JULY 2024

# Central Hawke's Bay District Council

Waipawa – Streets for People Monitoring and Evaluation Report



## FOLKL

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## **Project background and objectives**

Central Hawke's Bay District Council (CHBDC) was awarded support by Waka Kotahi's Streets for People (SfP) fund to make improvements to Waipawa's main street. The aim is to make the area a safer, healthier and more people-friendly place for the community.

#### The objectives:

The programme of work is split into five focus areas which seek to address the following:

- Traffic calming interventions (1) into Waipawa
- Improved walking and cycling connections across State Highway 2
- (3)Improved walking and cycling connections at key intersections
- Improved access to Madge (4)Hunter Park and Centennial Memorial Swimming Pool
- Testing cycling options on State Highway

# 2022

FOLKL conducted research to provide a pre-change benchmark for the area. The research revealed people's appreciation for the street's character and the convenience of a compact shopping area. The main cause for negative experiences was a feeling of a lack of pedestrian priority primarily due to unsafe crossing points and speeding vehicles. The community was supportive of calming initiatives, safer crossing points and infrastructure to revitalise the area.

The findings from this phase enables the measurement of the impact of changes. This report is publicly available on the CHBDC website.

# 2024

CHBDC made changes to th

- → a temporary new roundabout at the intersection of Ruataniwhā Street and State Highway 2 (SH2)
- and slow traffic as it approaches the roundabout
- $\rightarrow$  two new flat pedestrian crossings with safety
- → new signage and road markings to slow traffic approaching Waipawa from both directions and at the Waverley/Church streets intersection
- → plants and planter boxes to provide visual cues to slow traffic



FOLKL conducted phase two of the research to evaluate the impact of these changes. These findings are presented in this report and will be used to support CHBDC's decisions about any further changes.

→ a centre island near Madge Hunter Park and Centennial Memorial Swimming Pool to narrow the carriageway lighting, one near the BP Station, one near the library

## **Project methodology**



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## **Research methodology**

To enable community involvement, a 'citizen audit' programme was initiated as part of the engagement and evaluation process. This gathered regular feedback pre- and post-change to understand the impact of interventions and provide supporting information for the co-design groups.

A seven-point scale for evaluation was utilised with open-ended feedback against the assessment criteria to contextualise participant scores.

**494** completed survey responses were recorded for this evaluation phase using the methods outlined on the page.

Video cameras were set up to monitor changes in vehicle and pedestrian behaviour, intersection use and traffic volumes.



#### **Research limitations**

Survey data is not representative of the Waipawa population and any interpretation of the results

should consider this. The comparative analysis utilises a different, and larger survey sample within the same community, with minor differences in the question sets.



#### **Citizen Assessment:**



#### Survey

An online survey of the public ran from 2 July to 29 July 2024 and received 483 responses. The survey was promoted via CHBDC social media channels using sponsored posts, outdoor QR code displays, and shared in the local school newsletter.

#### Walking workshop

R FOLKL researchers lead a walking group of 11 students from Waipawa Primary School on 2 July 2024. Students completed a survey at the end of the workshop.





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- (1) SH2 & Ruatar 03/07/2024 -
- (2) Waipawa Buto 03/07/2024 -



A sample of TomTom data was used to obtain speed measurements for the average and 85th percentile along High Street. The sample was based on eligible vehicle movements in November 2023 (pre-change) and June/July 2024 (post-change).



Sound level monitoring was conducted in three different locations along High Street and the sound level was recorded at these locations for 15 minutes in the pre-change and post-change analysis.

Source: FOLKL Research.

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FOLKL VISION
FOLKL Vision is a proprietary traffic analysis tool which uses digital processing to produce an ing of how people use space. A descriptive analysis cted using video data from two sites in order to
Ruataniwha Street 2024 - 08/07/2024 from 6am to 8pm
va Butcher 2024 - 08/07/2024 from 6am to 8pm
Speed data

#### Sound level monitoring

## **Executive summary**

Participants felt safer in the area following the changes. Notably, there has been a 130% increase in positive feelings of safety among pedestrians and a 54% increase in overall safety compared to the benchmark report. 85th percentile speeds have dropped by 11km per hour on average.



There were mixed feelings about the roundabout. Some participants felt it had improved traffic flow, while others found it confusing and unsafe, especially due to the aforementioned crossing point. Parking availability was generally not viewed as a concern, although some drivers found it difficult to parallel park with the additional crossings and roadworks. FOLKL Vision indicates that there was more pedestrian movement at the SH2/Ruantaniwhā Street intersection and the new infrastructure is being used correctly. Pedestrian crossing movements outside the Waipawa Butcher have decreased since the benchmark report.

There was a desire for revitalisation initiatives to enhance the town's appeal such as public art, the improvement of shop fronts and representation of Māori culture.

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Many participants felt the crossing at the SH2/Ruataniwhā Street intersection was dangerous for both vehicles and pedestrians and requested it be removed. OLKL: PROPRIETARY AND CONFIDENTIAI





## Findings

"There is no cycle lane but cyclists can ride around the quieter side streets. A cycle lane on the main street would be dangerous and we need to retain all the car parks outside the retail stores".

"There aren't many cyclists that use the main street that I have seen however traffic isn't inclined to give them much room going through Waipawa. They don't pay enough attention for people to safely cycle through".

"As a truck driver at the roundabout you are looking to give way as well as looking at who's crossing that crossing it's impossible".

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"Accessibility to the parking on the shop side has improved with the roundabout being able to easily turn and double back if coming from the north".

> "When I am driving I don't feel safe as there is too much clutter and lots of distractions with all the crossings, parking, planter boxes roundabouts etc".

"Safer crossing options and traffic has slowed considerably. Roundabout pedestrian crossing dangerous though".

"Apart from crossing at roundabout, the main street works well, I think".

## **Evaluation scores and perceptions Overall safety**

Participants generally feel safer in the area, though opinions on the effectiveness of the roundabout were mixed.



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#### **Open-ended feedback:**

→ Many participants mentioned feeling safer due to the slower vehicle traffic and safer crossing points.

→ There were mixed feelings about the roundabout; some found it effective for traffic flow, while others saw it as adding to the confusion and danger, especially with the nearby pedestrian crossing.

→ Some drivers felt there were now an excessive number of crossings, making it difficult to navigate the area.

 → Echoing the findings from the benchmark report, there were concerns about the high volume of truck traffic.

→ To a lesser extent participants mentioned issues with potholes and slippery footpaths when wet, creating hazards.

## **Evaluation scores and perceptions Pedestrian**

The changes have improved feelings of safety for pedestrians by slowing down traffic and making it safer to cross.



Percent

How effectively or ineffectively do you feel the Waipawa main street 76% area caters to pedestrians? 40% **Benchmark report comparison:** There has been a 130% increase in the number 32% of people feeling 'Somewhat effectively' to 'Very effectively' since the changes were implemented. 30% 18% 20% 7% 6% 10% 4% 4% 0%

Neither of ectively

Somewhat stectively

Level of effectiveness

inefectively



#### **Open-ended feedback:**

26%

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Very inerfectives

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 $\rightarrow$  Participants felt that the raised crossings have improved safety by slowing down traffic and making it easier to cross the road.

 $\rightarrow$  The close proximity of the crossing near the new roundabout was perceived as unsafe for both pedestrians and drivers.

→ Some participants suggest there are now too many crossings, causing congestion and driver distraction.

> Participants have concerns of 'jaywalking,' despite the new crossings leading to the belief that behaviour change is required rather than additional infrastructure.

 $\rightarrow$  The wide footpaths and good visibility of crossings were appreciated.



## **Evaluation scores and perceptions Cyclists**

Participants questioned whether the main street is suitable and feasible for cycling.



Level of effectiveness

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#### **Open-ended feedback:**

→ Many participants had never cycled through town and do not know the conditions for cyclists, however for those who did, said the slower vehicle speeds and crossing points have contributed to increased feelings of safety.

→ The absence of a dedicated cycleway is a major safety concern. However, many participants believe a dedicated cycle lane is unnecessary due to the short length of the main street and a perceived lack of cyclists using it.

 → Participants frequently mentioned that the state highway status of the main street makes the introduction of cycling infrastructure infeasible.

→ Cyclists often used the footpath due to road conditions, it was felt this created potential risks for pedestrians.



## **Evaluation scores and perceptions Parking**

It was generally felt that there is sufficient parking on and near the main street.



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#### **Open-ended feedback:**

→ Many participants felt that there was ample parking available, both on the main street and in adjacent areas such as behind the shops and next to the museum. These car parks were noted as particularly useful during busy times.

→ Some participants reported difficulties navigating in and out of parallel parking spaces due to increased congestion caused by pedestrian crossings, the roundabout, and roadworks.

→ A smaller number of participants expressed concerns about the lack of disabled parking spaces.



## **Evaluation scores and perceptions Cultural features**

Participants' feelings toward cultural features remained largely unchanged and people continue to show support for future initiatives to enhance the street's vibrancy.



How effectively or ineffectively do you feel the cultural features (i.e. art, heritage etc.) are showcased in the Waipawa main street area?





#### **Open-ended feedback:**

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 $\rightarrow$  As much of the feedback fell out of scope, there was little shift in feelings toward cultural features in the area. Planter boxes received limited mentions but were generally viewed favourably.

 $\rightarrow$  The museum continues to be seen as an important space for bringing culture and learning opportunities to the area.

 $\rightarrow$  Echoing findings from the benchmark report, there is a desire for more Māori art and cultural features.



## **Student workshop summary**

At the start of July 2024, FOLKL researchers conducted a workshop with 11 Waipawa Primary School students. Researchers walked with the students down the main street of Waipawa and discussed the new changes. After the walk, the students each filled out a survey.

#### **Key findings:**

- The students liked the new roundabout and raised crossings.
- 2 In both the workshop and survey students identified the crossing next to the roundabout as a safety concern. Some said that they wouldn't use the crossing and that it should be removed.
- **3** Students felt that the crossings have made them safer but they will always feel cautious when crossing the road.
- One suggestion from some students was to make 4 the roundabout more visible with colour or size.
- Students mentioned the pass under the bridge 5 being an issue at the time of the workshop and needed to be fixed to lighten congestion after school.



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## Suggestions

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The most common suggested changes can be categorised in to the six main features outlined in this section.

#### SH2/Ruataniwhā intersection

The new roundabout was generally supported, however there was widespread concern regarding the new pedestrian crossing at this location. Participants felt it was an 'accident waiting to happen' due to its close proximity to the roundabout, creating congestion and requiring drivers to further spread their attention.

People were concerned that traffic traveling in both directions were not paying attention to the crossing because of its placement: traffic traveling south were focused on approaching the roundabout and less likely to stop for pedestrians, and traffic traveling north were not expecting to slow down immediately after the roundabout. Some observed that traffic became backed up through the roundabout when the crossing was in use, impeding the flow of traffic at a busy intersection and creating safety issues, particularly for heavy vehicles. As well as it being unsafe, some people thought the crossing was unnecessary with the addition of other new crossing points along the street.

Other concerns regarding this intersection were access to the BP Station on the roundabout and the misalignment of the southbound lane which appears to go straight ahead and doesn't feed on to the roundabout well.

#### Common requests for change at this intersection:

- $\rightarrow$  Remove the new pedestrian crossing
- → Increase the visibility of the roundabout, for example by adding signage to indicate to drivers they are approaching. Some people thought it could be raised slightly and students suggested planting or a sculpture in the middle
- → Close the southern BP Station entry/exit point or make exit only, or create a fourth exit on the roundabout to access the BP
- Realign southbound lane feeding on to the roundabout
  We have a second seco

"Please leave the roundabout, remove the pedestrian crossing next to it - otherwise it's great. Also love the planters".

> "Your natural inclination is to accelerate out of a roundabout and you're not expecting a crossing to be there".

## Suggestions

The most common suggested changes can be categorised in to the six main features outlined in this section.

#### **Pedestrian crossings**

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In addition to the safety concerns of the southernmost crossing at the SH2/Ruataniwhā intersection, many participants felt the number of pedestrian crossings along the main street is now excessive. Although people said it was easier to cross the road, crossings caused the stopping and starting of the flow of traffic along a state highway and what was perceived as a short length of road, and made judgement of speed difficult.

There were some mentions of the obstruction of pedestrians waiting to cross the road by parked cars.

#### Common suggestions for pedestrian crossings:

- $\rightarrow$  Remove the southernmost crossing at the SH2/Ruataniwhā intersection
- $\rightarrow$  Increase crossing visibility

#### **Cyclists**

Cycling through the main street was perceived as unsafe and unnecessary. Cyclists made up a smaller portion of survey respondents and many people were unable to comment on the travel conditions for these users, or whether cycle infrastructure currently existed along the street. Many also stated they had never seen cyclists traveling through the main street and acknowledged the street is too busy for the inclusion of a dedicated cycle lane.

#### Common suggestions for cycle infrastructure:

- $\rightarrow$  Install bike parking
- $\rightarrow$  Create safe cycle ways using the surrounding quieter streets, for example Harker Street
- $\rightarrow$  Install signage to direct cyclists and aid navigation of the area

#### Parking

Predominantly, participants thought there was adequate parking servicing the main street with on-street parking, the carpark next to the museum and parking behind the shops. People thought the parking behind the shops could be made more known, reflecting some participants' experiences of not being able to find a park. Some felt parking could better cater to people with disabilities.

People also said it was more difficult to parallel park due to congestion which had increased following the instalment of crossings.

#### Common suggestions for parking improvements:

- behind the shops

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- → Additional disability parking spots
- $\rightarrow$  Signage to indicate there is parking available

## **Suggestions**

The most common suggested changes can be categorised in to the six main features outlined in this section.

#### **Cultural features**

The museum was widely valued, however many participants were unaware of cultural features beyond the museum. Some felt Waipawa was dull, while others appreciated its quirky shops, town clock and the flower baskets. Although people generally expressed support for future initiatives, some people felt money should not be spent on cultural improvements at this time.

## Common suggestions to improve culture and heritage:

- → Representation of local Māori histories through partnership with mana whenua
- → Refresh shop fronts
- $\rightarrow$  New shops for more variety
- → Building maintenance
- → More art, such as murals and refresh existing art features e.g. the vase and pillars on the far bridge

#### Heavy vehicle use and road surfaces

Some participants criticised the changes, and felt the improvement of road surfaces should be prioritised. Cyclists had also mentioned they experienced difficulty traveling on the road due to potholes.

In addition, people thought keeping the flow of traffic should be prioritised due to the street being a State Highway, others felt heavy vehicles should be diverted off the main street.

## Common suggestions toward heavy vehicle use and road surface quality:

 $\rightarrow$  Prioritise fixing potholes





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# FOLKL Vision, speed data and sound level monitoring

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## Waipawa SH2 **TomTom speed data**

Vehicle speed travelling north and south has decreased across all locations since the pre-change reporting in 2023. Vehicles travelling north at the roundabout experienced the greatest decrease 85th percentile and average speeds. Northbound vehicle speeds remain lower than south bound speeds. Average travel time of vehicles travelling north has increased by 29%, average travel time of vehicles travelling south has increased by 25%.



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## SH2 and Ruataniwhā Street Pedestrian crossing behaviour

Crossing pedestrian movements have condensed into two main locations in the post-change analysis, indicating that the new infrastructure is being used.



#### Pre-change pedestrian crossing trajectories

Trajectories indicate that pedestrian crossing patterns have changed following the changes in the area. In the pre-change filming it was revealed that some pedestrians were crossing in the middle of the road as seen in the trajectories. Almost half (46%) of the total pedestrian movements that crossed the road in the pre-change filming did so at the location of the new crossing.



#### Post-change pedestrian crossing trajectories

Trajectories show that pedestrian crossing movements have condensed into two main locations. This indicates that pedestrians are using the new infrastructure to crossed SH2.

## 64% of pedestrian movements that crossed the road in the post-change filming did so at the new crossing.

26% crossed on the opposite side of the roundabout.

The remaining 10% are pedestrian movements in between these locations.

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## Waipawa Butcher Site Pedestrian crossing behaviour

Pedestrian crossing movements have shifted further south since the pre-change and crossing into the carpark have decreased.



#### Pre-change pedestrian crossing trajectories

Trajectories indicate that the volume of pedestrians crossing SH2 in this area has decreased. The pre-change trajectories revealed that a large number of pedestrian movements crossed SH2 between the carpark of the left and the shops including the Post Office, library and the Waipawa Butcher. **28% of the total pedestrian crossing movements at this site entered or exited via the car park on the left side of the image.** 



#### Post-change pedestrian crossing trajectories

Post-change trajectories indicate that pedestrians crossing SH2 in this area have changed in pattern and volume. Trajectories of pedestrian movements crossing the road at this site have moved backwards in comparison to the pre-change filming. The volume decrease indicates that pedestrians are choosing other places to cross the road. This may be due to the increase in crossing areas along the street allowing pedestrians more choices in where they can safely cross. **13% of the total pedestrian crossing movements at this site entered or exited via the car park on the left side of the image.** 

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\*A new pedestrian crossing was introduced to this site after post-change filming.

## **Sound Level Monitoring**

Sound levels have decreased slightly near the roundabout, the area outside Foursquare is recording the highest sound readings on average.

The below three sites were chosen to gather sound level readings. In the pre-change report Site 3, where the new roundabout now sits, recorded some of the highest sound level. In the post-change analysis it decreased in the average, highest peak sound

and greatest percentage of time above 70 dBA. Site 2 experienced increased sound levels over all measurements and Site 1 experienced an increase in average sound level and lowest dBA and a decrease in highest dBA and percentage of time above 70 dBA.



Pre-change
Average Sound Level - dB
% of time above 70 dba
High - dBA
Low - dBA

Post-change	Site		
	1	2	3
Average Sound Level - dBA	67.2	68.9	67.6
% of time above 70 dba	20%	33%	26%
High - dBA	81.6	90.2	85.7
Low - dBA	56.5	55.9	59.2

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	Site			
	1	2	3	
A	66.4	67.0	68.0	
	23%	29%	32%	
	82.9	84.3	85.9	
	53.6	54	58	

\*Red indicates an increase from the pre-change findings and green indicates a decrease.

## **Recommended next steps**



The research has revealed safety issues following the street changes, top of mind for participants was the review of the SH2/ Ruataniwhā intersection intersection. Namely, the removal of the pedestrian crossing at this location, increased visibility of the roundabout, and the access of the southernmost BP Station entrance.



Also a safety issue, road surfaces, potholes in particular need investigating and potential repair.



Engage a wayfinding specialist to evaluate signage, focusing on the visibility of pedestrian crossings and the roundabout, parking and alternate cycle routes.



Although it's not a priority for some at this time, there is opportunity to explore options to enhance vibrancy and culture in the area through art installations and representing Māori culture. Further engagement is recommended.

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Some participants felt their voices weren't heard by CHBDC and conducting further engagement where needed, and keeping the community informed about this and adjacent projects will be key to building trust.

# Ngā mihi Thank you



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# Appendix







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# <section-header>

## Survey participant demographics



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## **FOLKL Vision**

FOLKL Vision is a proprietary traffic analysis tool which combines digital processing with manual coding to produce a robust understanding of how people use space. The purpose of FOLKL Vision is to provide an indication of use rather than completely accurate traffic counts.

The accuracy of digital processing traffic counts range from 95% - 100%. Speed calculation is 90% - 100%, and is dependent on precision distance of measurement.

Manual coding is used to inform digital processing strategy and determine margin of error within the sample.



For this project, 15 minute windows of video observation footage were selected at random across each of the day. Traffic counts determined through digital processing were cross-checked with manual counts. The result was an accuracy level at the Ruataniwhā Street/SH2 site of 96.7%, and at the Waipawa Butcher site of 85.7%.



Ruataniwhā

Street/SH2 site

Accuracy level of

**96.7**%

Waipawa Butcher site



Accuracy level of

85.7%



## FOLKL

## SH2 and Ruataniwhā Street Pedestrian crossing behaviour

Crossing pedestrian movements on average have remained at similar volumes through pre and post analysis.

Thursday experienced the most pedestrian crossing movements. In the comparison, in the pre-change filming Thursday had the least pedestrian crossing movements and Friday had the most.

During the week pedestrian crossing movements peaked in the middle of the day and in the weekend peak times varied, with Sunday experiencing the least amount of pedestrian crossing movements throughout the week.





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At this site the average daily pedestrian crossing movements was 27. In the pre-change filming it was 24.

\*A new pedestrian crossing was introduced to this site after post-change filming.





## SH2 and Ruataniwhā Street Cyclists & Motor Vehicles

Cyclist movement counts indicate that the volume of cyclists in the area have increased since the pre-change report.



Total volume of motor vehicles in the post-change analysis slightly decreased from the pre-change report.



Average Daily Cyclists			
Pre-change			
96	Weekday (4)	123	
133	Weekend Days (2)	209	
107	All Days (6)	152	
	Average   96 133 107	Average Daily CyclistsPost-change96Weekday (4)133Weekend Days (2)107All Days (6)	

Average Daily Motor Vehicles			
Pre-change		Post-change	
Weekday (5)	11,221	Weekday (4)	12,670
Weekend Days (2)	9,420	Weekend Days (2)	10,040
All Days (7)	10,703	All Days (6)	11,793

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## Waipawa Butcher Site Pedestrian crossing behaviour

Crossing pedestrian movements have significantly decreased in volume since the pre-change analysis.

There is a significant decrease in the number of pedestrians crossing movements in this area when compared to the pre-change reporting in March 2023. This may be due the increase in crossing areas along the street allowing pedestrians more choices in where they can safely cross.

In this post-change analysis, Thursday experienced the most pedestrian crossing movements. In the prechange analysis Saturday experienced the most and Thursday the second most.





Source: FOLKL Research, Total pedestrian movements: Pre-change: 595 (6 days), Post-change: 333 (6 days).

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At this site the average daily pedestrian crossing movements was 99. In the pre-change filming it was 56.

\*A new pedestrian crossing was introduced to this site after post-change filming.







## Waipawa Butcher Site Cyclists & Motor Vehicles

Motor vehicle volume in the post-change analysis has increase from the pre-change report.



Motor vehicle volume in the post-change analysis has increase from the pre-change report.



Average Daily Motor Vehicles			
Pre-change		Post-change	•
Weekday (5)	10,491	Weekday (4)	14,746
Weekend Days (2)	8,632	Weekend Days (2)	10,738
All Days (7)	9,871	All Days (6)	13,410

Average Daily Motor Vehicles				
Pre-change		Post-change		
	Weekday (5)	10,491	Weekday (4)	14,746
	Weekend Days (2)	8,632	Weekend Days (2)	10,738
	All Days (7)	9,871	All Days (6)	13,410

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