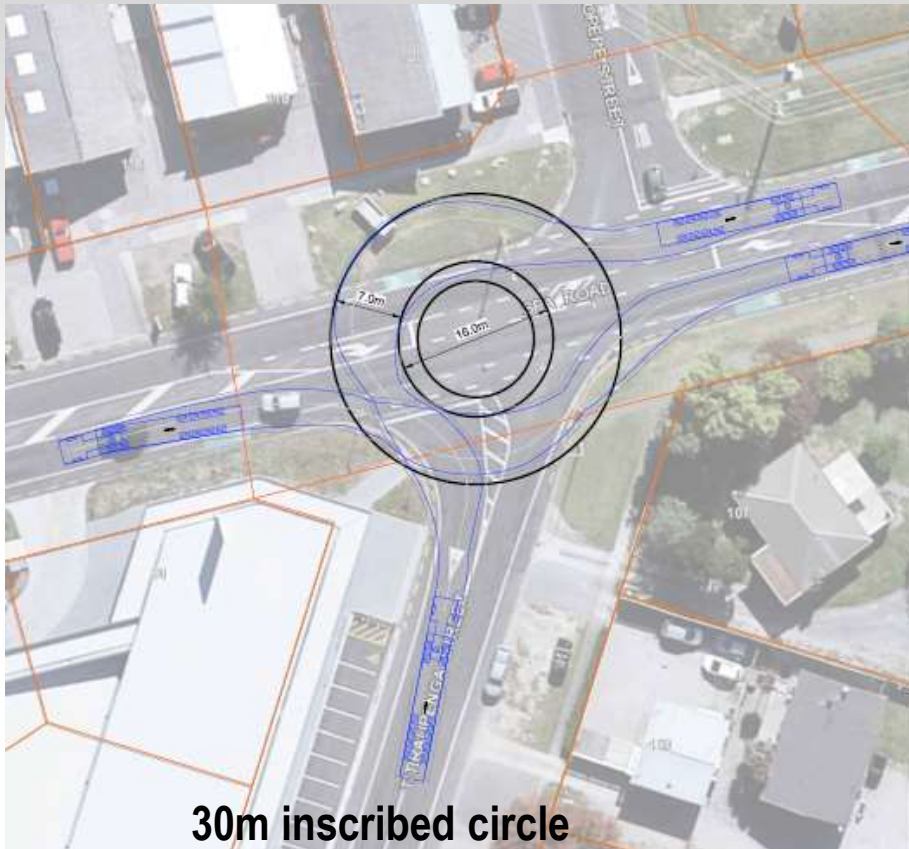
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Spa / Ruapehu Intersection

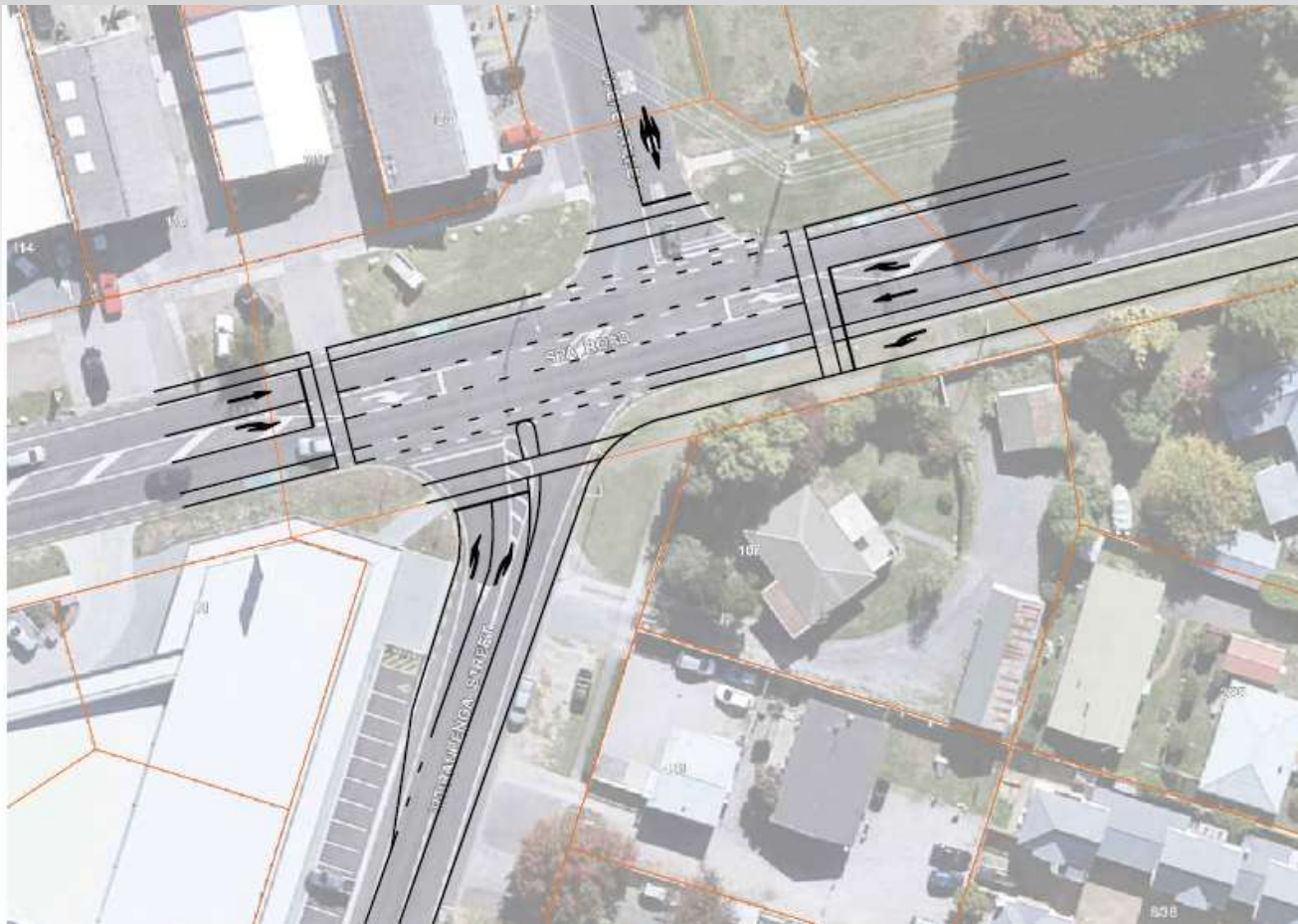


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Spa / Titiraupenga Intersection



Northern Access and CBD Study *Spa / Titiraupenga Intersection*



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Spa Road

How does it operate?

- **Roundabouts** [Video](#)
- **Signals** [Video](#)
- **Countdown access to Tongariro Street closed** [Video](#)

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Analysis – Spa Road

Recommended solution

Signals at Ruapehu and Titiraupenga

- *Allows right turns at the two intersections*
- *Creates gaps for turns at other intersections*
- *Better for pedestrians and cyclists near school*
- *Provision for traffic growth*

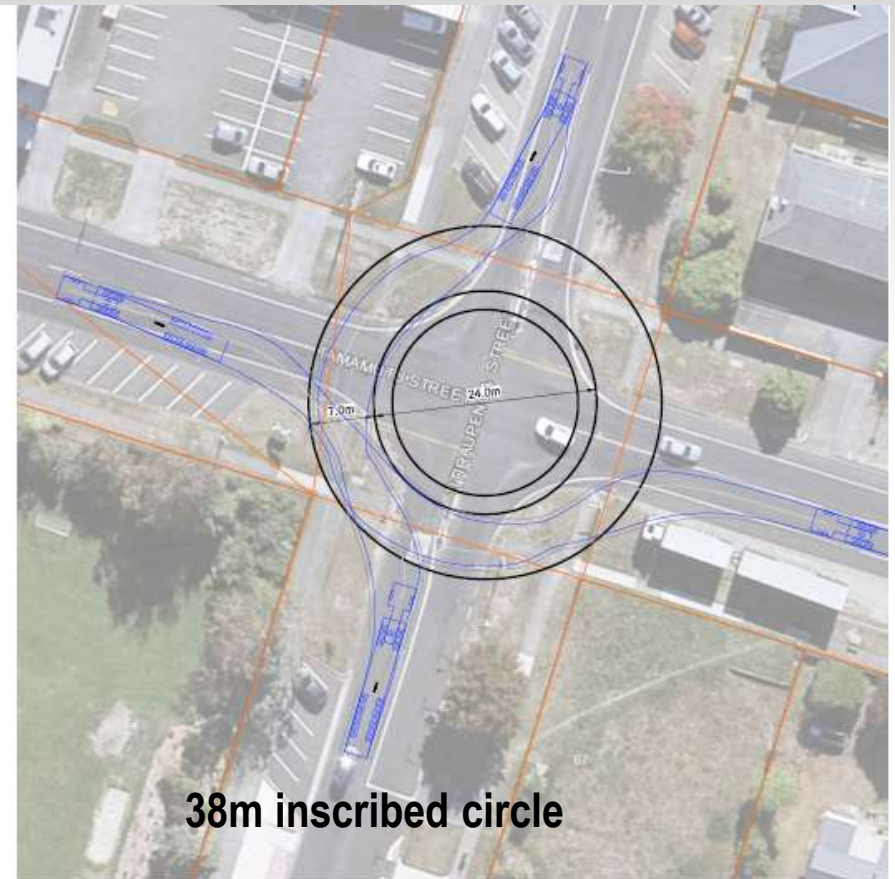
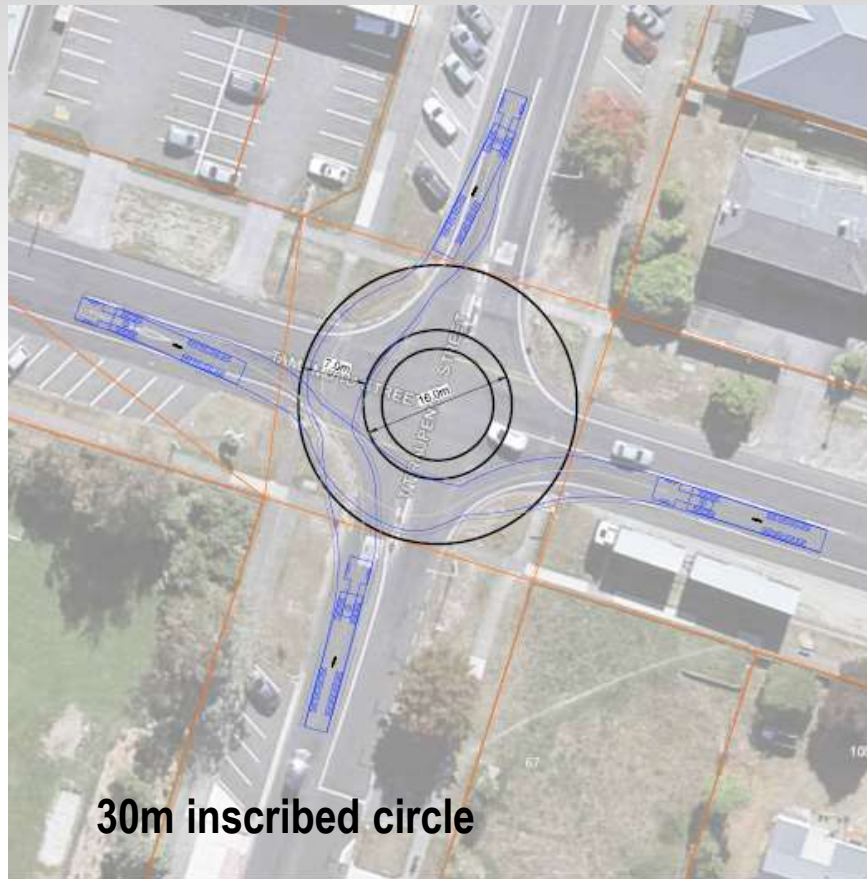
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Titiraupenga Street



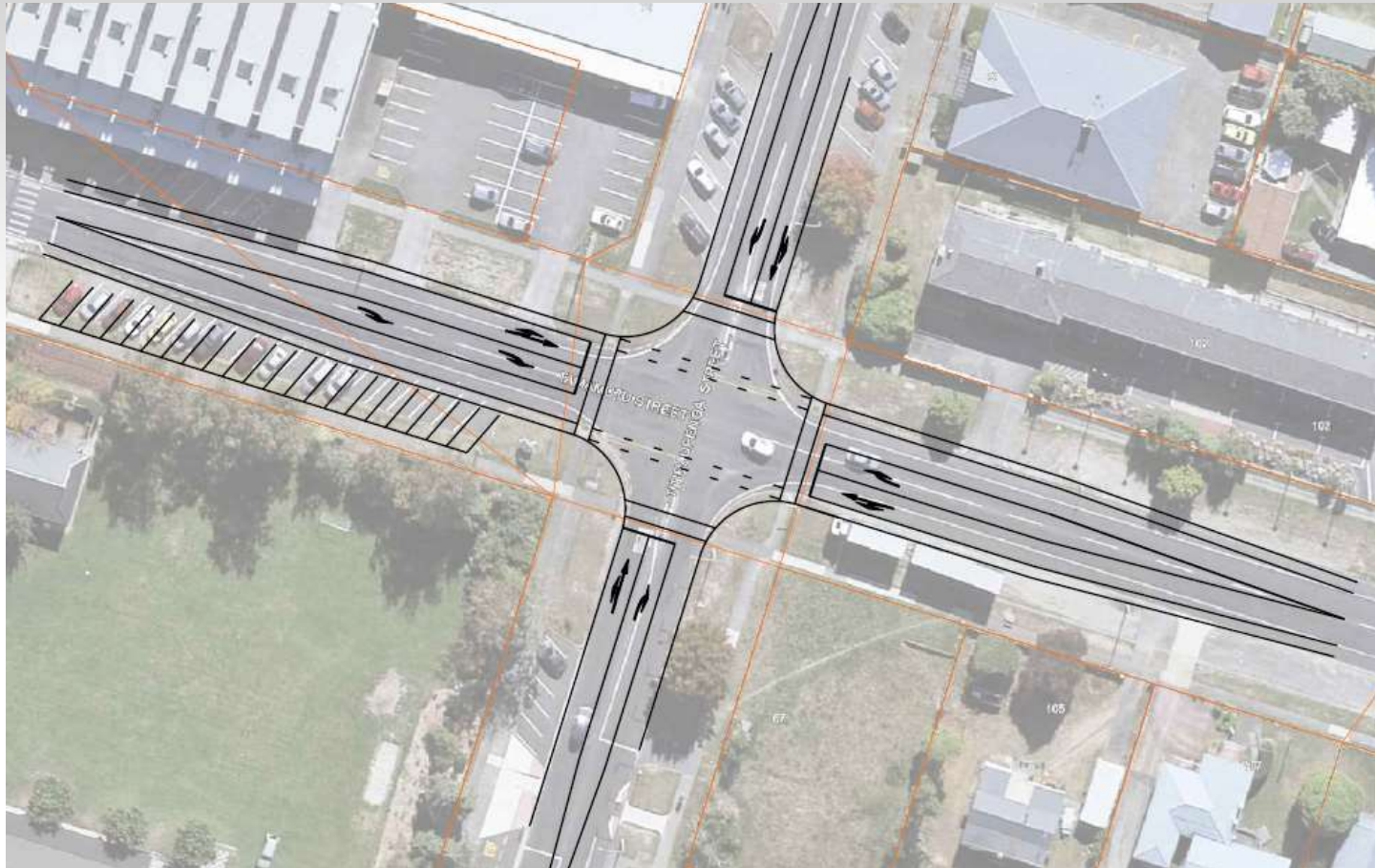
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Titiraupenga / Tamamutu Intersection



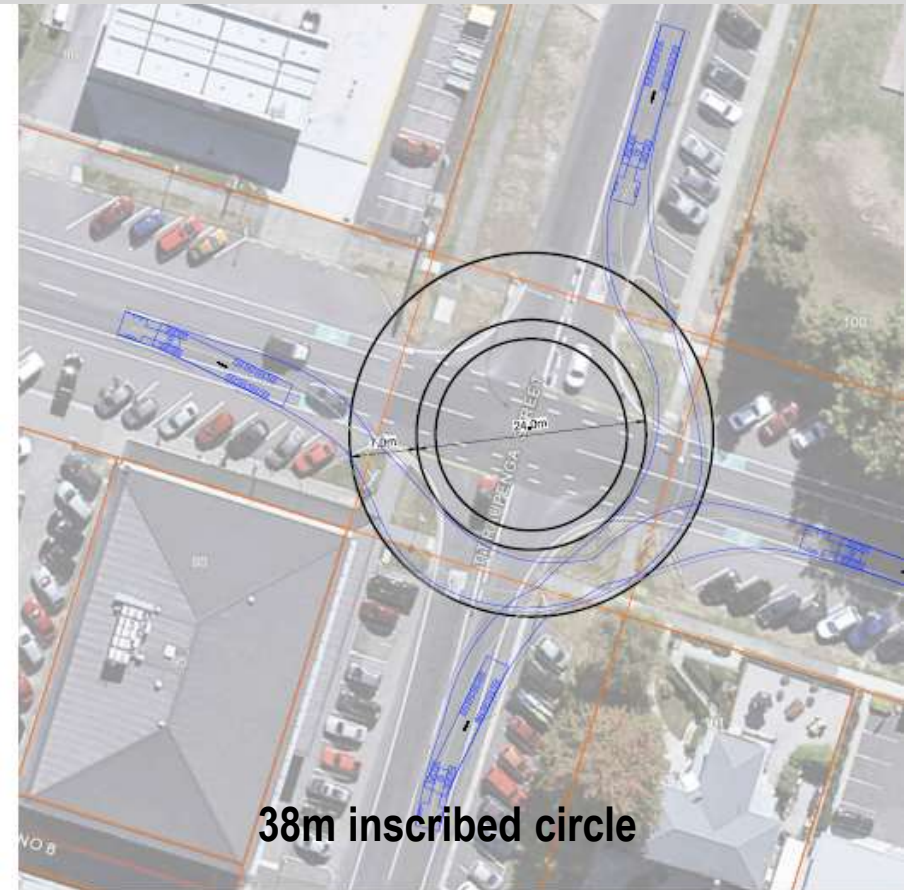
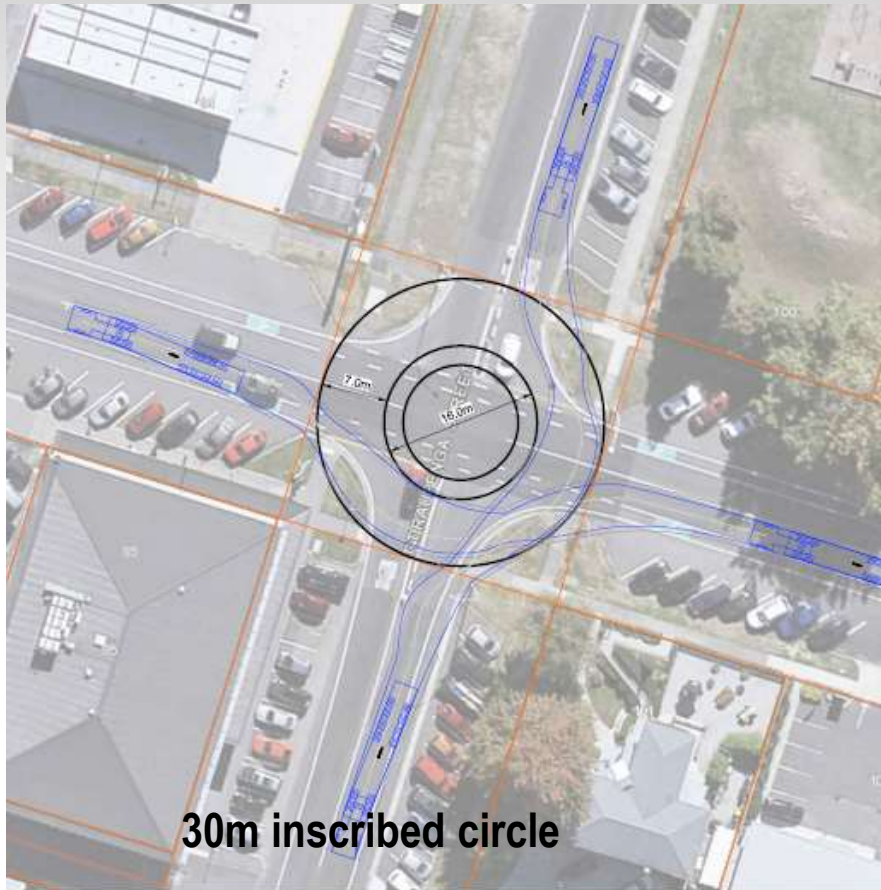
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Titiraupenga / Tamamutu Intersection



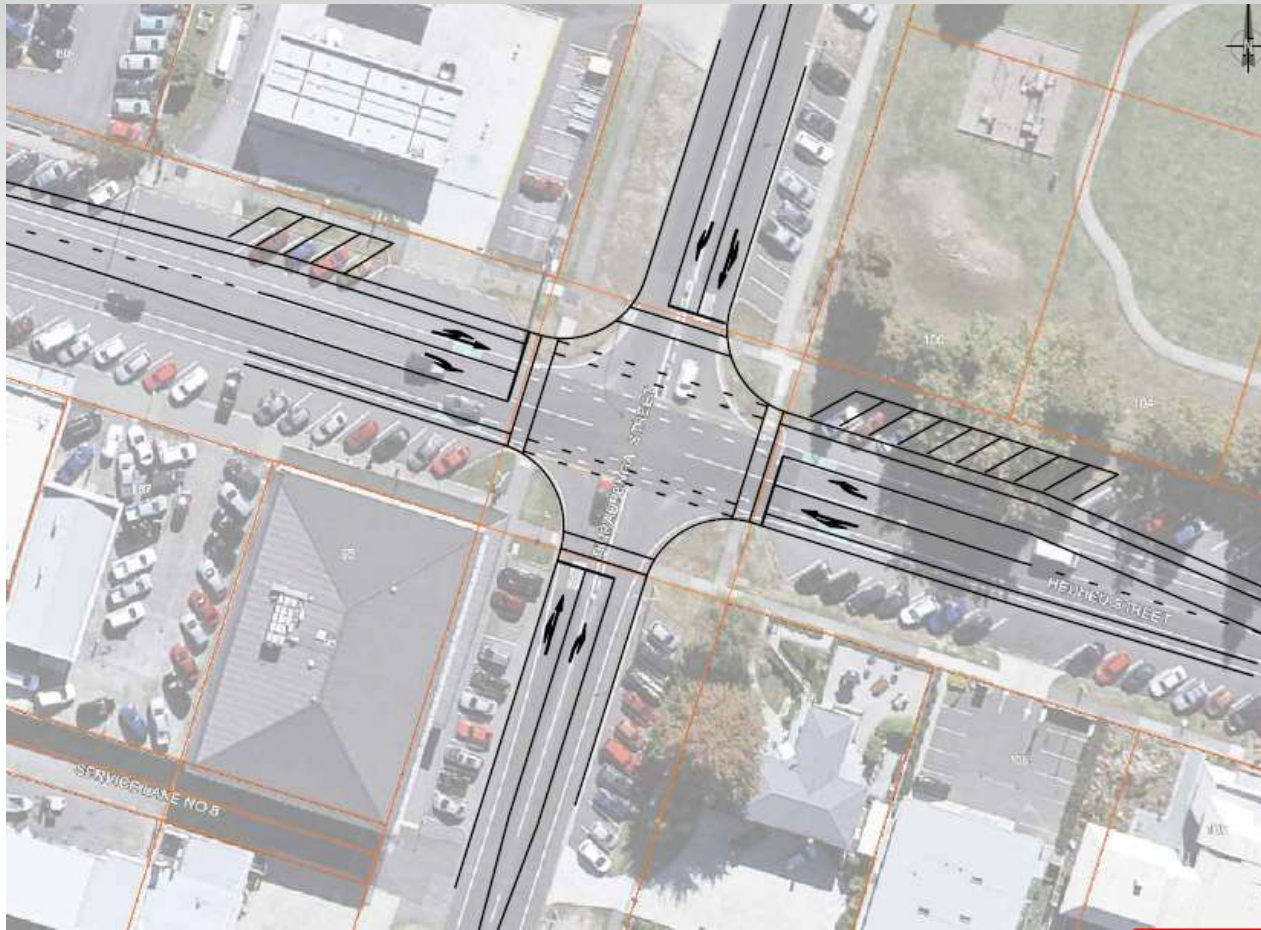
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Titiraupenga / Heu Heu Intersection



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Titiraupenga / Heu Heu Intersection



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Titiraupenga Street

How does it operate?

- Roundabout
- Signals

[Video](#)

[Video](#)

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Analysis – Titiraupenga Street

Recommended solution

Signals at Tamamutu and Heu Heu

- *Uneven flows*
- *High volumes (about the same as Tongariro/Heu Heu)*
- *Safety considerations for School children*

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Paora Hapi Street

Discussion