



## **Nelson Schools Variable Speed Limits 2013**

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### **Transportation Assessment Report**

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April 2013

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NCC Ref: 1503276 v2

# Nelson Schools Variable Speed Limits 2013

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## Transportation Assessment Report Quality Assurance Statement

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## 1. Introduction

TDG has been commissioned by Nelson City Council to undertake the investigation and assessment associated with the implementation of variable school speed limits. The following sites were considered during this process:

- St Joseph's School – Manuka Street, Collingwood Street and Bronte Street;
- Nelson College for Girls – school frontages on Rutherford Street and Trafalgar Street;
- Nelson Intermediate – school frontage on Tipahi Street and adjacent section of Motueka Street;
- Nelson College – school frontages on Waimea Road, Franklyn Street and Hampden Street;
- Hampden Street School – school frontages on Waimea Road, Hampden Street, Van Diemen Street and Ngatiawa Street;
- Victory School – extension of the existing school zone to include the Totara Street/ St Vincent Street intersection; and
- Tahunanui School – extension of existing school zone to include Tahunanui Drive (SH6);

Each of the above locations has been inspected and vehicle speed and pedestrian activity measured in order to assess each against the relevant warrant for school speed zones contained within the NZTA Traffic Note 37 – Revision 2: "40km/h Variable Speed Limits in School Zones Guidelines" document.

By way of summary, activity around each of the above schools during pick-up and drop-off times is at a level that meets the warrant for a reduction in speed limit on the roads listed above, unless otherwise noted. The following report discussed each location in relation to the warrant and any other issues that need to be considered.

## 2. Schools Assessment

### 2.1 Saint Joseph's School

It is proposed to establish a 40 km/h school speed zone on Manuka Street, Collingwood Street and Bronte Street to cover each of the school frontages and main access points. Collingwood Street and Manuka Street have been assessed as meeting the warrant due to high pedestrian usage and either high speeds or appropriate traffic calming measures being in place.

Bronte Street does not strictly meet the warrant as, even though there is high pedestrian usage, the vehicle speeds are relatively low and there have been no crashes involving pedestrians. Nevertheless, it is recommended that the section of Bronte Street between Scotland Street and Collingwood Street be included in the school speed zone to retain consistency across the whole school frontage. The proposed layout is shown in Figure 1 of Appendix A.

## 2.2 Nelson College for Girls

It is proposed to establish a 40km/h school speed zone on each of the road frontages of Nelson College for Girls. Both Rutherford Street and Trafalgar Street South meet the warrant, with large numbers of students crossing the road or entering or leaving vehicles on the roadside, and vehicle speeds being relatively high. In the case of Rutherford Street, its function as a main traffic route also contributes to it meeting the warrant. The proposed signs layout is shown in Figure 2 of Appendix A.

Due to the very close proximity of Hampden Street School and Nelson College, it is necessary that the speed zones be combined. This will result in the speed zone operating times being longer than the guidelines allow and a dispensation from NZTA will be required.

## 2.3 Nelson Intermediate

Tipahi Street meets the warrant with greater than 50 children crossing or entering or leaving vehicles and has an 85th percentile vehicle speed of 51.5km/h, (ie exceeds 50km/h). The relevant section of Tipahi Street is simple to sign with a reduced speed limit as shown in Figure 3 in Appendix A.

Motueka Street also meets the warrant with large numbers of children crossing at the intersection with Tipahi Street, where the mean of the measured vehicle speeds is greater than 45km/h, and therefore meets the warrant. There are issues with implementing variable school speed limits on Motueka Street, though, as with the minimum length of 300m speed zone, the speed zone will extend all the way to Vanguard Street. This leaves only 150m between this speed zone and the existing Victory School speed zone, which is then not far enough to warrant increasing the speed limit to 50km/h between the zones.

Therefore, the speed zones for Nelson Intermediate and Victory schools will need to be a single zone. This in itself poses a challenge in that the operating times of the schools are different. As a result, the length of time that the school zone operates will need to be extended beyond the constraints set out in the NZTA guidelines and legislation, albeit by a very short period. Approval for this extension will be needed from NZTA.

An alternative option for Motueka Street is to install active school warning signs and/or localised traffic calming measures in order to reduce vehicle speeds. This option would remove the need for the time extension for the previous option but may have less impact on the vehicle speeds on Motueka Street.

Regardless of which of the above options is eventually implemented it is recommended that consideration be given to construction of traffic calming measures and operation of a formal controlled school crossing across Motueka Street close to Tipahi Street.

It is noted that this location in particular is likely to be of interest to the Nelson Police and their comments on the Motueka Street options have been sought.

## 2.4 Nelson College/Hampden Street School

With Nelson College and Hampden Street School being in such close proximity to each other it is necessary to treat them essentially as a combined site with a single variable

school speed zone. Of the frontage roads, Van Diemen Street, Waimea Road, Ngatiawa Street and Waimea Road all meet the warrant for the school speed zone.

Due to the placement of the school bus stop on Waimea Road to the south of Franklyn Street, the zone is proposed to include the intersection of Waimea Road and Franklyn Street as far as the Ambulance bay on Waimea Road. It is recommended that the full length of Franklyn Street east of Waimea Road also be included due to the large amount of school activity on it. Only one additional fixed sign is needed to implement the school speed zone on the Franklyn section.

Vehicle speeds on Hampden Street east of Waimea Road are not high enough to meet the warrant, but with pedestrian counts in excess of 200 in the afternoon peak and a large amount of vehicle activity along with the fact the Ngatiawa Street and Waimea Road speed zone sections need to be connected, it is recommended that this section of Hampden Street be included. The proposed signs layout is shown in Figure 4 of Appendix A.

## 2.5 Victory School

It is proposed to extend the existing Victory School speed zone to include Totara Street and St Vincent Street as shown in Figure 5 of Appendix A. With well over 50 children crossing and 85<sup>th</sup> percentile vehicle speeds of greater than 50km/h, this section of St Vincent Street meets the warrant conditions in full.

Totara Street also has greater than 50 children crossing, although vehicle speeds are lower than required to meet the warrant. In this case it is recommended that Totara Street be included to provide a cohesive speed zone and essentially join the existing zone on Vanguard Street to the critical St Vincent Street/Totara Street intersection.

It is further recommended that consideration be given to the construction of traffic calming measures at or in the vicinity of the Totara Street/St Vincent Street intersection to further encourage reduced vehicle speeds.

## 2.6 Tahunanui School

It is proposed to extend the existing variable school speed zone for Tahunanui School to include Tahunanui Drive (SH6). Although speeds and traffic volumes are high, the pedestrian data collected for the site for a typical school day shows that greater than 50 children cross the road or enter or leave vehicles at the roadside on Tahunanui Drive during the before and after school periods, as sought by the warrant.

Additionally, there is a crash record in the locality and NZTA have accordingly expressed their support for a variable school speed zone to be extended to include this section of state highway. It is therefore recommended that this zone be extended as shown in Figure 6 of Appendix A. Note that NZTA will be responsible for progressing any speed limit change on the state highway (Tahunanui Drive) component of this zone.

## 3. Times of Operation

It is recommended that the following times of operation be adopted for each school site:

- St Josephs – 8:15-8:50am and 2:55-3:15pm;
- Nelson College for Girls – 8:25-9:00am and 3:00-3:30pm (note: the afternoon period exceeds the 20 minute maximum in the design guidelines and as a result will need NZTA approval);
- Nelson Intermediate – 8:20-8:55am and 2:45-3:15pm (note: the afternoon period exceeds the 20 minute maximum in the design guidelines and needs NZTA approval);
- Nelson College/Hampden Street School – 8:25-9:00am and 3:00-3:30pm (note: the afternoon period exceeds the 20 minute maximum in the design guidelines and as a result needs NZTA approval);
- Victory School – 8:20-8:55am and 2:45-3:15pm (note: the existing time limits will need to be adjusted on all signs due to the extension in time to accommodate Nelson Intermediate within the same variable speed zone, and for which NZTA approval will be required);
- Tahunanui School – 8:25-9:00am and 2:55-3:15pm (note: times are the same as for the existing zone).

## 4. Speed Zone Schedule

The associated speed zone schedule requires the approval of Nelson City Council and is appended to this report as Appendix B.

## 5. Conclusion & Recommendations

Following on from a similar study last year, this study has included a detailed review to investigate whether or not variable 40km/h speed zones are warranted for five new schools together with an evaluation of whether extensions are warranted for a further two schools (Tahunanui School and Victory School), as identified by Council.

It is understood that these schools were identified by Council in conjunction with the schools themselves as most likely to meet the warrants for 40km/h school speed zones, subject to more detailed appraisal, as summarised by this report.

In summary, it is considered by the consultant team that school speed zones are warranted for all of these additional schools and that the extent of the zones at Victory School and Tahunanui School also be increased.

This report provides the warrants in each case together with plans showing the location and layout of the signs required, for implementation.

Recommended additions to 'Schedule M' of the NCC Speed Limits Bylaw are provided for the approval of Council.

It is concluded that with the close proximity of some schools, the speed zones extend across more than one school, as follows:

- Nelson College/Hampden Street/Nelson College for Girls, and
- Nelson Intermediate/Victory School.

In view of differences in the school start and finish times, this will require a dispensation from the warrant.

It is recommended that these plans be adopted.

Traffic Design Group Ltd  
April 2013



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## Appendix A Site Warrant Assessments and Speed Limit Layout Plans

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SUMMARY DATA SHEET

<b>Name of school:</b>	St Josephs	
<b>Main frontage road(s):</b>	Collingwood Street	
<b>Frontage Road type:</b>	Collector	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	4,800vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>	46.3km/h	Complies
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>	52.9km/h	Complies
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 1 attached	
<b>No. of Electronic Variable Speed Signs:</b>	2	
<b>No. of Static speed signs:</b>	1	
<b>No. of "School Zone Ends" signs:</b>	3	
<b>No. of kerb build-outs:</b>	3	

<b>Name of school:</b>	St Josephs	
<b>Main frontage road(s):</b>	Manuka Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	700vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>	Yes	Complies
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 1 attached	
<b>No. of Electronic Variable Speed Signs:</b>	0	
<b>No. of Static speed signs:</b>	1	
<b>No. of "School Zone Ends" signs:</b>	1	
<b>No. of kerb build-outs:</b>	1	

<b>Name of school:</b>	St Josephs	
<b>Main frontage road(s):</b>	Bronte Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	700vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>NO</b>
<b>Other reasons for implementation</b>	No additional signage needed to include frontage.	
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 1 attached	
<b>No. of Electronic Variable Speed Signs:</b>	0	
<b>No. of Static speed signs:</b>	1	
<b>No. of "School Zone Ends" signs:</b>	1	
<b>No. of kerb build-outs:</b>	0	





Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

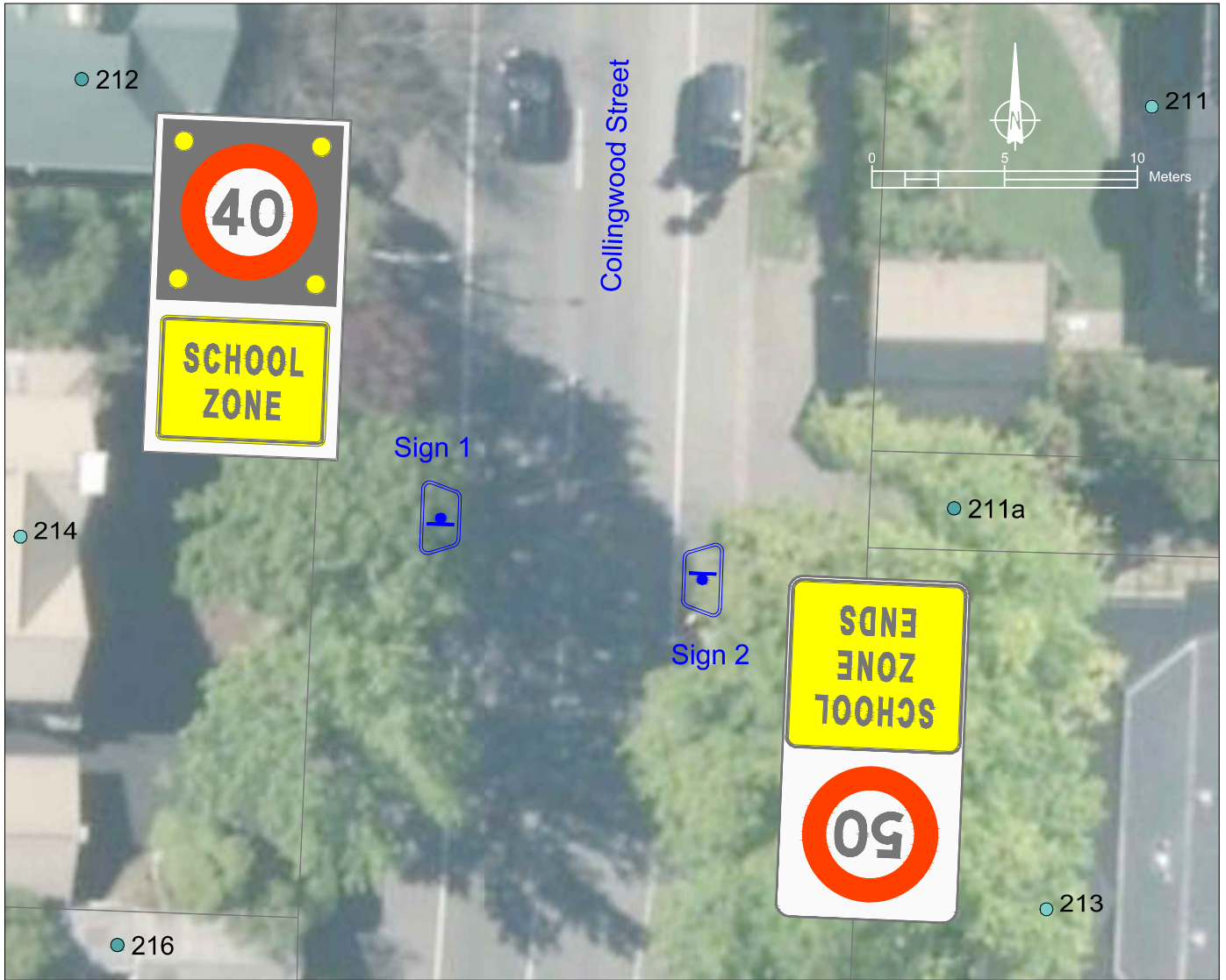
Nelson Schools Variable Speed Limits  
 Saint Josephs School



1c

SCALE: 1:250@A4





Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

SUMMARY DATA SHEET

<b>Name of school:</b>	Nelson Girls College	
<b>Main frontage road(s):</b>	Rutherford Street	
<b>Frontage Road type:</b>	Arterial	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	14,650vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>	Yes	Complies
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 2 attached	
<b>No. of Electronic Variable Speed Signs:</b>	1	
<b>No. of Static speed signs:</b>	2	
<b>No. of "School Zone Ends" signs:</b>	2	
<b>No. of kerb build-outs:</b>	2	

<b>Name of school:</b>	Nelson Girls College	
<b>Main frontage road(s):</b>	Trafalgar Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	2,730vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>	46.6km/h	Complies
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>	53.3km/h	Complies
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 2 attached	
<b>No. of Electronic Variable Speed Signs:</b>	2	
<b>No. of Static speed signs:</b>	3	
<b>No. of "School Zone Ends" signs:</b>	5	
<b>No. of kerb build-outs:</b>	1	

Key

-  Sign Position
-  Sign Position on New Island
-  Extent of School Speed Zone



R1-6 Sign



R1-7 Sign



R1-6.1 Sign

Wednesday, 1 May 2013 0 20mm



Nelson Schools Variable Speed Limits  
Nelson Girls College



2

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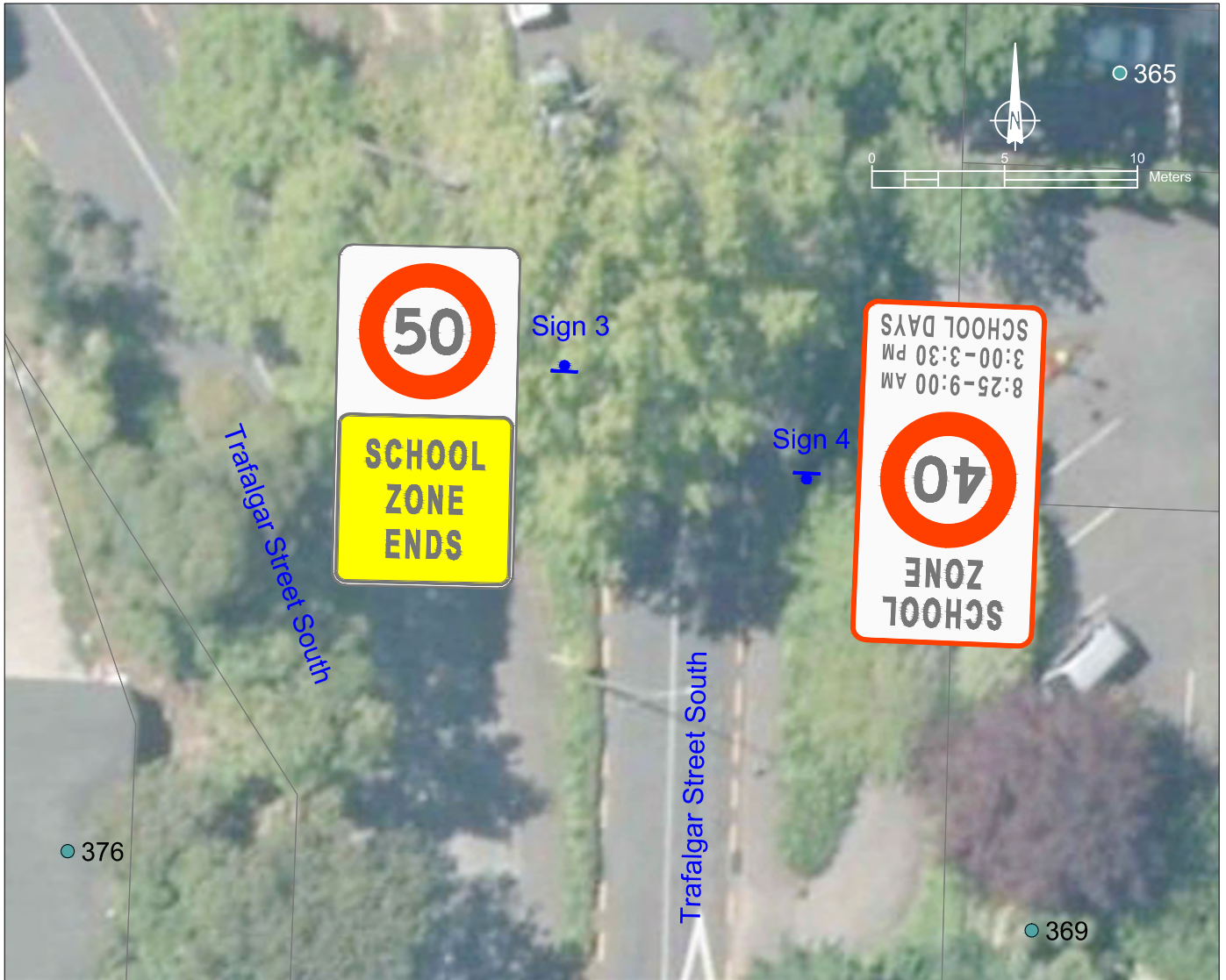


Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

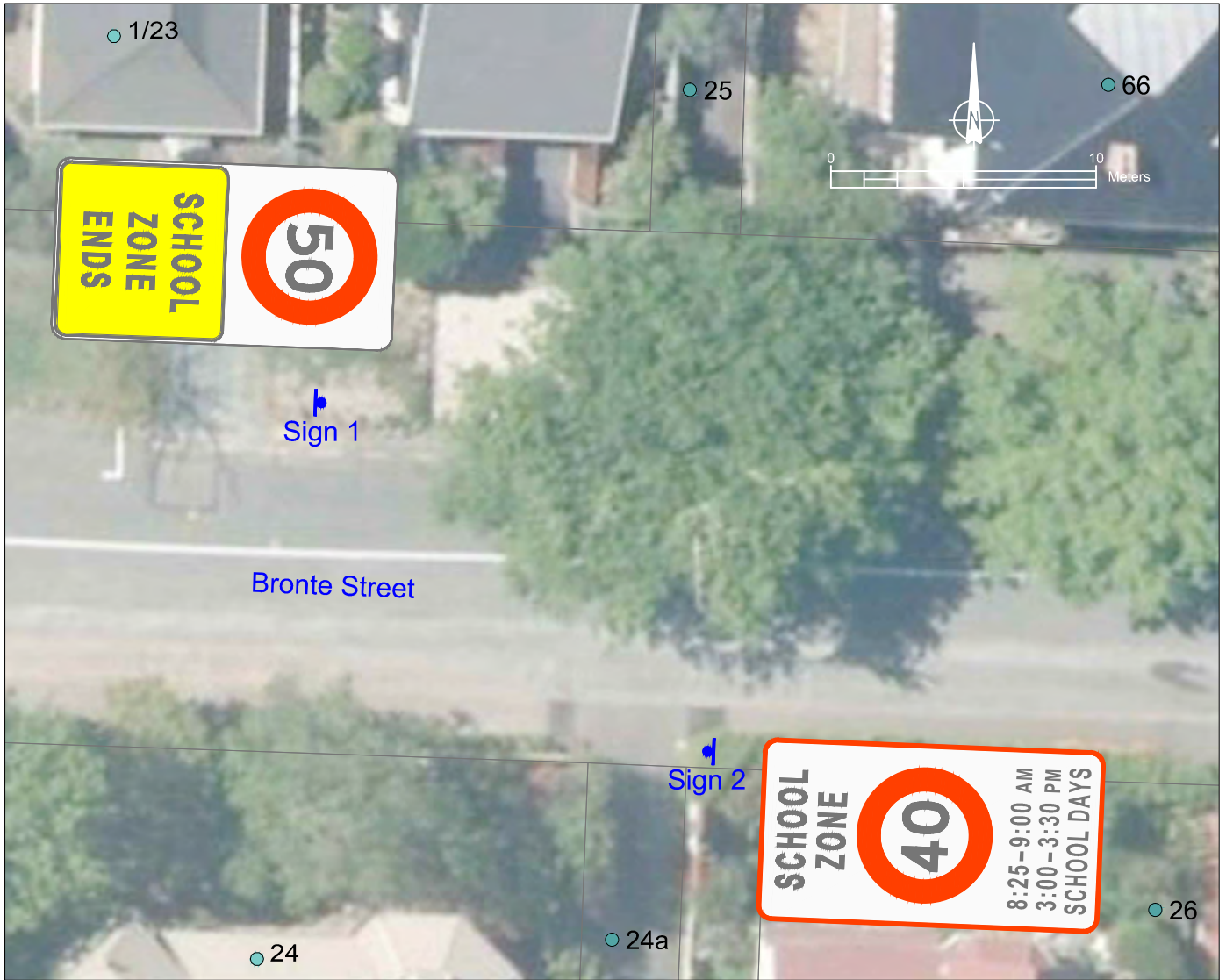


Sign 3 Location



Sign 4 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



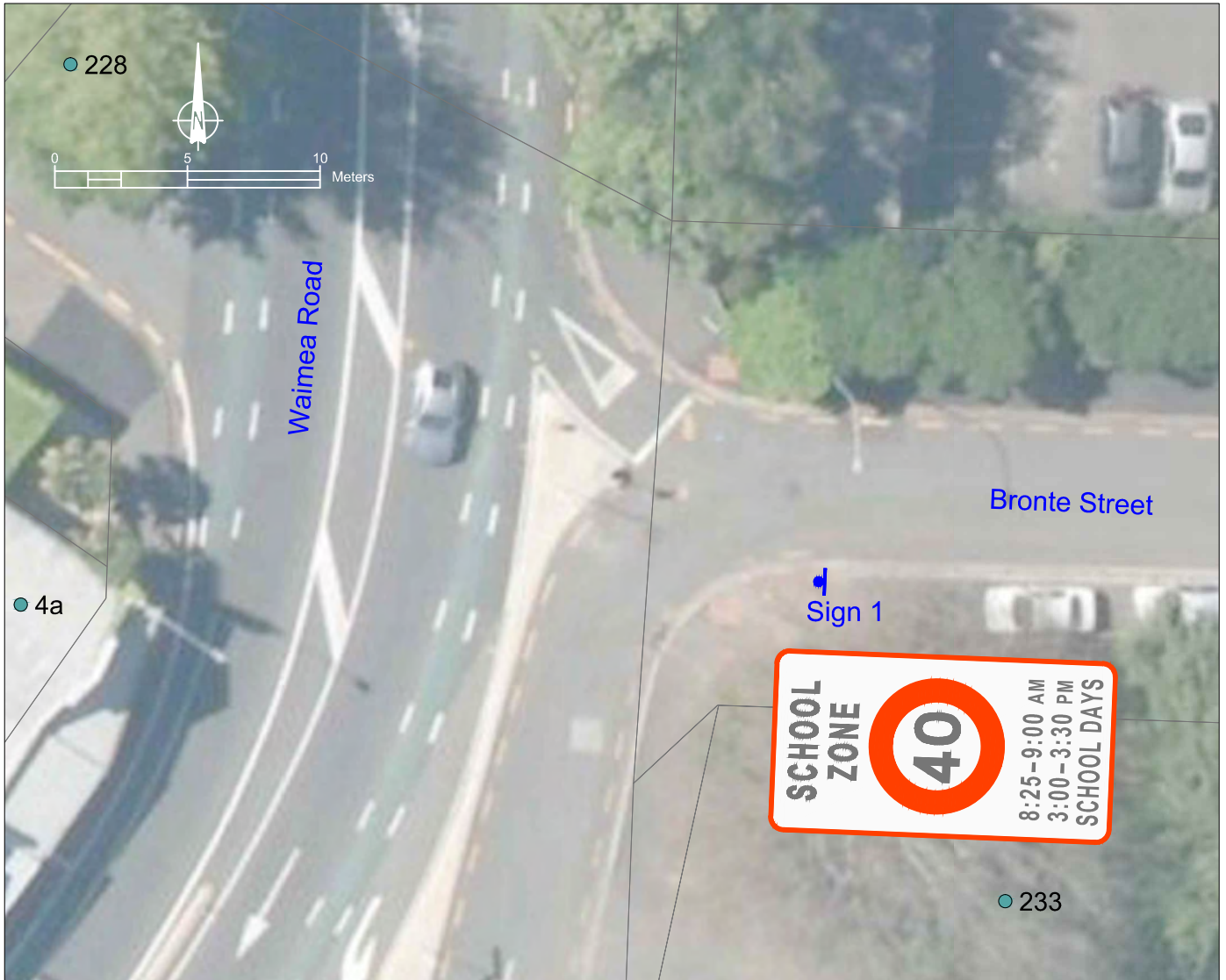


Sign 3 Location



Sign 4 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location

Monday, 29 April 2013 0 20mm

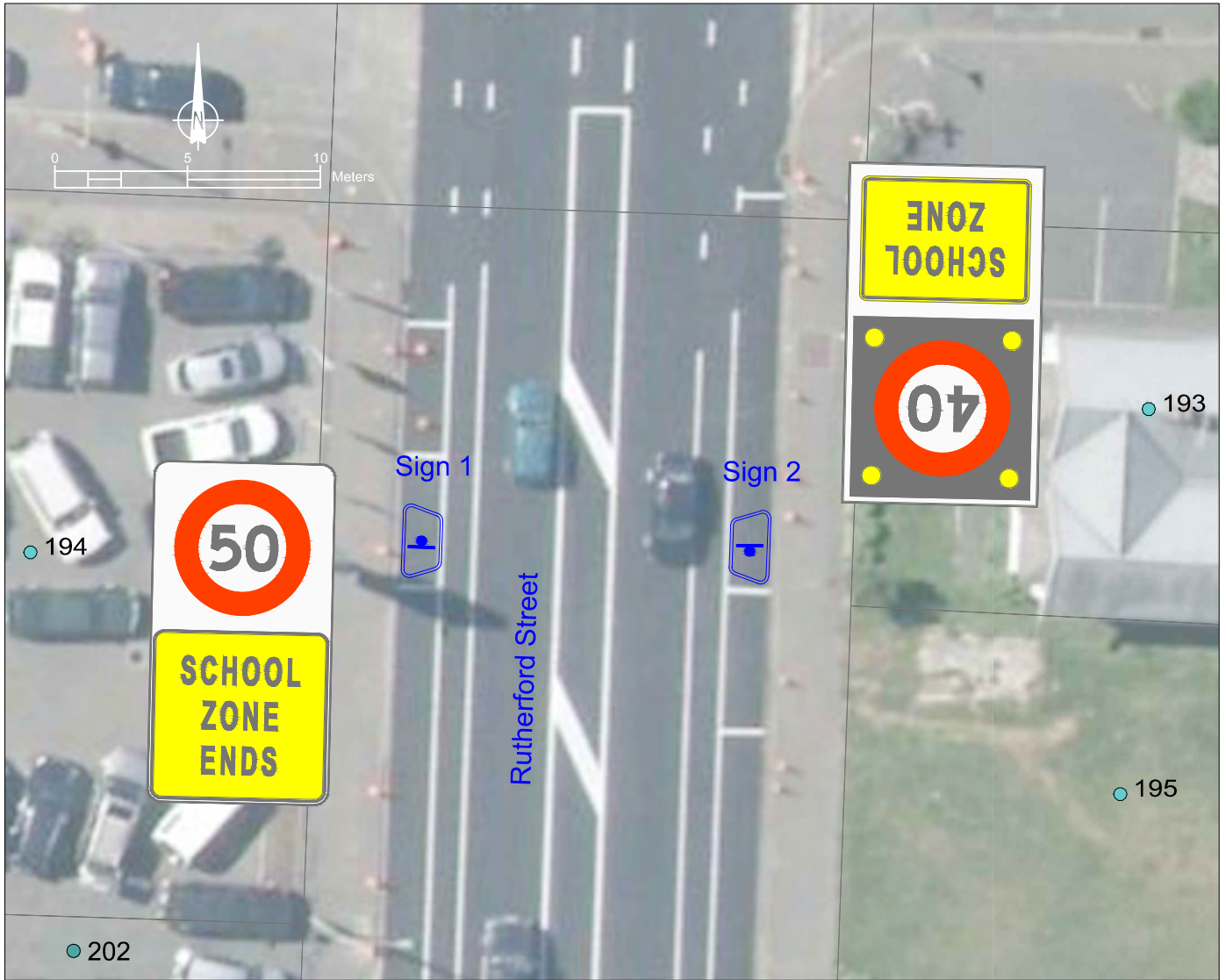


Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



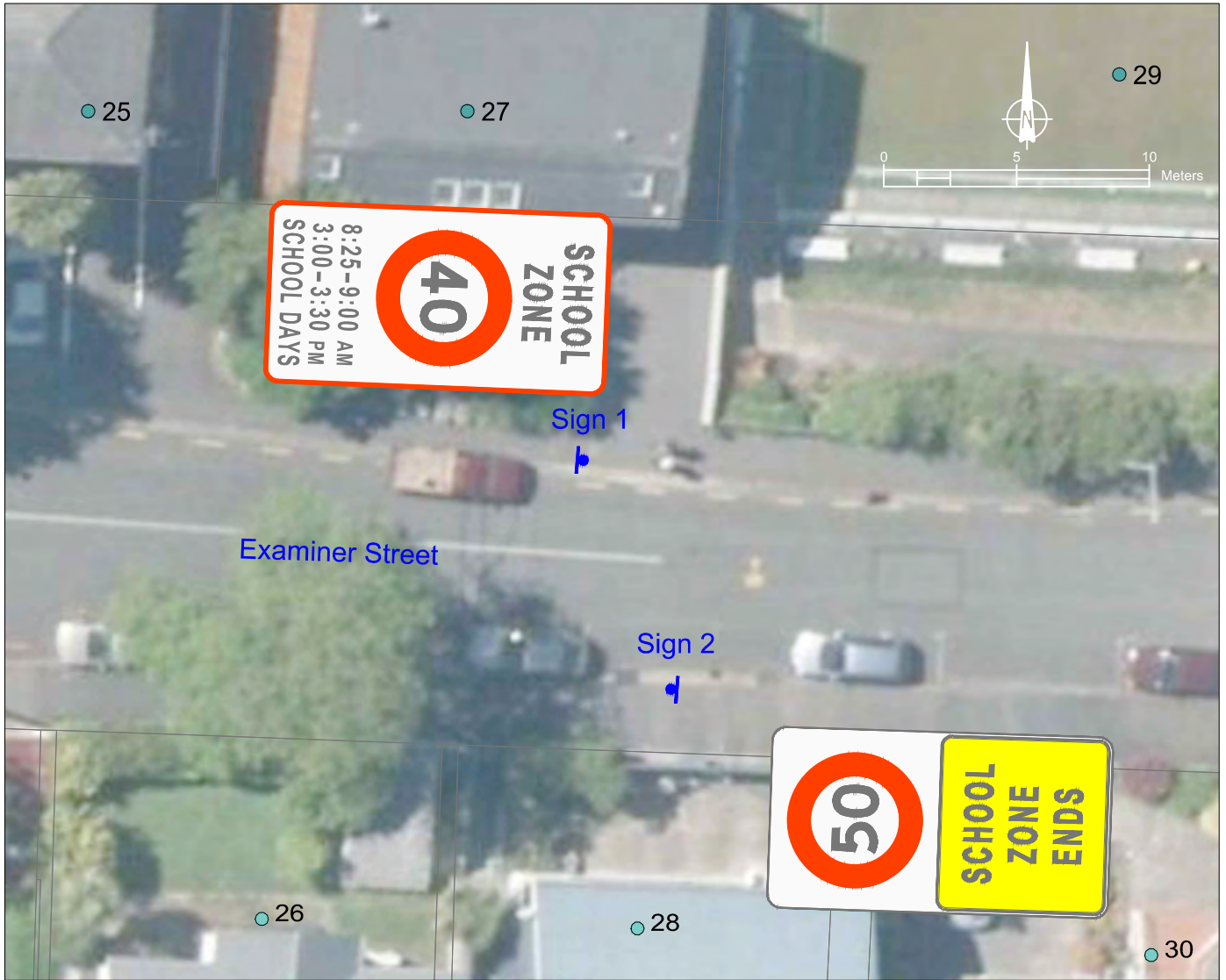
Sign 2 Location

Wednesday, 1 May 2013 0 20mm

Nelson Schools Variable Speed Limits  
 Nelson Girls College



2g  
 SCALE: 1:250@A4



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

SUMMARY DATA SHEET

<b>Name of school:</b>	Nelson Intermediate	
<b>Main frontage road(s):</b>	Tipahi Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	1,660vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>	51.5km/h	Complies
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 3 attached	
<b>No. of Electronic Variable Speed Signs:</b>	1	
<b>No. of Static speed signs:</b>	3	
<b>No. of "School Zone Ends" signs:</b>	3	
<b>No. of kerb build-outs:</b>	1	

<b>Name of school:</b>	Nelson Intermediate	
<b>Main frontage road(s):</b>	Motueka Street	
<b>Frontage Road type:</b>	Collector	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	6,830vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 3 attached	
<b>No. of Electronic Variable Speed Signs:</b>	1	
<b>No. of Static speed signs:</b>	3	
<b>No. of "School Zone Ends" signs:</b>	2	
<b>No. of kerb build-outs:</b>	1	

Wednesday, 1 May 2013 0 20mm



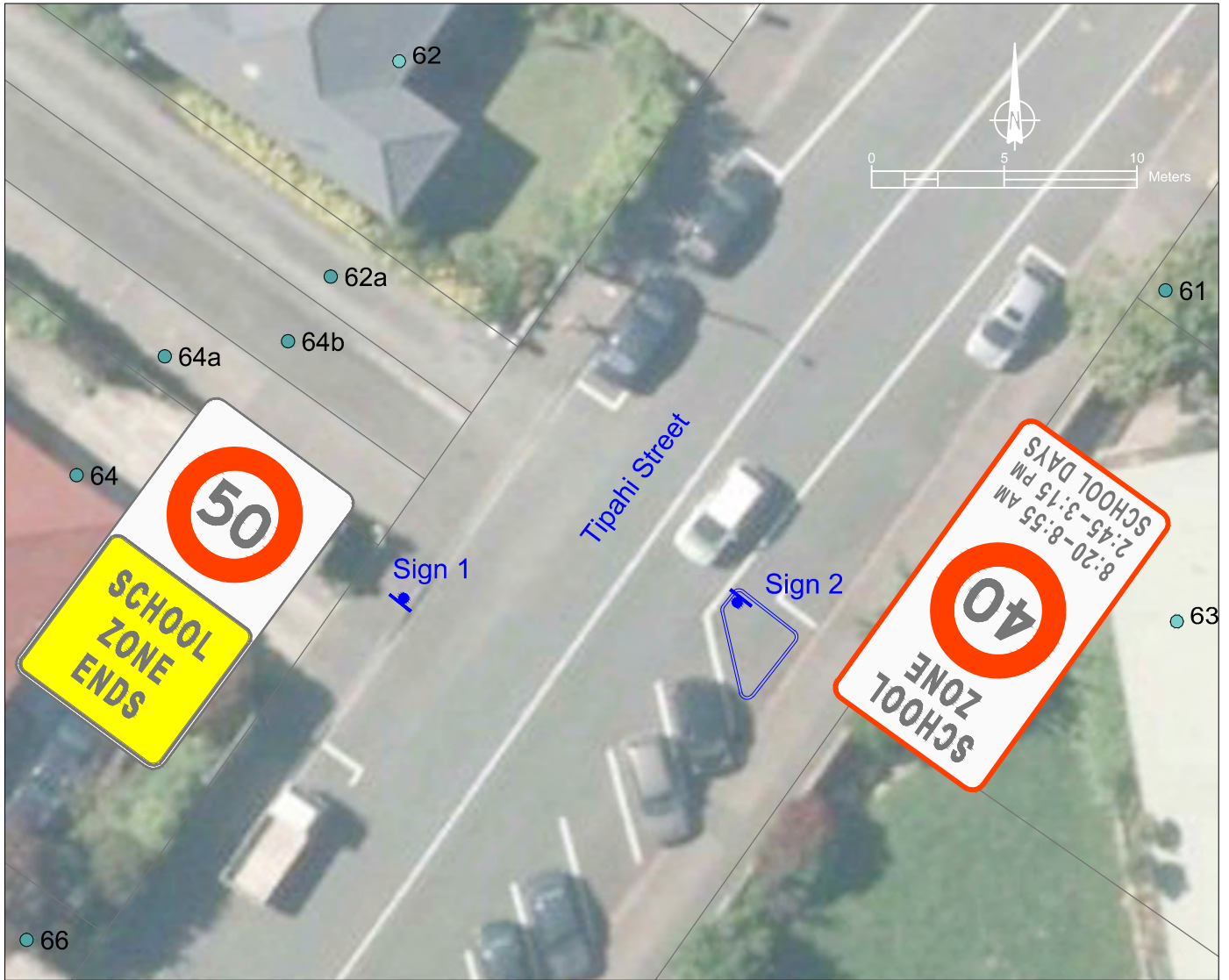
Nelson Schools Variable Speed Limits  
 Nelson Intermediate School



3

SCALE: 1:3,000@A4





Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Wednesday, 1 May 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

SUMMARY DATA SHEET

<b>Name of school:</b>	Nelson Boys College/Hampden Street	
<b>Main frontage road(s):</b>	Waimea Road	
<b>Frontage Road type:</b>	Arterial	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	22,000vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>	Yes	Complies
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 4 attached	
<b>No. of Electronic Variable Speed Signs:</b>	1	
<b>No. of Static speed signs:</b>	4	
<b>No. of "School Zone Ends" signs:</b>	3	
<b>No. of kerb build-outs:</b>	1	



<b>Name of school:</b>	Nelson Boys College/Hampden Street	
<b>Main frontage road(s):</b>	Franklyn Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	440vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>NO</b>
<b>Other reasons for implementation</b>	No additional signage needed to cover full site frontage.	
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 4 attached	
<b>No. of Electronic Variable Speed Signs:</b>	0	
<b>No. of Static speed signs:</b>	3	
<b>No. of "School Zone Ends" signs:</b>	0	
<b>No. of kerb build-outs:</b>	0	

<b>Name of school:</b>	Nelson Boys College/Hampden Street	
Main frontage road(s):	Hampden Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	1160vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>NO</b>
<b>Other reasons for implementation</b>	No additional signage needed to cover full site frontage. Need to connect Waimea Rd to Ngatiawa St.	
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 4 attached	
<b>No. of Electronic Variable Speed Signs:</b>	0	
<b>No. of Static speed signs:</b>	1	
<b>No. of "School Zone Ends" signs:</b>	1	
<b>No. of kerb build-outs:</b>	0	

<b>Name of school:</b>	Nelson Boys College/Hampden Street	
Main frontage road(s):	Ngatiawa Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	890vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>	Yes	Complies
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 4 attached	
<b>No. of Electronic Variable Speed Signs:</b>	0	
<b>No. of Static speed signs:</b>	0	
<b>No. of "School Zone Ends" signs:</b>	0	
<b>No. of kerb build-outs:</b>	0	

<b>Name of school:</b>	Nelson Boys College/Hampden Street	
Main frontage road(s):	Van Diemen Street	
<b>Frontage Road type:</b>	Collector	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	5230vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>	47.1km/h	Complies
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>	54.4km/h	Complies
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 4 attached	
<b>No. of Electronic Variable Speed Signs:</b>	1	
<b>No. of Static speed signs:</b>	0	
<b>No. of "School Zone Ends" signs:</b>	1	
<b>No. of kerb build-outs:</b>	0	

Tuesday, 30 April 2013 0 20mm



Nelson Schools Variable Speed Limits  
 Nelson Boys College/Hampden Street School



4

SCALE: 1:4,000@A4



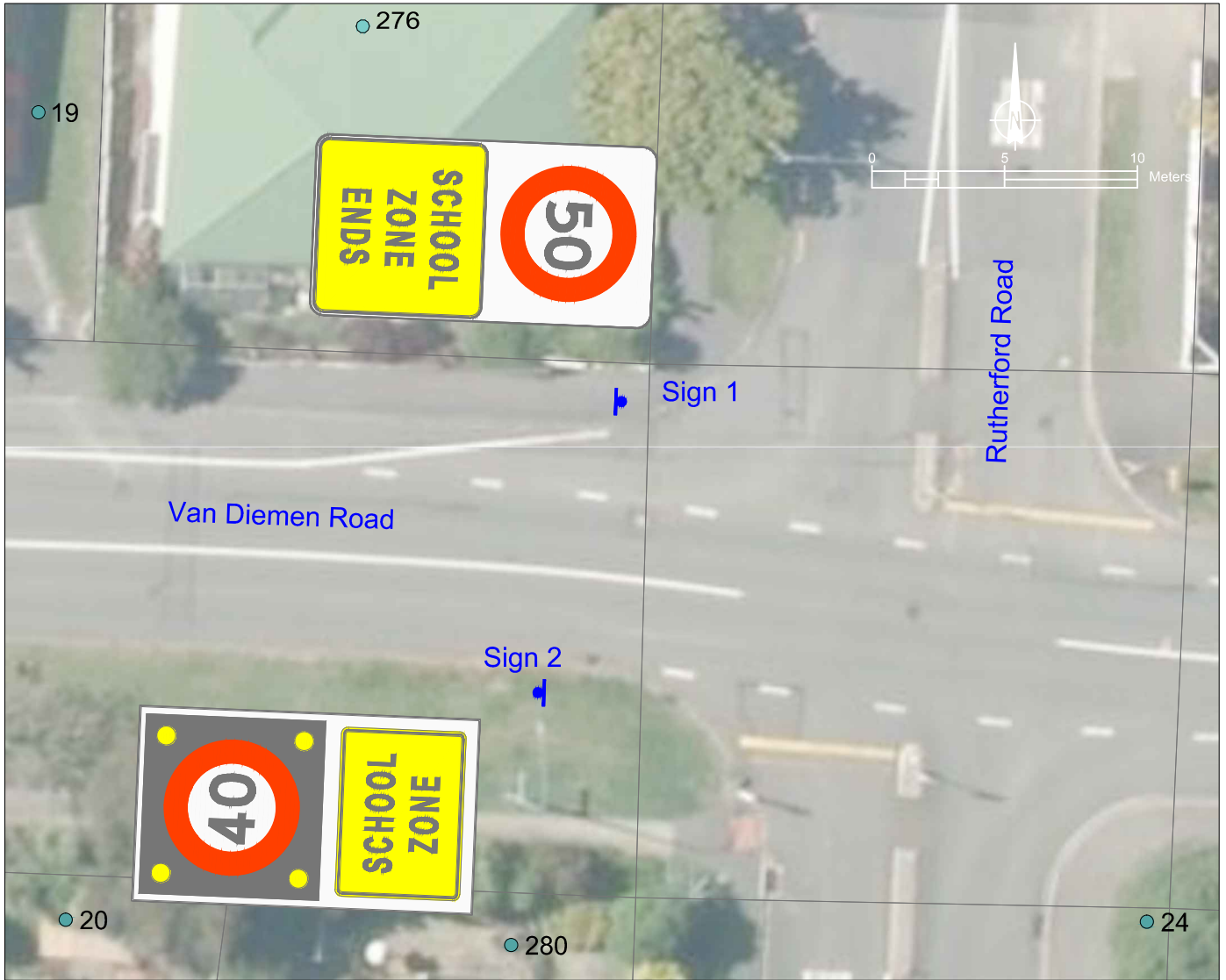
Sign 1 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm





Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

Nelson Schools Variable Speed Limits  
 Nelson Boys College/Hampden Street School



4d

SCALE: 1:250@A4

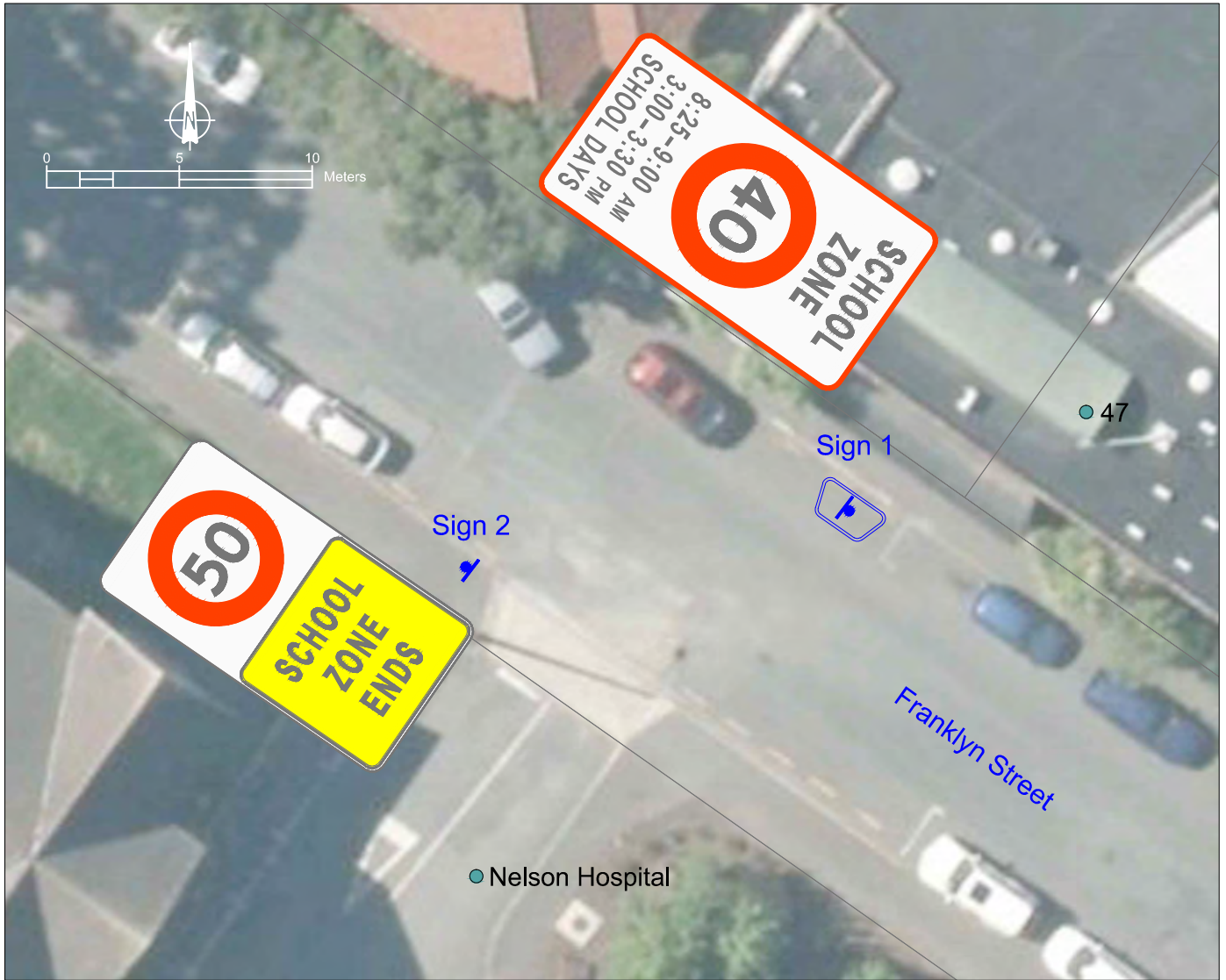


Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

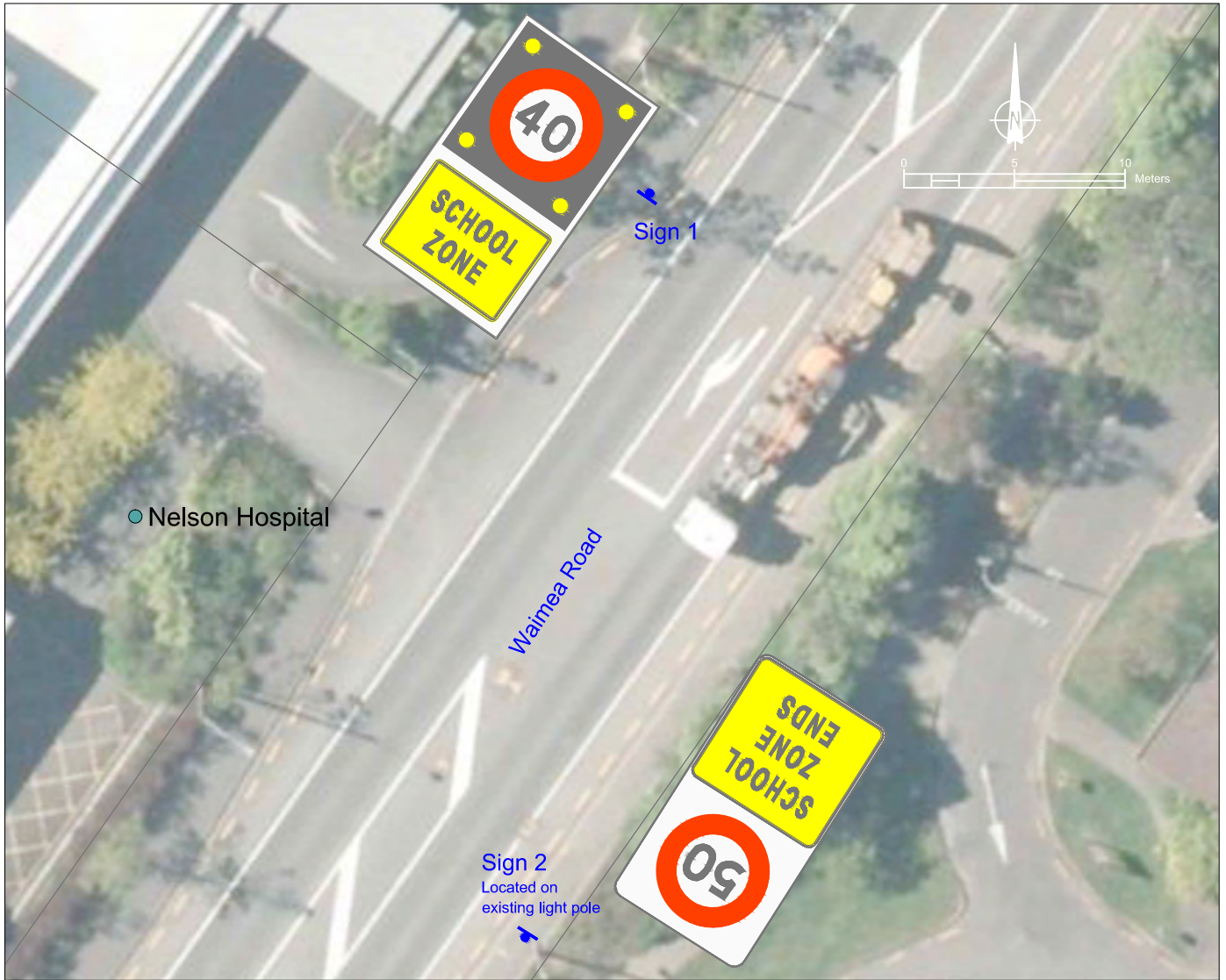


Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



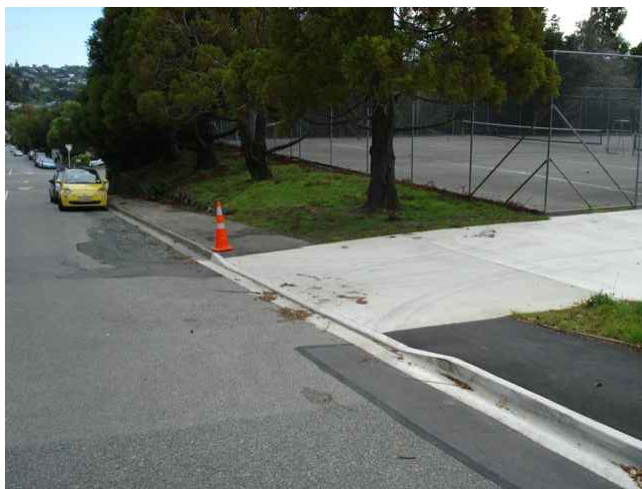
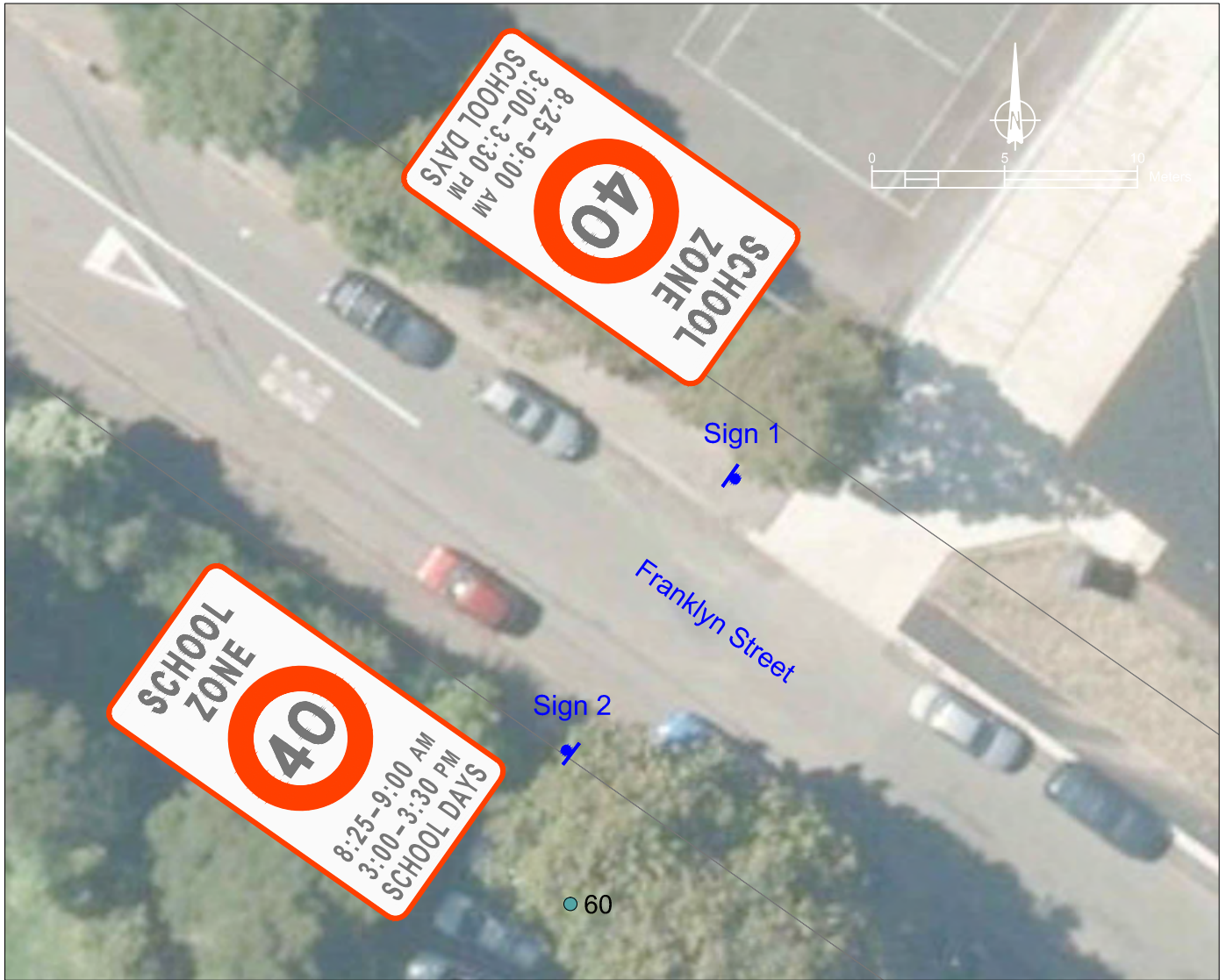
Sign 2 Location

Monday, 29 April 2013 0 20mm

Nelson Schools Variable Speed Limits  
 Nelson Boys College/Hampden Street School



**4g**  
 SCALE: 1:300@A4



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

Nelson Schools Variable Speed Limits  
 Nelson Boys College/Hampden Street School



**4h**  
 SCALE: 1:250@A4



Sign 1 Location

0 20mm

Monday, 29 April 2013

Nelson Schools Variable Speed Limits  
 Nelson Boys College/Hampden Street School



4i

SCALE: 1:250@A4

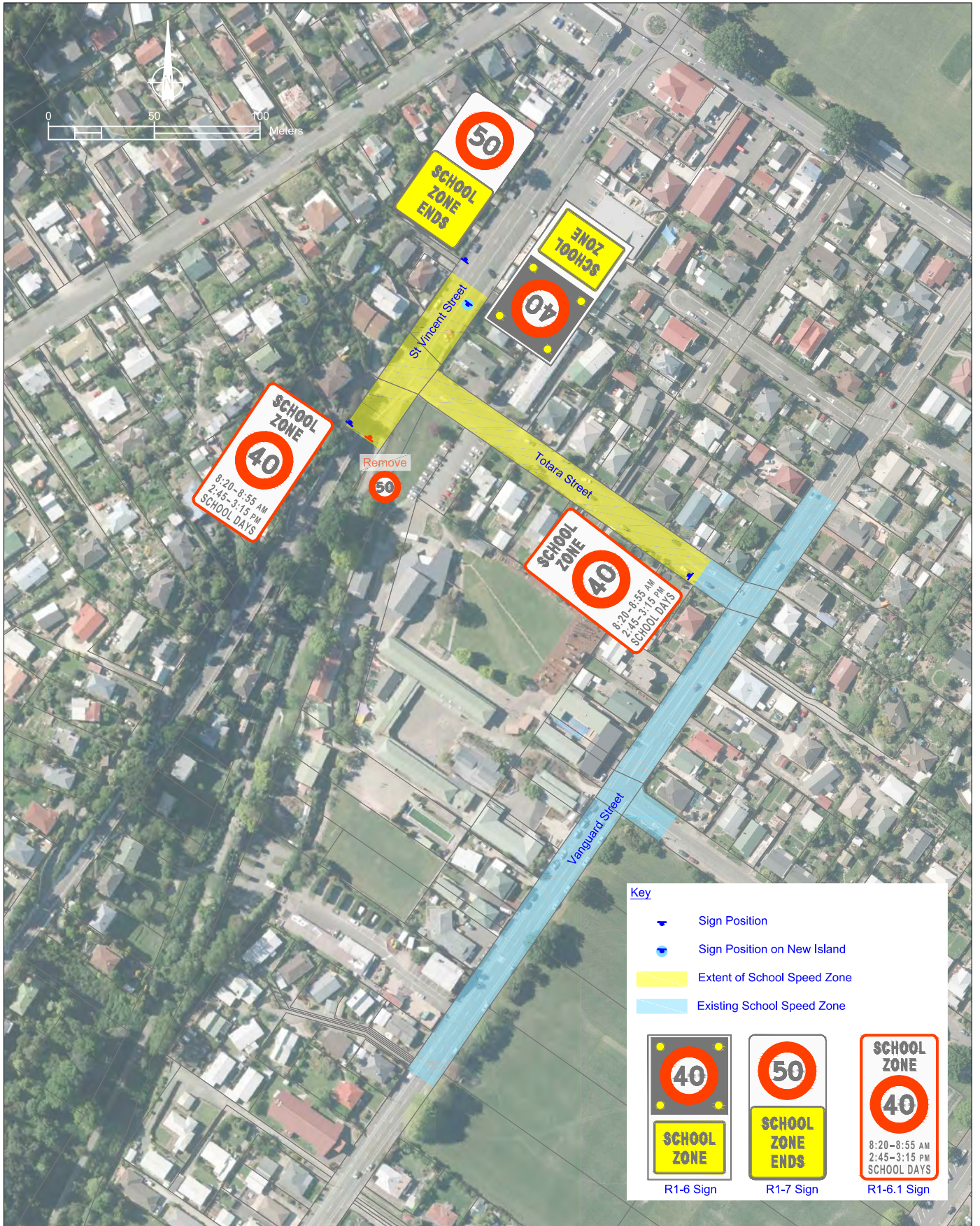
SUMMARY DATA SHEET

<b>Name of school:</b>	Victory School	
<b>Main frontage road(s):</b>	St Vincent Street	
<b>Frontage Road type:</b>	Principal	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	1,200vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>	46.3km/h	Complies
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>	51.9km/h	Complies
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>		
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 5 attached	
<b>No. of Electronic Variable Speed Signs:</b>	1	
<b>No. of Static speed signs:</b>	1	
<b>No. of "School Zone Ends" signs:</b>	1	
<b>No. of kerb build-outs:</b>	1	

<b>Name of school:</b>	Victory School	
<b>Main frontage road(s):</b>	Totara Street	
<b>Frontage Road type:</b>	Local	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	1,080vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>		N/A
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>NO</b>
<b>Other reasons for implementation</b>	Connect St Vincent St zone to Vanguard St Zone	
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 5 attached	
<b>No. of Electronic Variable Speed Signs:</b>	0	
<b>No. of Static speed signs:</b>	1	
<b>No. of "School Zone Ends" signs:</b>	0	
<b>No. of kerb build-outs:</b>	0	



Monday, 29 April 2013 0 20mm



Nelson Schools Variable Speed Limits  
 Victory School Extension



5

SCALE: 1:2,500@A4

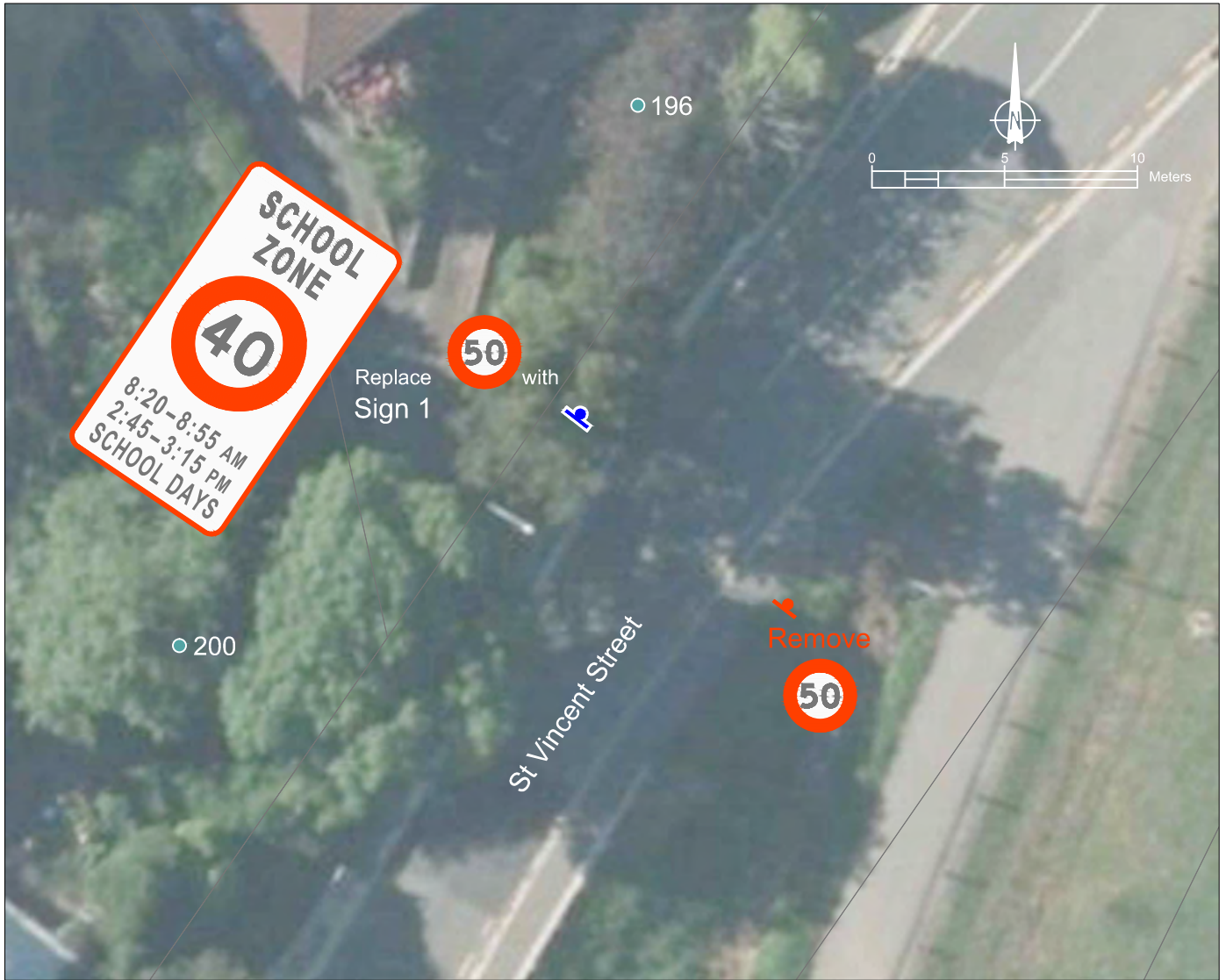


Sign 1 Location



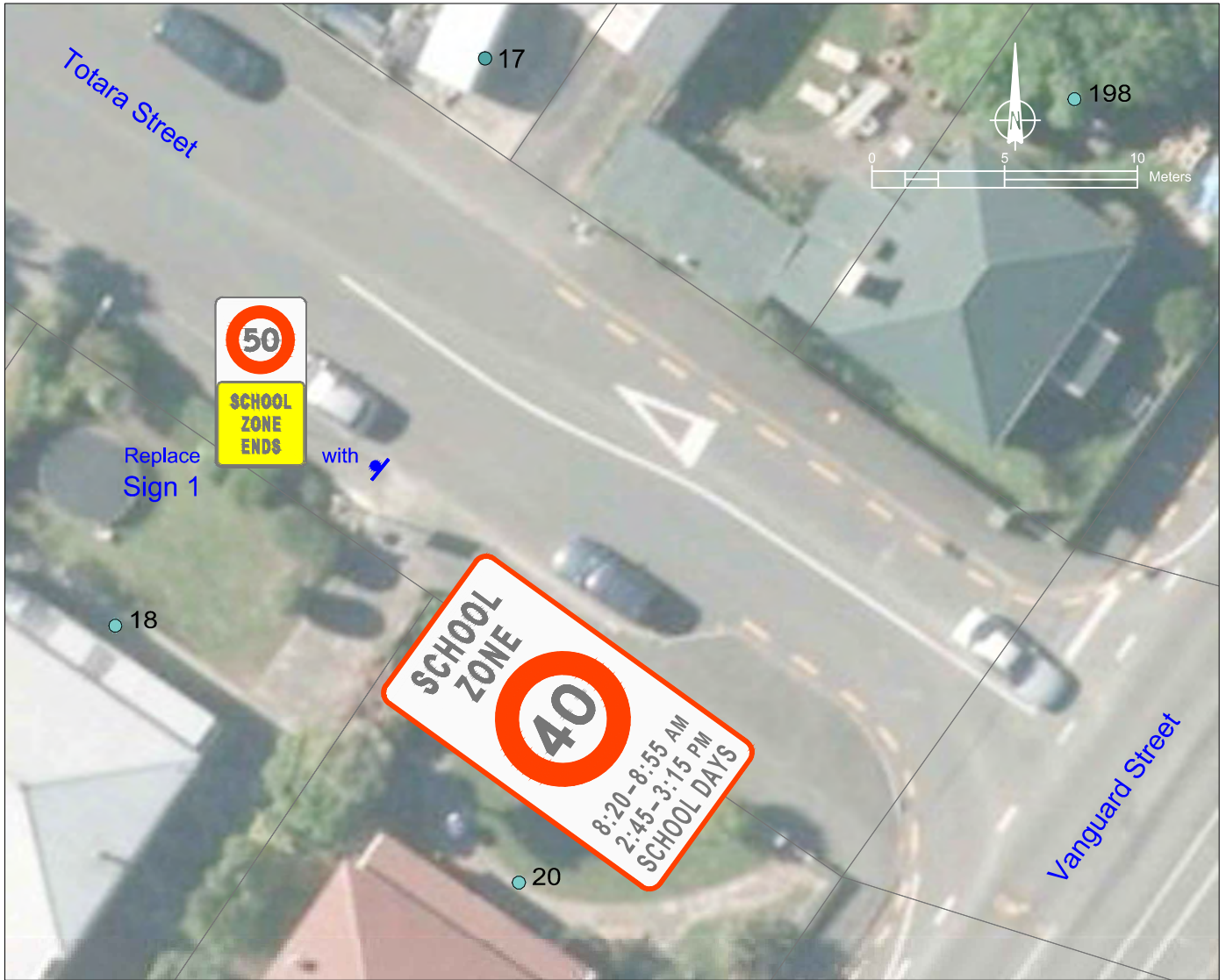
Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location

Monday, 29 April 2013 0 20mm

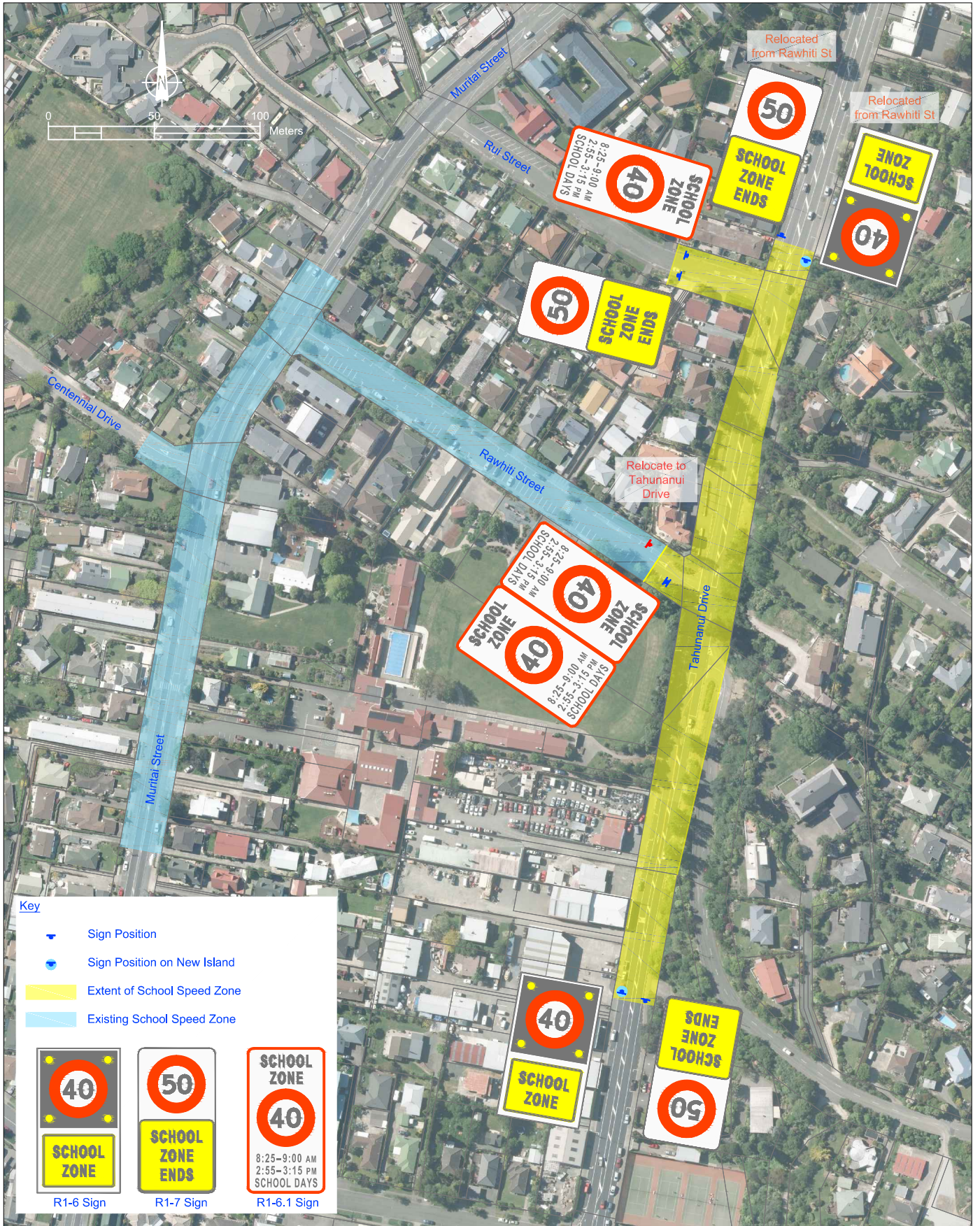


Sign 1 Location

Monday, 29 April 2013 0 20mm

SUMMARY DATA SHEET

<b>Name of school:</b>	Tahunanui School	
<b>Main frontage road(s):</b>	Tahunanui Drive (SH1)	
<b>Frontage Road type:</b>	State Highway	
<b>Average Daily Vehicle Traffic Flow (ADT):</b>	19,500vpd	
<b>WARRANT CRITERIA</b>		
<b>(a) Pedestrian Flows: (&gt;50 children <u>and</u>)</b>	Yes	Complies
<b>Traffic Speeds: (i) (<u>either</u> mean &gt;45km/h)</b>		N/A
<b>(ii) (<u>or</u> 85<sup>th</sup> percentile &gt;50km/h)</b>		N/A
<b>(iii) Five Year Crash Record: (<u>or</u> speed related crashes recorded on the last 5 years)</b>		
		N/A
<b>(iv) Main traffic route (<u>or</u> school on main traffic route)</b>	Yes	Complies
<b>(b) Engineered speed limit &lt;40km/h</b>		N/A
<b>SITE COMPLIANCE WITH WARRANT</b>		<b>COMPLIES</b>
<b>Other reasons for implementation</b>	NZTA support	
<b>RECOMMENDED LOCATION/IMPLIMENTATION</b>		
<b>Location of Signs</b>	See Figure 6 attached	
<b>No. of Electronic Variable Speed Signs:</b>	2 (1 new and one relocated)	
<b>No. of Static speed signs:</b>	3	
<b>No. of "School Zone Ends" signs:</b>	3	
<b>No. of kerb build-outs:</b>	2	



**Key**

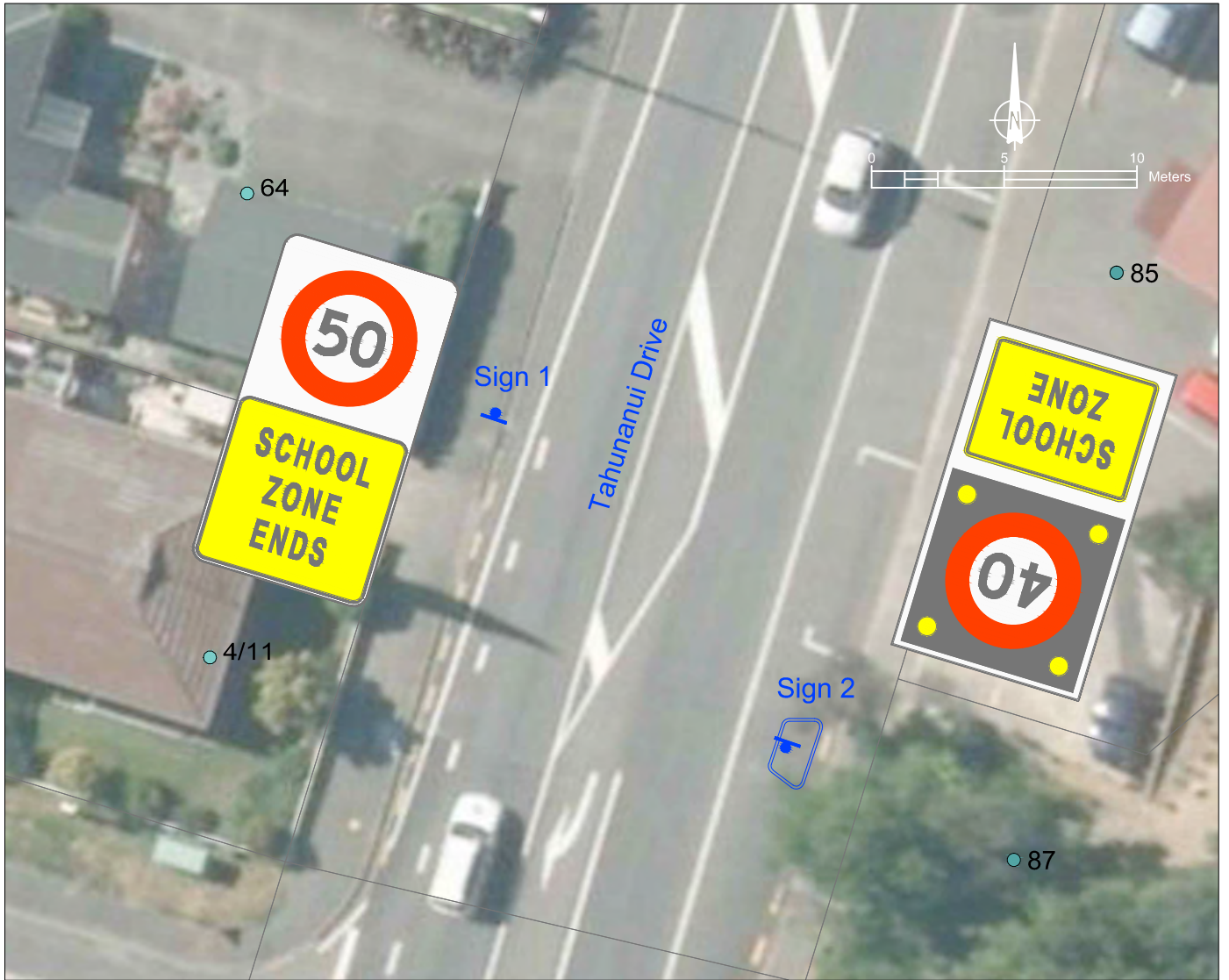
- Sign Position
- Sign Position on New Island
- Extent of School Speed Zone
- Existing School Speed Zone

R1-6 Sign	R1-7 Sign	R1-6.1 Sign

Monday, 29 April 2013 0 20mm

Nelson Schools Variable Speed Limits  
Tahunanui School





Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm





Sign 1 Location

Monday, 29 April 2013 0 20mm



Sign 1 Location



Sign 2 Location

Monday, 29 April 2013 0 20mm

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## Appendix B Schedule of Variable Speed Limits

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## Recommended additions to NCC Speed Limits Bylaw (no. 210): Schedule M – Variable Speed Limits

Road Name	Location
All variable speed limit in school zones (40km/h) to operate in accordance with the NZ Gazette 21/4/2011. Note: All measurements are taken from the nearest road reserve boundary.	
Scotland Street	from 25m north of Seymour Avenue to Bronte Street
Tipahi Street	from 42m south west of Tukuka Street to 70m north east of Motueka Street
Tukuka Street	from the north west cul-de-sac to 44m south east of Tipahi Street
Motueka Street	from 56m south east of Tipahi Street to its intersection with Vanguard Street
Vanguard Street	from 36m south west of Motueka Street to 51m north east of Totara Street
Totara Street	all of Totara Street
St Vincent Street	from 25m south west of Totara Street to 40m north east of Totara Street
Waimea Road	from 112m south west of Franklyn Street through to and including its intersection with Rutherford Street
Franklyn Street	from 60m north west of Waimea Road through to its end, 210m south east of Waimea Road
Hampden Street	from 48m north west of Waimea Road to 73m south east of Ngatiawa Street
Ngatiawa Street	full length from Hampden Street to Van Diemen Street
Van Diemen Street	from Waimea Road to 82m east of Ngatiawa Street
Rutherford Street	from 78m south of Bronte Street west to 160m north of Bronte Street west
Bronte Street West	all of Bronte Street West
Wellington Street	first 10m of Wellington Street north west of Rutherford Street
Trafalgar Street South	from 45m south of Bronte Street to Trafalgar Square
Bronte Street	from Nelson College for Girls to 36m east of Trafalgar Street
Examiner Street	first 65m of Examiner Street west of Trafalgar Street south
Trafalgar Square	first 77m of Trafalgar Square, north west from Examiner Street
Collingwood Street	from 48m north of Manuka Street to 60m south of Bronte Street
Bronte Street	from 47m west of Collingwood Street to Scotland Street
Manuka Street	from Collingwood Street to 55m west of Tasman Street (measured along Manuka Street southern boundary)

Rui Street	first 36m of west of Tahunanui Drive
Rawhiti Street	all of Rawhiti Street

### Recommended additions to State Highway network speed limits

Road Name	Location
All variable speed limit in school zones (40km/h) to operate in accordance with the NZ Gazette 21/4/2011. Note: All measurements are taken from the nearest road reserve boundary.	
Tahunanui Drive	from 180m south of Rawhiti Street to 16m north of Rui Street