

Citywide Public Transport Priority Plan

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Executive Summary

The purpose of this plan is to identify and prioritise transport corridors for public transport priority treatments against Council adopted criteria of unreliability, delay, benefit to others and other factors. This is in accordance with the targets set in the Christchurch Public Passenger Transport Strategy, adopted by the Council in July 2003.

The plan does not identify options to resolve the delay and unreliability issues identified. The development of options and specific proposals will proceed at the next stage at which stage participation will be encouraged from all people likely to be effected or to have an interest in these corridor developments.

These identified corridors present significant delays and unreliability to the people who use public transport and deter many more people from using “metro”¹ public transport. Evidence shows that removing these constraints, in association with the provision of high quality infrastructure and services, results in more people using public transport as their travel mode of choice. This will contribute to the City Council’s multi-modal transport objectives of reducing traffic congestion and growth, improving road safety and achieving a transport system that supports a quality of life second to none.

The first three public transport priority corridors that are recommended to be developed are :

- Belfast to / from Exchange, via Papanui Road
- Princess Margaret Hospital to / from Exchange, via Colombo Street
- Queenspark to / from Exchange, via New Brighton Road

In addition, it is recommended that the Council give approval in principle to plan for appropriate Council enforcement of any priority measures developed through the community participation process.

¹ metro is the branding for the Christchurch public passenger transport (bus and ferry) system.

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BACKGROUND

This Citywide Public Transport Priority Plan has been prepared in response to citywide consultation during preparation of the Christchurch Public Passenger Transport Strategy (CPPTS) Update. The updated strategy was adopted by both the City Council and Environment Canterbury in July 2003. The CPPTS is a constituent strategy of the Councils long term approach to transport planning and contributes to the aims of the Metropolitan Christchurch Transport Statement, which sets the recommended long term direction for transport planning over the next twenty years.

The consultation undertaken in the development of the CPPTS identified the goals of an attractive, convenient, integrated, efficient and community focussed public transport system, and set a number of targets for both Councils to achieve to meet these goals. Two such targets for the City Council are the adoption of this plan, and the development, introduction and enforcement of at least three public transport priority corridors by June 2006.

1 INTRODUCTION

The following sections outline the link between the New Zealand Transport Strategy and this Citywide Public Transport Priority Plan.

1.1 National and regional transport strategies

The New Zealand Transport Strategy sets out the direction in which the Government wishes to see the transport system develop. The Government gives effect to this direction through its policies and funding frameworks which assess the merits of transport schemes and their outcomes in contributing towards the desired direction.

Central Government's overall vision for the New Zealand Transport system is one of an affordable, integrated, safe, responsive and sustainable transport system.

The Government requires regional authorities to prepare a Regional Land Transport Strategy (RLTS) every three years, to identify and address the regions land transport needs. The RLTS identifies as a major project the implementation of 'bus priority street works' by 2006.

1.2 Metropolitan Christchurch Transport Statement

The Metropolitan Christchurch Transport Statement (MCTS) is the document that identifies future land transport needs and funding requirements in Metropolitan Christchurch, providing a recommended direction that changes the current approach to the way we plan, develop and use the transport system. The MCTS takes its lead from the national and regional strategies and reinforces the need to provide a sustainable transport system. The MCTS provides the overarching direction for all other Christchurch City Council transport strategies to follow. It identifies a number of public transport project areas from improving mode share of public transport, including bus priority measures.

1.3 Christchurch Public Passenger Transport Strategy

The Christchurch Public Passenger Transport Strategy (CPPTS) was first developed in 1998 at a time when the public transport system had experienced years of decline in patronage. This was due in part to deregulation of bus services in 1991 leading to a decline in service levels (and a sharp decline in patronage over a short period), and the reduced cost of car ownership. Since 1998 and the introduction of the first CPPTS however, patronage has steadily increased to over 14.5 million trips in 2002/03. This came about through the ongoing achievement of strategy targets surrounding improvements to integrated ticketing and fares, service levels, infrastructure and information provision. After 5 years the strategy was updated in 2003 to review the targets and identify what still needs to be done. One such target identified through the community participation process was the need to address the delays and unreliability along key transport corridors that deter more people from using public transport as an alternative to the private car (this had been an initiative not achieved from the first CPPTS). A target was set to develop a citywide public transport priority plan, leading to the development, introduction and enforcement of priority corridors by June 2006.

1.4 Citywide Public Transport Priority Plan

Adoption of this plan in part achieves the community developed target for public transport priority corridors, however this is simply a document to identify problem corridors for public transport and place them in a priority order for attention. The stages that follow this plan (discussed later in this report) will need community acceptance and considerable political commitment if tangible improvements in public transport on these corridors are to be realised.

This plan has been developed progressively, since adoption of the strategy update in July 2003. This has involved consultation with a cross section of the community via focus groups, including bus users, cyclists, pedestrians, motorists, residents and business owners. Environment Canterbury, both bus operators and other major stakeholders have been involved in this development and Community Boards have also had input into the establishment of criteria to be used to identify and prioritise corridors for development.

The purpose of this plan then is to identify the corridors most in need of priority measures. This has been done in a systematic way by comparing the current performance of buses against the criteria set by the Council. The criteria hierarchy was agreed as follows

Unreliability - Intervention should be considered on corridors where arrivals at key destinations vary by 3 minutes or more from their schedules.

Delay - Intervention should be considered at locations causing delay to services which result in their journey times between key origins and destinations exceeding 125% that of a car in the same time period.

Benefit to Others - High priority should be given to locations where there is good potential to improve levels of service to other road users, such as pedestrians and cyclists.

Other factors - Relative value of costs and benefits, road safety, practicality, impact on adjacent land uses, ongoing maintenance and operational liabilities and integration within the existing capital projects programme.

2 CONCEPTS OF PUBLIC TRANSPORT PRIORITY MEASURES

Priority measures are the collective term for a range of traffic management measures where the delays and unreliability to public transport caused by physical constraints and other vehicles are removed or significantly reduced. The range of measures are discussed below.

2.1 Bus stop rationalisation

This involves an overall reduction in the number of bus stops and / or the relocation of bus stops to sites where they are convenient for boarding and alighting passengers, whilst at the same time result in a reduction in the overall journey time between the origin and destination.

This may be particularly relevant in circumstances where:

- buses experience delay in rejoining the traffic stream
- there are too many bus stops along a route, increasing the proportion of stop time to travel time
- bus stops are inappropriately located, for example just before traffic signals
- investigation shows bus stops are hardly, if ever used

It is important when considering the rationalisation of bus stops along a route that high passenger usage at a particular stop is accounted for, as well as the type of road. Bus services on local roads are typically not subject to traffic congestion and delays and so it can be acceptable to have bus stops at a closer spacing, especially where the bus service may be at a lower frequency. Arterial roads are however subject to greater traffic flow and it is bus stops on these roads that should not be closely spaced to reduce the delays caused by rejoining the traffic stream. Service frequency should also be considered in this case as there is a trade off for the passenger between increased walking distance to the bus stop, reduced waiting time at the stop, and a faster journey time on the bus. Special attention should also be given to the needs of vulnerable users and, if appropriate, stops provided that are convenient to them.

Application – Rationalisation should be considered on congested roads where delays in rejoining the traffic stream from bus stops are a problem and / or where the bus stops are too closely spaced.

2.2 Bus stop boarder

A bus stop boarder is a build out of the kerb line (widening of the footway) which allows the bus to remain closer to the traffic stream when stationary at the bus stop, allowing a smooth transition back into the traffic flow, with reduced delay. This has the added advantage of making it easier to board the bus (particularly for vulnerable people) as the bus can pull up very close to the kerb and avoids the need to pull in between parked cars (hence the stop can be shorter and potentially fewer parking spaces removed). It also provides more width to a footway and at busy stops can avoid inconvenience to pedestrians passing through the bus stop area. Bus boarders should be carefully considered to ensure minimal delay to following vehicles, including cyclists. This requires that additional lane width is available for passing traffic or that the following traffic stop in that lane, as occurs in Fendalton Road currently.

Application - The use of this measure should be considered at locations where the primary cause of delay is difficulty in rejoining the traffic stream. It should also be considered where high passenger boarding numbers cause footway congestion and would benefit from a wider footway. It may also be considered at locations where vulnerable road users such as the elderly or parents with young children form a significant proportion of bus passengers and would benefit from improved access. It is especially applicable to multi-lane roads or 2 lane roads with a flush median.

2.3 Clearways

Part-time clearways

Part-time clearways are a useful approach to maximising the traffic capacity of existing road space at specific times of the day and can be used to reduce queue lengths on the approach to signalised intersections. It involves the provision of a part time no stopping restriction that allows the use of all road width by traffic, perhaps on the approach to an intersection. This results in an increased movement of vehicles through each green phase on that approach and a reduction in the gradual build up of queues and associated traffic delay. By removing parking it also removes the element of traffic delay associated with the conflict between passing vehicles and vehicles manoeuvring into a parking space (known as side friction). The benefit of this approach is an overall improvement to the journey time of all vehicles, however fluctuations in day to day traffic volumes remain and a bus will still experience unreliable trip times through the intersection from one day to the next. The effectiveness of any part time measure is of course only as effective as the level of compliance (or level of enforcement) and the absence of any physical measures (such as kerb buildouts at pedestrian crossings) that allow traffic to use the extra available road space.

Application - The use of this measure should be considered at locations with localised congestion and uniform traffic flows, or where the primary cause of congestion is the conflict caused by vehicles manoeuvring into a parking space. Importance should be placed on the availability of alternative parking spaces (which is discussed in later sections of this plan).

Full-time clearways as part of intersection traffic management

Clearways can also be full-time traffic management measures to maximise the capacity of the approach to an intersection. Full-time clearways are characterised by the provision of a single broken yellow line adjacent to the kerb channel that prohibits parking at all times. Full-time clearways are most effective at major intersections with high traffic volumes at all times and where turning traffic volumes are sufficiently high to require a dedicated lane on the approach to the stop line. This measure avoids the conflicts between turning vehicles and through traffic on the approach and allows a smooth transition of traffic through the intersections with minimal delay. Whilst this kind of measure will improve capacity and reduce to a greater extent the level of delay and unreliability to buses, it does not remove them completely as there will still be day to day variations in traffic volumes. In some circumstances (such as a high left turn demand) this measure would be used in preference to a kerbside bus priority lane, where the benefit of the bus lane might be outweighed by the delay caused to left turners and the through traffic waiting behind them. In this situation buses could be allowed an exemption from the left turn, allowing them to stay in the nearside lane whilst proceeded through the intersection.

Application - The use of this measure should be considered at locations with high traffic volumes throughout the day where a bus lane continued close to the stop line would significantly delay other traffic.

2.4 Priority Lane

Commonly known as a bus lane, a priority lane is a dedicated lane for buses (and in most circumstances also cycles and taxis) either at all times or at certain specified periods as required to overcome congestion along roads.

Lengths of bus lane can vary between short sections on the approach to intersections that are matched to the length of stationary traffic queues ("queue jumpers"), or longer continuous lengths between intersections that provide a dedicated lane that is immune to variable traffic queues and speeds and provides the day to day travel time certainty and reliability that is so important to attracting bus users.

In circumstances where traffic from the adjacent lane needs to turn (typically left) across the priority lane at an intersection, the bus lane is stopped short of the stop line sufficient to allow this (cyclists emerging from the bus lane must also be accounted for in this type of

arrangement). As noted above, high numbers of left turning vehicles may make a full time clearway more appropriate on the approach to a signalised intersection.

Recommended widths for priority lanes are 3 metres or 4.2 metres or more. The lower figure discourages buses from overtaking cycles within the bus lane (i.e. they must pull out of the bus lane to overtake), whilst the wider lane allows a safe width for the bus to overtake the cycle without the need to change lanes. The wider lane width is preferred, and is essential where high cycle volumes combine with high bus frequencies, which would make overtaking manoeuvres by buses increasingly likely.

To improve their visibility (with safety and compliance benefits especially with the introduction of initial priority lanes), priority lanes commonly receive a painted colour treatment. Examples of this already exist on Colombo Street (south) and in the vicinity of Cathedral Square, where green colouring is used to illustrate the presence of the priority lanes for buses, cycles and taxis. Green colouring would be a sensible colour to proceed with, given these existing examples, and the adoption of red to identify cycle lanes. Priority lanes are also identified by a longitudinal continuous white lane line, painted white text in the lane and roadside signs at regular intervals and after each side road. Peak period only bus lanes can allow parking spaces to be used in the off peak periods within the lane, and these can be marked as required.

With the introduction of priority lanes it is very important to undertake education and promotion activities appropriately planned in advance of their introduction. This will allow road users to understand the times and rules of operation of the lane, improving compliance, safety and understanding. With this understanding of bus lanes and their purpose, support and acceptance will follow.

It is essential that priority lanes are appropriately enforced to maintain a good level of compliance, as well as to maintain the safety of all vehicles on the road. A clear lane is often a temptation to motorists to queue jump and this can lead to problems without a clear and well communicated enforcement plan. This is discussed later in Section 5.

Application - This measure should be considered at locations with extensive queuing problems that cannot be satisfactorily overcome in the long term by other measures.

2.5 PTIPS – passenger transport information and priority system

PTIPS is a traffic signal based system which takes advantage of our existing real time information (RTI) system that tracks buses around the city. RTI detects when buses are running late and by linking this information to the central computer that controls traffic signals, can give an early or extended green light to assist the late running bus until it is through the next (close by) signalised intersection on its route.

The advantage of this measure is the relative speed and low cost with which it can be implemented. It can also be implemented in such a way as to assign priority to conflicting bus routes based on their context within the overall metro system. PTIPS does have limitations. It will not give priority to a continuous stream of late running buses that currently characterise some of the city's busiest routes. To do so would increase congestion on side roads, perhaps also delaying buses on these roads. Similarly it can only extend or call early green lights for a limited length of time before disrupting side road flows.

Application - The use of PTIPS should only be considered in association with other measures that reduce the delay on the approach to signals, or on routes experiencing only intermittent minor delays.

2.6 Signal pre-emption

Traffic signals that recognise approaching buses and give them priority over other traffic stream signals are called pre-emptive signals. These take the form of an illuminated white letter 'B' by the side of the normal green light. It illuminates some seconds before the green light and allows buses to move ahead of other traffic. It is important that a bus is near the front of the queue in the first instance, to benefit from the pre-emptive signal. This can be achieved

either by a short bus lane on the approach or by allowing buses to use an adjacent quieter traffic lane (perhaps a left turn lane). Examples of these are the northbound Colombo Street approach to Moorhouse overbridge, and the departure from the Bus Exchange platform E bus stop at Cashel Mall.

Application - This measure would be appropriate where the road ahead of the signals is constrained by available width, excluding the possibility of providing any further bus lane. In this case it would have to be ensured that the road was free of delay by some other means, such as the co-ordination of signals that keep the road ahead clear.



Signal pre-emption with priority lane on approach

3 IDENTIFICATION AND PRIORITISATION OF CORRIDORS

The following sections outline how corridors were identified and prioritised using the criteria approved by Council. These criteria were developed with the objective of achieving a transparent and consistent process for identifying corridors and placing them in a priority order. They should maximise the potential benefits related to reliability of arrival and departure time at any destination along a bus route. Additionally, they were developed to reduce the time taken to travel between any destination on the route. It is these two factors that suffer when bus routes become congested by variable and high traffic volumes.

These unreliability and slow journey times are what the community tells us are the primary barriers to using buses. It would be unreasonable to expect motorists to give up the comfort and convenience of their private transport without at least as good an alternative being available.

3.1 Identifying corridors

Corridors were first identified with known unreliability and delay issues that present problems to the most number of buses and bus users. These include corridors identified by Environment Canterbury and the bus operators (with their in depth and practical knowledge of the metro network), the Passenger Transport Advisory Group (made up of bus users and non-users) and through focus groups (bus users and non-users), who were all consulted in the development of this plan.

The corridors identified through this process were :

Hornby Mall to / from Exchange, via Main South Road, Riccarton Road, Riccarton Avenue

Belfast to / from Exchange, via Papanui Road

Princess Margaret Hospital to / from Exchange, via Colombo Street.

Sumner to / from Exchange, via Ferry Road.

Oaklands to / from Exchange, via Lincoln Road.

New Brighton to / from Exchange, via Pages Road.

Queenspark to / from Exchange, via New Brighton Road.

Main North Road to / from Exchange, via Cranford Street.

Corridor plans are included in appendix 1 for reference.

3.2 Analysis methodology

Following development of this shortlist of corridors, an in-depth bus performance analysis was undertaken of each section along each corridor in both directions (a section is a length of road between timing points along the route – see corridor plans in appendix 1).

A period of twelve months (May 2003 to April 2004) for weekday inbound 8 to 9 am bus trips and outbound 5 to 6 pm bus trips was considered. This was done to match bus trips with peak congestion patterns, peak bus frequencies and peak bus passenger loadings, and as a first step towards identifying key corridors. The prioritisation of these corridors was undertaken by focussing on the identification of the key network deficiencies as highlighted in weekday peak hour commuter periods. This does not imply that periods of unreliability or delay do not exist at off peak times or at weekends. These are known in some locations and will be confirmed at the option identification stage following adoption of this plan.

As many different bus routes as possible with common start and finish timing points were used in the section analyses. This was done to maximise the amount of data considered. The

data for this analysis was sourced from the real time information database of all recorded bus trips since August 2002 (over 6.5 million bus trips to mid June 2004).

The data for each section of corridor was obtained and then analysed in the following way :

1. Confirm adequate and reliable data obtained by ensuring at least ten bus trips in the month were recorded for each section. Months with less were not considered for the detailed analysis.
2. Calculation of monthly average journey time for each section.
3. Calculation of the standard deviation of monthly travel times in each section. This gives a measure of the spread or variability of a majority of the journey times across the month².

A graph was then plotted of these monthly averages and their spread of journey times (one standard deviation each side of the average) to establish the worst period of the year. It can be seen from the various graphs (see Appendix 2), that February and March 2004 were consistently the combined slowest and most unreliable periods of the year. For this reason the months of February and March 2004 were then taken as the baseline against which to compare all sections at the detailed level. It was necessary to develop this baseline period to ensure seasonal variations of congestion patterns did not skew the analysis between one corridor and another. An added advantage of this was that it took into account a recent and extended period of bus trip data. This provides confidence that what is being measured is a recent and typical situation and not a one off.

Each section of each corridor in both time periods was then considered in detail in the following way for the months of February and March 2004:

1. Calculate the section reliability. This was done for each day by taking the arrival time of a bus at the end of a section (relative to its scheduled arrival time) and subtracting from this the departure time of the bus at the start of the section (relative to its scheduled departure time). This removed the delay brought from the previous section and by comparing against other days in the period, is a measure of the section reliability. To think of it another way it is a measure of the reliability (or variability) of bus trips between the start and finish point, assuming they left the start on time.
2. For each section and time period, a frequency distribution graph was plotted showing how frequently (by one minute intervals) trips arrived early, on time or late in February and March 2004. The percentage of trips recorded that were 3 or more minutes early or late (relative to the schedule) was then calculated as an indicator of the reliability criteria adopted by the Council.
3. The excess bus to car travel time was also calculated for each day, by subtracting 125% of the average car travel time in the period from the actual travel time for each day. Car travel times were established through independent travel time surveys along the routes during the periods being assessed. This was averaged for the whole period to provide an indicator of the typical excess bus to 125% car travel time, in line with the Council's adopted delay criteria. A negative excess travel time indicates that the actual average bus travel time is less than 125% of the actual (average) car travel time.

The graphs and accompanying data for both reliability and excess bus travel time calculations are included in appendix 2. A summary table is also included below which shows all the reliability and excess bus travel time results. It also compares for each section the potential to achieve improved walking and cycling outcomes, in line with the 'benefit to others' criteria (an

² a normal distribution was considered adequate for the purposes of the analysis as the standard deviations from the mean were relatively small.

explanation of the potential outcomes for each section is included in the discussion in section 3.4.2).

3.3 Results summary

The following table summarises the bus frequencies, excess bus travel time, unreliability and potential to improve levels of service for pedestrians and cyclists.

Corridor Summary Table – bus frequency, excess travel time, reliability and potential to improve LOS to other users.

Corridor	Section	Direction ^{*1}	Key bus frequency ^{*2}	Unreliability (% of trips) ^{*3}	Ave. excess travel time ^{*4} (mins)	Potential contribution to prioritised cycle network capital programme	Potential to improve LOS for cycling ^{*5}	Potential to improve LOS for walking ^{*5}
Hornby / Bus Exchange via Riccarton Road	Hornby Mall - Church Corner	Inbound - am	10	100	3.5	L	L	H - LR
		Outbound - pm	8	34	-2.6			
		Inbound - am	29	24	0.7	H	H	H
Church Corner - Riccarton Mall	Riccarton Mall - Hospital	Outbound - pm	26	10	-0.5			
		Inbound - am	33	18	1.2	H	H	H/L
		Outbound - pm	31	21	1.9		M	
Hospital - Exchange	Hospital - Exchange	Inbound - am	32	1	-1.2	L	L	L
		Outbound - pm	30	6	-0.7			
		Inbound - am	19	25	2.0			
Belfast / Bus Exchange via Papanui Road	Belfast shops - Papanui Shops	Outbound - pm	17	41	2.4	H/M	M/H	M
		Inbound - am	10	38	4.7			
		Outbound - pm	10	49	0.6	H	H	H
Papanui Shops - Bealey Avenue	Papanui Shops - Bealey Avenue	Inbound - am	10	49	0.6			
		Outbound - pm	47	39	1.7	H	H	M
		Inbound - am	33	38	1.2	L	L	
Bealey Avenue - Exchange	Bealey Avenue - Exchange	Outbound - pm	11	50	3.9			
		Inbound - am	9	28	4.2	M	M	L
		Outbound - pm	34	13	0.3			
PMH / Bus Exchange via Colombo Street	Sydenham shops - Exchange	Inbound - am	29	31	-1.0	L	L/M	L
		Outbound - pm	3	43	2.7			
		Inbound - am	5	no reliable data	no reliable data	L	L	H
Summer / Bus Exchange via Ferry Road	Summer - Ferrymead shops	Outbound - pm	3	31	6	M	M/H	M
		Inbound - am	5	23	1.9			
		Outbound - pm	7	1	-0.3			
Hoyts 8 - Exchange	Hoyts 8 - Exchange	Inbound - am	7	57	2	L/M	M	L
		Outbound - pm	10	27	3.3			
		Outbound - pm	6	24	1.3	L	L/M	H - SH, L - LR
Oaklands / Bus Exchange via Lincoln Road	Addington Village - Exchange	Inbound - am	10	11	0.3	M	M/H	H
		Outbound - pm	6	23	-0.6			
		Outbound - pm	17	33	1.5	H	H	H
New Brighton / Bus exchange via Pages Road	New Brighton - Eastgate	Inbound - am	18	21	0.8			
		Outbound - pm	4	1	0.8	L	L	H
		Inbound - am	5	18	-0.7			
Eastgate - Fitzgerald Avenue	Eastgate - Fitzgerald Avenue	Outbound - pm	5	27	4	M	L/M	L
		Inbound - am	46	1	0.1			
		Outbound - pm	4	0	1.7	L	L	H
Fitzgerald Avenue - Exchange	Fitzgerald Avenue - Exchange	Inbound - am	5	24	0.4			
		Outbound - pm	7	0	2.0	L	L	H
		Inbound - am	8	0	0.4			
Queenspark - Beach Road	Queenspark - Beach Road	Outbound - pm	11	13	1.7	H	H	H
		Inbound - am	14	12	1.9			
		Outbound - pm	10	27	1.9	H	H	H
Beach Road - Wainoni Road	Beach Road - Wainoni Road	Inbound - am	6	38	0.9			
		Outbound - pm	15	9	0.7	L	L	M
		Inbound - am	46	19	-0.5			
Palms - Fitzgerald Avenue	Palms - Fitzgerald Avenue	Outbound - pm	8	41	1.9	M/H	M/H	H
		Inbound - am	5	13	-1.0			
		Outbound - pm	4	4	1.1	L	L	M
Fitzgerald Avenue - Exchange	Fitzgerald Avenue - Exchange	Inbound - am	7	12	0.2			
		Outbound - pm	8	4	1.1			
		Inbound - am	4	4	1.1			
Main North Road / Exchange via Cranford Street	Main North Road - Bealey Avenue	Outbound - pm	7	12	0.2	L	L	M
		Inbound - am	8	41	1.9	M/H	M/H	H
		Outbound - pm	5	13	-1.0			

*1 - Inbound 08.00 to 09.00, outbound 17.00 to 18.00.

*2 - Bus frequency at key intersections and sites of congestion. Frequencies from June 2004, excludes routes leaving central city layover. See also appendix 3.

*3 - Percentage of trips 3 or more minutes early or late.

*4 - Average bus travel time minus 125% average car travel time.

*5 - High / Medium / Low (see also section 3.4.2).

3.4 Prioritising corridors

The following sections outline how corridors have been prioritised through a systematic approach that reflects the criteria approved by the Council.

It will be useful in considering the following discussion to recall exactly what the approved criteria are in order of importance.

- most unreliability to most buses
- most excess bus to 125% car travel time, to most buses
- benefit to others
- other factors

The table of results that follows shows the ranking of sections by unreliability, bus frequency and excess travel time (each corridor is colour coded for ease of reference). Following the table is a discussion of how the corridors were then ranked overall in terms of the first two criteria (unreliability and excess travel time) and before taking into account criteria concerning the benefit to others and other factors to be considered.

All sections ranked by percentage of trips unreliable (trips 3 or more minutes early or late), bus frequency (buses/hour) and excess bus travel time (minutes).

UNRELIABILITY

rank	section	unreliability
1	hornby to church corner	100
2	exchange to hours	57
3	pmh to studenham	50
4	bealey to papanui shops	49
5	summer to ferrymead	43
7=	main north road to bealey (oranford)	41
7=	papanui to befast	41
8	bealey to exchange (from pap)	39
11=	papanui to bealey	38
11=	fitzgerald/oucester to palms	38
11=	exchange to bealey (papanui)	38
12	church corner to hornby mall	34
13	new brighton to eastgate	33
15=	ferrymead to hours	31
15=	exchange to studenham	31
16	studenham to pmh	28
19=	oaklands to addington	27
19=	palms to fitzgerald ave.	27
19=	fitzgerald/cashel to exchange	27
20	befast to papanui	25
23=	church corner to riccarton mall	24
23=	beach road to queenspark	24
23=	addington to oaklands	24
25=	hours to ferrymead	23
25=	exchange to addington	23
27=	eastgate to new brighton	21
27=	hospital to riccarton mall	21
28	exchange to fitzgerald/oucester	19
30=	riccarton mall to hospital	18
30=	fitzgerald/cashel to eastgate	18
33=	wainoni road to palms	13
33=	studenham to exchange	13
33=	bealey/oolombo to main north road	13
35=	palms to wainoni	12
35=	exchange to bealey/oolombo	12
36	addington village to exchange	11
37	riccarton mall to cc	10
38	fitzgerald/oucester to exchange	9
39	exchange to hospital	6
40	bealey/oolombo to exchange	4
44=	hours to exchange	1
44=	eastgate to fitzgerald ave.	1
44=	hospital to exchange	1
44=	exchange to fitzgerald / cashel	1
47=	queenspark to beach road	0
47=	beach road to wainoni road	0
47=	wainoni to beach	0
48	ferrymead to summer	no data

BUS FREQUENCY

rank	section	bus freq.
1	bealey to exchange (from pap)	47
3=	exchange to fitzgerald / cashel	46
3=	exchange to fitzgerald/oucester	46
4	studenham to exchange	34
6=	riccarton mall to hospital	33
6=	exchange to bealey (papanui)	33
7	hospital to exchange	32
8	hospital to riccarton mall	31
9	exchange to hospital	30
11=	church corner to riccarton mall	29
11=	exchange to studenham	29
12	riccarton mall to cc	26
13	befast to papanui	19
14	eastgate to new brighton	18
16=	new brighton to eastgate	17
16=	papanui to befast	17
17	fitzgerald/oucester to exchange	15
18	palms to wainoni	14
20=	pmh to studenham	11
20=	wainoni road to palms	11
25=	papanui to bealey	10
25=	palms to fitzgerald ave.	10
25=	hornby to church corner	10
25=	addington village to exchange	10
27=	bealey to papanui shops	9
27=	studenham to pmh	9
27=	ferrymead to summer	9
30=	main north road to bealey (oranford)	8
30=	church corner to hornby mall	8
30=	wainoni to beach	8
34=	hours to exchange	7
34=	beach road to wainoni road	7
34=	exchange to hours	7
34=	oaklands to addington	7
38=	fitzgerald/oucester to palms	6
38=	exchange to addington	6
38=	addington to oaklands	6
43=	fitzgerald/cashel to exchange	5
43=	hours to ferrymead	5
43=	bealey/oolombo to main north road	5
43=	beach road to queenspark	5
43=	fitzgerald/cashel to eastgate	5
47=	queenspark to beach road	4
47=	eastgate to fitzgerald ave.	4
47=	bealey/oolombo to exchange	4
47=	summer to ferrymead	4
48	ferrymead to hours	3

EXCESS BUS TRAVEL TIME

rank	section	excess
1	ferrymead to hours	6
2	papanui to bealey	4.7
3	studenham to pmh	4.2
4	fitzgerald/cashel to exchange	4
5	pmh to studenham	3.9
6	hornby to church corner	3.5
7	oaklands to addington	3.3
8	summer to ferrymead	2.7
9	papanui to befast	2.4
12=	befast to papanui	2
12=	beach road to wainoni road	2
12=	exchange to hours	2
17=	main north road to bealey (oranford)	1.9
17=	palms to fitzgerald ave.	1.9
17=	hospital to riccarton mall	1.9
17=	palms to wainoni	1.9
17=	hours to ferrymead	1.9
20=	wainoni road to palms	1.7
20=	bealey to exchange (from pap)	1.7
21	queenspark to beach road	1.7
21	new brighton to eastgate	1.5
22	addington to oaklands	1.3
24=	riccarton mall to hospital	1.2
24=	exchange to bealey (papanui)	1.2
25	bealey/oolombo to exchange	1.1
26	fitzgerald/oucester to palms	0.9
28=	eastgate to fitzgerald ave.	0.8
28=	eastgate to new brighton	0.8
29=	church corner to riccarton mall	0.7
29=	fitzgerald/oucester to exchange	0.7
31	bealey to papanui shops	0.6
33=	beach road to queenspark	0.4
33=	wainoni to beach	0.4
35=	studenham to exchange	0.3
35=	addington village to exchange	0.3
36	exchange to bealey/oolombo	0.2
37	exchange to fitzgerald / cashel	0.1
38	hours to exchange	-0.3
40=	riccarton mall to cc	-0.5
40=	exchange to fitzgerald/oucester	-0.5
41	exchange to addington	-0.6
43=	exchange to hospital	-0.7
43=	fitzgerald/cashel to eastgate	-0.7
45=	exchange to studenham	-1
45=	bealey/oolombo to main north road	-1
46	hospital to exchange	-1.2
47	church corner to hornby mall	-2.6
48	ferrymead to summer	no data

3.4.1 Unreliability and excess bus travel time criteria

The following table shows a range of indicators calculated from the above table to rank the corridors by unreliability and bus frequency and then by excess bus to 125% car travel time and bus frequency, in line with the criteria.

Corridor	Average no. of unreliable trips / section ^{*1}		Average excess travel time / section ^{*2} (mins)		Total no. of unreliable section trips ^{*3} on corridor		Total excess travel time ^{*4} (mins)	
	rank	rank	rank	rank	rank	rank	rank	
Belfast to / from Exchange	8.5	1	2.1	2	51	1	241	1
Hornby Mall to / from Exchange	4.6	3	0.3	8	37	2	61	5
PMH to / from Exchange	5.4	2	1.9	3	21	3	62	4
Queenspark to / from Exchange	1.9	5	1.8	4	19	4	74	2
New Brighton to / from Exchange	2.0	4	1.1	6=	12	5	64	3
Sumner to / from Exchange	1.6	6	2.5	1	8	6	48	6
Oaklands to / from Exchange	1.4	7	1.1	6=	6	7	27	7
Main North Road to / from Exchange, via Cranford St.	1.2	8	0.6	7	5	8	16	8

*1 sum of (section unreliability x section bus frequency) / no. of sections

*2 (sum of section excess travel times) / no. of sections

*3 sum of (section unreliability x section bus frequency)

*4 sum of sections excess travel time

It can be seen from the table that very clearly the highest priority corridor in terms of unreliability and delay is Belfast to and from the Exchange. It ranks consistently highest among the indicators for unreliability and delay and comes only marginally second to the Sumner corridor in terms of average excess travel time per section.

It can also be seen clearly from the table that positions 6, 7 and 8 in order of priority are Sumner, Oaklands and the Cranford Street corridor. Arguably the Sumner corridor could be placed higher than it's consistently ranked 6th placing, however the 1st placing in terms of average excess travel time per section does omit the Ferrymead to Sumner outbound section, which could potentially change its rank. Aside from this fact however, the weight of other evidence does suggest this priority order for the last three placings is appropriate.

The second corridor in priority order is PMH to and from the Exchange. It consistently ranks higher than any other remaining corridor in terms of unreliable and delayed bus trips and if one compares the proportion of unreliable section trips to total section trips made, it reveals that 23% of all sections completed along this corridor in peak periods in the peak direction were unreliable. This was higher than the third ranking corridor which is Hornby Mall to and from the Exchange, of which 19% of all section trips made in the peaks are unreliable.

For positions 4 and 5 one can see that in terms of excess travel time Queenspark and New Brighton are similar, however both unreliability indicators place the Queenspark corridor ahead of the New Brighton corridor. This is also true in terms of the proportion of unreliable section trips to total section trips made, where the Queenspark corridor has 15% and the New Brighton corridor has 13%.

In terms only of unreliability and delay the corridor priority order is:

1. Belfast to / from the Exchange
2. PMH to / from the Exchange

3. Hornby Mall to / from the Exchange
4. Queenspark to / from the Exchange
5. New Brighton to / from the Exchange
6. Sumner to / from Exchange
7. Oaklands to / from Exchange
8. Main North Road to / from Exchange, via Cranford St.

3.4.2 Benefit to others criteria

This section provides a discussion on the relative potential benefits to pedestrians and cyclists. Where appropriate the priority corridor list above has been changed where justified to reflect the relative potential benefits between corridors where the differences in terms of reliability and delay are marginal. Reference should be made to the corridor summary table on page 11.

Belfast to / from the Exchange

The potential to improve the level of service to pedestrians is ranked in the medium to high range relative to other corridors. In particular the section between Papanui shops and Bealey Avenue is ranked highly. This is because whilst there is a painted median running along most of this length, there are long lengths of road without pedestrian islands or any other form of specific pedestrian facility. Such facilities provide confidence to pedestrians to cross busy roads such as this, and make the crossing safer by either stopping the traffic (with pedestrian signals) or breaking the crossing into two shorter sections (by providing a median island halfway).

With the exception of the Exchange to Bealey Avenue outbound section (Colombo / Kilmore / Victoria Streets) which caters well for cyclists already, the potential for this corridor to improve levels of service to cycling are ranked medium to high in comparison to other corridors. This is because there is an absence of dedicated cycle facilities on the remaining sections of the corridor. There is potential to integrate cycle capital works planned in the next five years into developments on this corridor and this is discussed in section 3.4.3.

It is not justified to change the priority of this corridor based on the potential benefits to others.

PMH to / from the Exchange

The potential to improve pedestrian facilities along this corridor is ranked low as there are improvements planned already for Cashmere Road between PMH and Colombo Street, which will improve the pedestrian environment. There are already appropriate facilities along Colombo Street and into the city (signalised intersections with pedestrian phases and pedestrian islands) that cater well for pedestrians.

The potential to improve cycling along this corridor is ranked low to medium, again because of the Cashmere Road improvements and the presence of continuous cycle facilities into and out of the city along Colombo Street. Notwithstanding this, the route north of Moorhouse Avenue could be improved for cyclists. In particular, the length of road between Smiths City and the Exchange is not a comfortable route for any cyclist, as the available road space for them is reduced by parked cars on both sides (and their parking manoeuvres), high bus numbers and careless and sometimes illegal parking of cars and service vehicles.

In light of the above and the marginal nature between this corridor and the Hornby Mall to / from the Exchange in terms of reliability and delay discussed in section 3.4.1, there would be more value in placing this corridor third after the next corridor discussed.

Hornby Mall to / from the Exchange

Overall there is a high potential to improve the level of service to pedestrians along this route. In particular the section between Deans Avenue and Church Corner has high potential. This is because the absence of dedicated pedestrian facilities (only one between Clyde Road and

Matipo Street – a distance of 750 metres) often mean pedestrians have difficulty negotiating gaps in the high traffic volumes.

The potential to improve cycling is also high along this section and there are capital projects planned in the next five years for a school bubble at Riccarton High and facilities between Deans Avenue and Mandeville Street. These are discussed in section 3.4.3. There is an absence of dedicated cycle facilities along Riccarton Road which by most recent counts is used by more cycles than buses in the peaks. The Riccarton Road Traffic Management and Riccarton / Clarence / Straven road network improvement schemes are also in the five year capital works programme and this is also discussed in section 3.4.3.

As discussed above, on the basis of reliability, delay and potential benefits to others, this should sit above the PMH to / from Exchange corridor.

Queenspark to / from the Exchange

The potential to improve pedestrian facilities is ranked high in each of the sections of this corridor, excepting the central city section between the exchange and the intersection of Gloucester Street and Fitzgerald Avenue. This is in common with all other central city sections where the grid based road network layout provides regular crossing opportunities at regular intervals. The remaining sections have infrequent signalised intersections that mean pedestrians must seek gaps in the traffic flow and this is particularly the case along Whitmore and Hills Road and also along sections of New Brighton Road east of the Palms.

The section of corridor between Wainoni / New Brighton Road and Fitzgerald Avenue is rated highly for its potential to improve the level of service to cycling. This is because there is currently an absence of dedicated facilities along most of this section (some of which is in the capital works programme and categorised as medium priority) and presents a medium to high combination of perceived danger and exposure.

On the basis of criteria considered to date this corridor should retain its current position in the priority list at fourth.

New Brighton to / from the Exchange

Outside the central city (for reasons discussed above) the potential to improve pedestrian facilities is rated highly. This is because there are long sections of road (particularly along Pages Road east of Woodham Road) where there are infrequent dedicated facilities with which to safely cross the road.

Pages Road also rates highly for the potential to improve cycling facilities. This is because much of it (Breezes Road to Owles Terrace and Cuffs Road to Linwood Avenue) is rated as a high priority towards completing the prioritised cycle network capital programme.

On the basis of criteria considered to date this corridor should retain its current position in the priority list at fifth.

Sumner to / from Exchange

The potential for pedestrian facilities is rated medium to high for this corridor in comparison to the others. There are very few facilities along this corridor east of Ferrymead, and aside from intermittent painted median at the more likely pedestrian desire lines (Ferrymead shops, Redcliffs), there is very little in the way of dedicated pedestrian facilities to cater for people wishing to cross the road to and from bus stops, houses and the foreshore.

On the basis of criteria considered to date this corridor should retain its current position in the priority list at sixth. However of any of the 6th, 7th or 8th placed corridors, this would be a first alternative to the currently placed 5th corridor.

Oaklands to / from Exchange

There is a high potential to improve pedestrian facilities on the state highway section of this corridor, between Curletts Road and Dunbars Road. This is because there is an absence of dedicated facilities or a painted median all along this section and particularly at key locations such as the Aidanfield estate and the residential areas east of Hendersons Road. A bus passenger would not find it easy to cross the road walking to or from a bus stop along this part of the corridor. There is high potential between Addington Village and the Exchange and this reflects the absence of good facilities east of the mall towards Moorhouse Avenue.

The potential to improve cycling is rated low to medium and this is because most of this corridor is complete or planned for construction in the near future. This includes work planned by Transit New Zealand on the state highway section.

On the basis of criteria considered to date this corridor should retain its current position in the priority list at seventh.

Main North Road to / from Exchange, via Cranford St.

This corridor has areas that would benefit from improved pedestrian facilities, such as the lengths of road between Edgware shops, Berwick Street, Westminster Street, Innes Road and McFaddens Road. Shortly thereafter the surrounding area becomes more rural with consequently fewer pedestrian desire lines.

Cranford Street has not been assigned any particular priority over any other corridor discussed within the cycle network but as a recognition of its direct route into the city has been identified with medium to high potential to improve the level of service to cyclists.

On the basis of criteria considered to date this corridor should retain its current position in the priority list at eighth. It is significant also to remember that Cranford Street forms part of the NROSS study and so issues covering bus priority and benefits to others should be included in considerations of designs associated with the recommended upgrading of Cranford Street.

3.4.3 Other factors criteria

Other factors were also considered in prioritising the list of corridors. Two key factors have been identified that have a practical effect on which corridors it is most advisable to develop as part of the first three.

These key factors are:

- traffic management schemes already committed that may have a bearing on the traffic flow characteristics of the corridor and change bus performance in the near future.
- corridors that can best be integrated within existing projects on the five year capital works programme.
- adjacent land uses

These are discussed below.

Committed schemes likely to alter bus performance in the short term

There is one key intersection improvement (planned for the 04/05 financial year) that justifies a change to the top three priority corridors as they currently stand. This is the Riccarton / Clarence / Straven intersection improvement on Riccarton Road which has been in the capital programme for a number of years. There are also works happening now associated with the Westfield Riccarton mall redevelopment closeby that could influence a change to traffic flow overall in the area. The intersection works aim to improve capacity and reduce queuing on the approaches to this intersection, which it is possible may reduce the unreliability of this corridor, at least on the sections approaching Riccarton mall.

Whilst this corridor currently sits at second on the list of priority corridors, it is recommended that the development of this corridor be deferred to a time when the intersection improvements at the Riccarton / Clarence / Straven intersection and the works associated with the mall redevelopment are complete and traffic flows have settled to a predictable and measurable level at which to re-measure the bus performance indicators of unreliability and delay as outlined in section 3.4.1.

Another associated body of work on this corridor is the Riccarton Road Traffic Management scheme, which has also been identified in the five year capital programme for a number of years. It would make sense to integrate this scheme with any bus priority scheme, pending resolution of the issues mentioned above.

Integration with the five year capital works programme

Appendix 5 provides a list of capital works associated with each corridor.

The Belfast to / from Exchange corridor remains at number one on the list following a review of the capital works associated with this corridor in the next five years. The schemes associated with Papanui Road and Main North Road identified in appendix 6 amount to over \$10.5 million worth of capital works (consisting primarily of street renewals but also cycle facilities between Bealey Avenue and Harewood Road) between now and completion of the 2008/09 financial year. This provides a good opportunity to integrate any bus priority works within these schemes.

Following consideration of the criteria so far, the PMH to / from the Exchange corridor is placed at number two on the priority list. In terms of programmed capital works, there are some schemes in the next five years that are associated with the corridor. These comprise street renewals at Angus Street (\$243,000 in 2005/06) and Faraday Street (\$58,000 in 2005/06). Due to the timing of these schemes, they could be co-ordinated well with any related bus priority works, however since they only join with Colombo Street and not specifically effect it, it is unlikely that there would be any dependency between one or the other from an engineering view point. A budget provision of \$2.15 million has been made for southern central city transport projects over the next five years. This is associated with ongoing investigations into central city concepts that arose from the Lichfield / Tuam swap project.

As discussed above, the impending works at the Riccarton / Clarence / Straven intersection, together with developments at the Riccarton mall site have the potential to improve traffic flows in the area and it is recommended that this corridor (Hornby Mall to / from Exchange) be placed at number four on the list of priority corridors. The value of capital works associated with this corridor in the next five years are worth over \$3 million, and include street renewals (Kauri Street in 2006, Harakeke Street in 2009 and Puriri Street in 2009) the intersection improvement at Riccarton / Clarence / Straven this year, the Riccarton Road Traffic management Scheme towards 2006, cycle facilities at Deans to Mandeville (this year) and a school bubble around Riccarton High School (next year). Completion of the Riccarton / Clarence / Straven intersection improvements this financial year would allow a new review of the bus performance along this corridor to proceed soon after. If found to still rank highly compared to other remaining corridors it could feasibly be one of the next round of bus priority corridors to be developed from 2006 onwards.

With the move of the Hornby Mall to / from Exchange corridor to number four on the priority list, this promotes the Queenspark corridor to number three. As discussed in section 3.4.2, cycle facility schemes are programmed with a value of \$257,000 (New Brighton Road - Avondale Road to Wainoni Road) and next financial year (Fitzgerald Avenue – Moorhouse Avenue to Armagh Street). There are also a number of street renewal projects (Warrington Street in 2005, Bower Avenue in 2008 and North Avon Road in 2008) that are associated with this corridor.

Another corridor with significant capital works in next five years is the New Brighton to / from the Exchange corridor. There are three cycle facilities schemes programmed for completion in 2006 and two schemes due for completion in the current financial year. In total the capital works associated with this corridor amount to over \$800,000 over the next five years. It is

recommended that the New Brighton to / from Exchange corridor retains its position at number 5.

Adjacent land uses

Primarily the concerns in this respect will be on the potential loss of on-street parking. Until options are developed to resolve the unreliability and delay issues identified on the eight corridors, it is difficult to comment on the local and specific effects of bus priority schemes on adjacent land uses to any level of detail. The actual effects will depend on the type of measure required and the availability of, or potential for nearby off-street alternatives.

Each of the corridors have similar ranges of adjacent land uses including for residential and commercial purposes, in the central city and in the suburbs. It would be fair to say that whichever corridors are first developed, there will be concerns over potential effects such as loss of on-street parking. The important issue in such cases is to establish the actual level and type of use of on-street parking space and to reconcile this with local land owners and users needs within design options that also resolve public transport objectives.

Reference should be made to the responses of motorists to the concepts of bus lanes and parking in commercial areas, included in the market research report in appendix 4.

Issues of cost/benefit, road safety, practicality, maintenance

Each of these factors will be relevant to the development of public transport priority measures options, and on any corridor that is selected. Option development will commence at the next stage (see development process on page 20). Some key issues are discussed below.

Costs and benefits can only be accurately measured at the next stage, when options are developed from which the anticipated value of benefits can be compared against the financial and other 'costs'. In terms of benefits however, one can see with reference to the table on page 12, that an effective and comprehensive treatment of the three proposed corridors would bring corresponding reliability and journey time improvements to bus services on those corridors and the people who use them. As outlined in section 3.4.2, they would also potentially, and to varying degrees, bring benefits to pedestrians and cycling. These benefits (and any others identified when options are developed) can be quantified and compared against corresponding costs to establish a ratio of costs and benefits, and also the rate at which the costs are recovered through realisation of the benefits of the works.

The road safety perception of public transport priority (as shown by the market research undertaken – see appendix 4) primarily relates to bus lanes, and in particular, the shared use of them by buses and cycles. City Streets staff have been conscious of this as an issue and have sought evidence from other organisations, both in New Zealand and overseas as to the occurrence of incidents involving cycles and buses in bus lanes. To date no evidence has been found of trends towards such problems, and this research will continue towards the detailed design phase of any corridor proposals that may involve priority lanes. City Streets staff have also consulted with cycle advocacy and user groups around the country to establish their views on the shared use of bus lanes. These consultations have revealed a support for the inclusion of cycles in bus lanes, in association with good education for cyclists and bus drivers.

The issue of practicality is very important, particularly for the bus companies. It is essential that they be involved in the option development process to ensure measures that are constructed can actually be used as they are intended. This stands to reason, but there can be subtle ways in which the effectiveness of bus priority measures are reduced by seemingly innocuous road features.

In most instances the maintenance liability of public transport priority infrastructure will be integrated with existing asset management processes currently in place for street infrastructure. Some debate has taken place in recent months however, concerning bus lane 'greening' in Auckland and the costs associated with maintaining the coloured surfacing material. Whilst Auckland has a major inventory of bus lanes, and a substantial associated maintenance liability, there is no doubt that the compliance benefits of greening bus lanes

can compare favourably with ongoing maintenance costs. The relative value of benefits from 'greening' bus lanes will decline with increasing compliance and increasing lengths of bus lane. This means that with good compliance (for example by effective enforcement), and increasing lengths of bus lane to maintain, there comes a time when greening bus lanes is no longer cost effective, and simple roadside signs and markings suffice. The decision as to whether or not greening of bus lanes should form part of proposals should be addressed as and when options are presented for approval. At such time it may prove beneficial to develop a standard for Christchurch, or perhaps instead treat each individual proposal on a case by case basis.

3.5 Conclusions on a priority corridor list

After consideration of all the criteria approved by the Council, it is recommended that the final prioritised corridor list is as follows:

1. Belfast to / from the Exchange, via Papanui Road
2. PMH to / from the Exchange, via Colombo Street
3. Queenspark to / from the Exchange, via New Brighton Road
4. Hornby Mall to / from the Exchange, via Riccarton Road
5. New Brighton to / from the Exchange, via Pages Road
6. Sumner to / from Exchange, via Ferry Road
7. Oaklands to / from Exchange, via Lincoln Road
8. Main North Road to / from Exchange, via Cranford Street

This has been developed based most importantly on the key issues of unreliability and excess bus to car travel time. However changes to the priority order have come about through a review of the potential benefit to others and other factors, as discussed in sections 3.4.2 and 3.4.3. Most notably this has resulted in the recommendation that the Hornby Mall to / from the Exchange corridor be placed at number 4 and re-assessed once traffic patterns have settled following some significant changes to traffic management programmed for completion over the next year.

4 COMMUNICATION, CONSULTATION, EDUCATION

4.1 Communication

It is natural that people likely to be effected in the development of the corridors will have some concerns surrounding what any changes might mean for them.

It is important that the Council is seen to be listening and considering all points of view and that the information provided on which these views are formed is accurate, timely and in a format appropriate to the people who are interested.

The aim of good communication is to ensure that the right information gets to the right people at the right time, encouraging them to take part in the process and to air their views in a manner convenient to them. This will lead to the development of options that meet with the widest possible level of approval and support, or at least acceptance and understanding.

Market research has been undertaken in the form of focus groups, getting feedback from the key sectors of motorists, bus users, cyclists, pedestrians, residents and business owners. This has been a valuable piece of research to show where the Council needs to put most effort into getting the right information to the right people.

The focus groups highlighted some key issues and attitudes :

- acceptance from all groups that congestion is getting worse.
- a perception among residents in the community that 'if nothing is done we will end up like Auckland'.
- peak traffic makes buses unreliable and their timetables meaningless forcing people to drive instead.
- bus lanes would encourage people out of their cars if there were enough buses in them.
- a perception that the Council does not have a long term plan to manage traffic.
- bus lanes perceived more important than parking if convenient parking nearby is available.
- enforcement very important with 'expensive penalties' seen as essential.
- business group perception that bus patronage is falling but that bus lanes would encourage people if they have the benefits of speed, frequency and timeliness.

The market research report is provided in appendix 5, which outlines the views held by the key sectors of people.

4.2 Development process

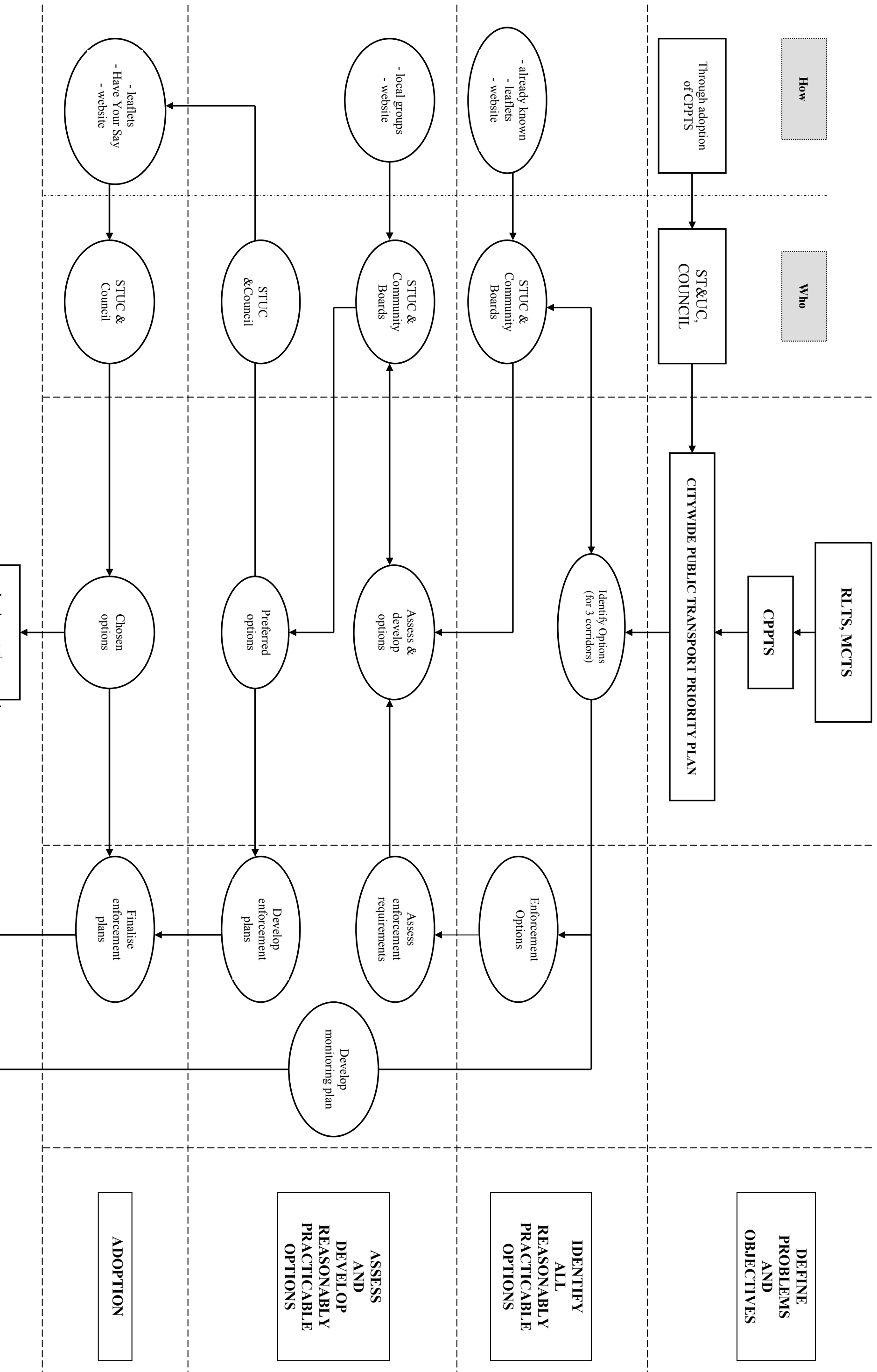
The development process for corridors to which a communications plan will be aligned was approved through the Council in May 2004. This process is included below for reference. The process identifies the key decision making stages and who makes them.

4.3 Road user education

Road user education is important further down the line when corridor schemes approach implementation. Education will be necessary to explain to bus drivers, cyclists, motorists and pedestrians how to behave approaching and passing through bus priority measures. This is important primarily from an enforcement and road safety point of view.

In particular, the concept of enforcement of moving vehicle offences in bus lanes (should that be the Council's chosen direction) will be a new one to Christchurch road users since the ones currently in place are not strictly enforced or complied with. The introduction of the concept must be done fairly, accurately and in a timely way to meet with road user acceptance and good compliance.

Proven means to achieve high levels of understanding include bus driver training, radio advertisements, bill board advertising, newspaper advertising and mail-outs.



5 ENFORCEMENT OF PUBLIC TRANSPORT PRIORITY MEASURES

This section outlines the need for appropriate enforcement and options available to the Council to enforce public transport priority measures. It outlines methodologies used elsewhere in New Zealand and where dedicated enforcement personnel and equipment are used to maximise the intended benefits of public transport priority measures.

5.1 Importance of enforcement

As with many other traffic management measures such as parking restrictions and turning bans, certain types of public transport priority measures rely on road user compliance with road user rules and traffic bylaws in order to achieve and maintain the intended benefits to public transport. However, human nature being what it is some road users will take opportunities to speed up their journeys or increase their personal convenience if the perceived benefit outweighs the perceived risk of being caught, or of being confronted by other road users. Other road user's safety and convenience are seldom a consideration.

Non-compliance can result at least in a disbenefit to other road users and at worst put other people's lives at risk. A traffic management measure that does not achieve its intended purpose because of non-compliance is also an undesirable use of public money. The occasional use by private vehicles of measures such as priority lanes and bus signals can initially have no detrimental effect on the performance of the measure. Allowing this to continue can however quickly spiral into widespread non-compliance, because compliant drivers, seeing others getting ahead without apparent penalty, soon become fed up and feel they are missing out on a benefit that seemingly has no drawback, and inevitably numbers of formally compliant drivers become non-compliant.

It is essential therefore to communicate effectively to road users from the outset of a priority measure that it will be enforced and that an early visual presence is maintained to underline this commitment. Subject to regular monitoring, this can lead to a reduced presence and the use of enforcement resources on other priority measures. This can enable a widespread and efficient enforcement operation at optimal cost.

All moving vehicle offences in Christchurch are currently the responsibility of the Police. The Council can and does enforce stationary vehicle offences in priority measures such as parking on a clearway. Police enforcement of moving vehicle offences target with their available resources the most serious issues that pose a risk to road safety, such as dangerous driving, drink driving, speeding and red light violations. Resources are generally not available to enforce such measures as priority lanes or priority signals that pose less of a safety risk through non-compliance. The following section outlines a possible alternative that the Council could develop to remove this burden from the Police and maximise the benefits to road users.

5.2 Opportunities for Council enforcement

Precedents have been set in North Shore city and Auckland city for Territorial Local Authorities to enforce moving traffic offences associated with public transport priority measures. This is made feasible through legislation in the Land Transport Act 1998 that empowers the Commissioner of Police to warrant local authority officers as "Enforcement Officers" for the purpose of enforcing moving vehicle offences such as the illegal use of public transport priority measures. The Act also creates owner liability for moving vehicle offences in bus lanes observed by approved surveillance equipment. This delegation of duties does however require a quite lengthy process of pre-planning, which includes seeking delegations of authority from the Minister of Transport and Commissioner of Police to undertake the enforcement of specific moving offences, and from the Minister of Finance for approval to retain the revenue from infringement notices as a source of funding to assist in off-setting the cost of enforcing public transport priority measures.

Various enforcement methodologies have been considered and operate around the country and overseas.

These include:

- on road observation with infringement notices issued by post.
- on road observation with infringement notices issued to the driver.
- camera enforcement.

The first option is one that is recommended for Council consideration. The third option should be considered for the long term once Police approval of surveillance equipment is complete. The first option has one weakness in that although infringement notices would be issued via posting to the registered owner(s), technically owner liability would not exist as the offence would not (at least initially) have been detected by approved surveillance equipment. This is overcome in most circumstances however by a requirement in the Land Transport Act for owners to identify drivers or face a fine. In reality, practise has shown in North Shore and Auckland priority lanes and from red light violations being enforced by the Police, that vehicle owners will accept the fine when presented with an infringement notice together with the opportunity to observe the infringement on video footage.

The second option is not recommended. The disadvantages of this method mirror the advantages of the first option which are :

- limited interaction between officer and driver (thereby avoiding personal security concerns).
- increasing the level of potential detections (officers focus on recording non-compliance rather than issuing notices).
- it would not hold up other cars, buses, cyclists and avoid the safety issues that this would present.

5.3 Recommended direction

It is recommended at this stage that the Council support in principle seeking the delegation of Police powers to Council enforcement officers for the enforcement of priority lanes; and at the appropriate point seeking approval from the Minister of Finance to retain revenue from infringement fines. It is also recommended that Transport and City Streets staff report back to Council via the appropriate standing committee(s) on detailed procedures for priority lane enforcement, including staff and funding issues.

6 MONITORING AND REVIEW

6.1 Corridor performance monitoring

It is proposed that a review of bus reliability and journey time performance takes place one year following the implementation of corridor priority treatments. This is essential to demonstrate the benefits of treatments are being realised, identify any further improvements and also provide the city with confidence in bus priority for the future.

Other corridors on the priority list should also be monitored annually to establish changes in performance with time and identify issues for the future.

It is proposed that bus operators be included in these reviews as a reality check on the measurable performance of journey times and reliability.

It is further recommended that the views of affected bus users, cyclists, motorists, residents and businesses also be recorded within the overall review.

6.2 Corridor priority list review

Due to changing levels of congestion, new roading developments and the growth of commercial, industrial and residential areas, the priority order of corridors as it is currently presented may change with time, or indeed new corridors may become important.

It would be sensible then to review the priority corridor list every three years to tie in with LTCCP development timelines to ensure future operational and capital funding is directed towards the most important corridors.

It is suggested that February and March 2004 are set as the baseline performance levels against which to measure changes in bus performance and steer the annual priority list review.

7 CONCLUSIONS

This plan recommends that public transport priority treatments for corridors be developed in the following order (subject to annual reviews), with the first three implemented by June 2006.

1. Belfast to / from Exchange, via Papanui Road
2. PMH to / from Exchange, via Colombo Street
3. Queenspark to / from Exchange, via New Brighton Road
4. Hornby to / from Exchange, via Riccarton Road
5. New Brighton to / from Exchange, via Pages Road
6. Sumner to / from Exchange, via Ferry Road
7. Oaklands to / from Exchange, via Halswell Road
8. Main North Road to / from Exchange, via Cranford Street

These have been prioritised based on the criteria adopted by Council in May 2004. These were:

- most unreliability to most buses
- most excess bus to car travel time
- benefit to others
- other factors

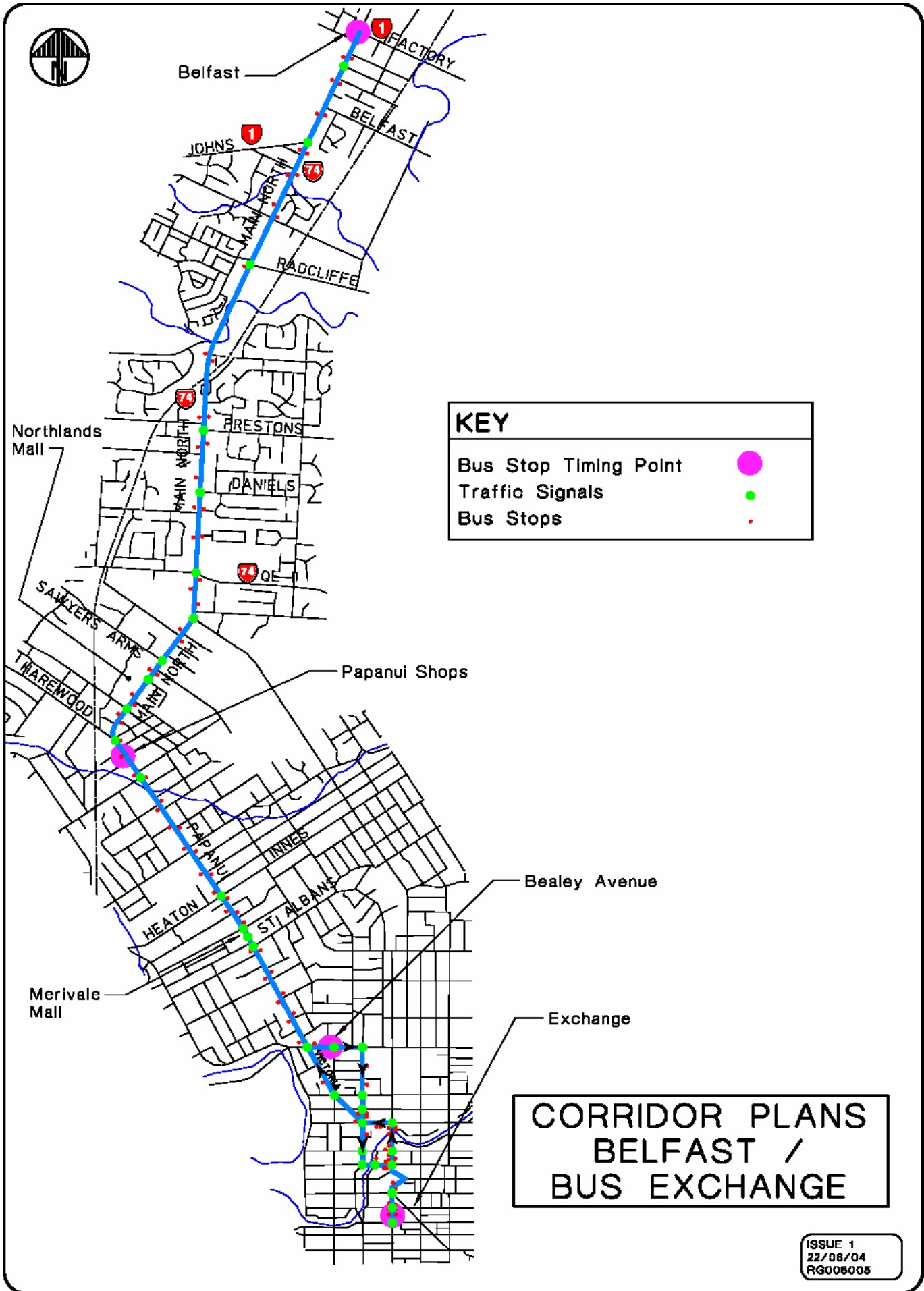
This plan also recommends that Council give its approval in principle to seek receiving the delegation of Police powers to enforce moving vehicle violations associated with bus priority measures and authority from the Minister of Finance to retain revenues from this enforcement to contribute towards a degree of self funding for the enforcement operations. With this approval in principle, officers will be able to commence the lengthy planning processes required to obtain these delegations and authorities and report back to Council with their further recommendations.

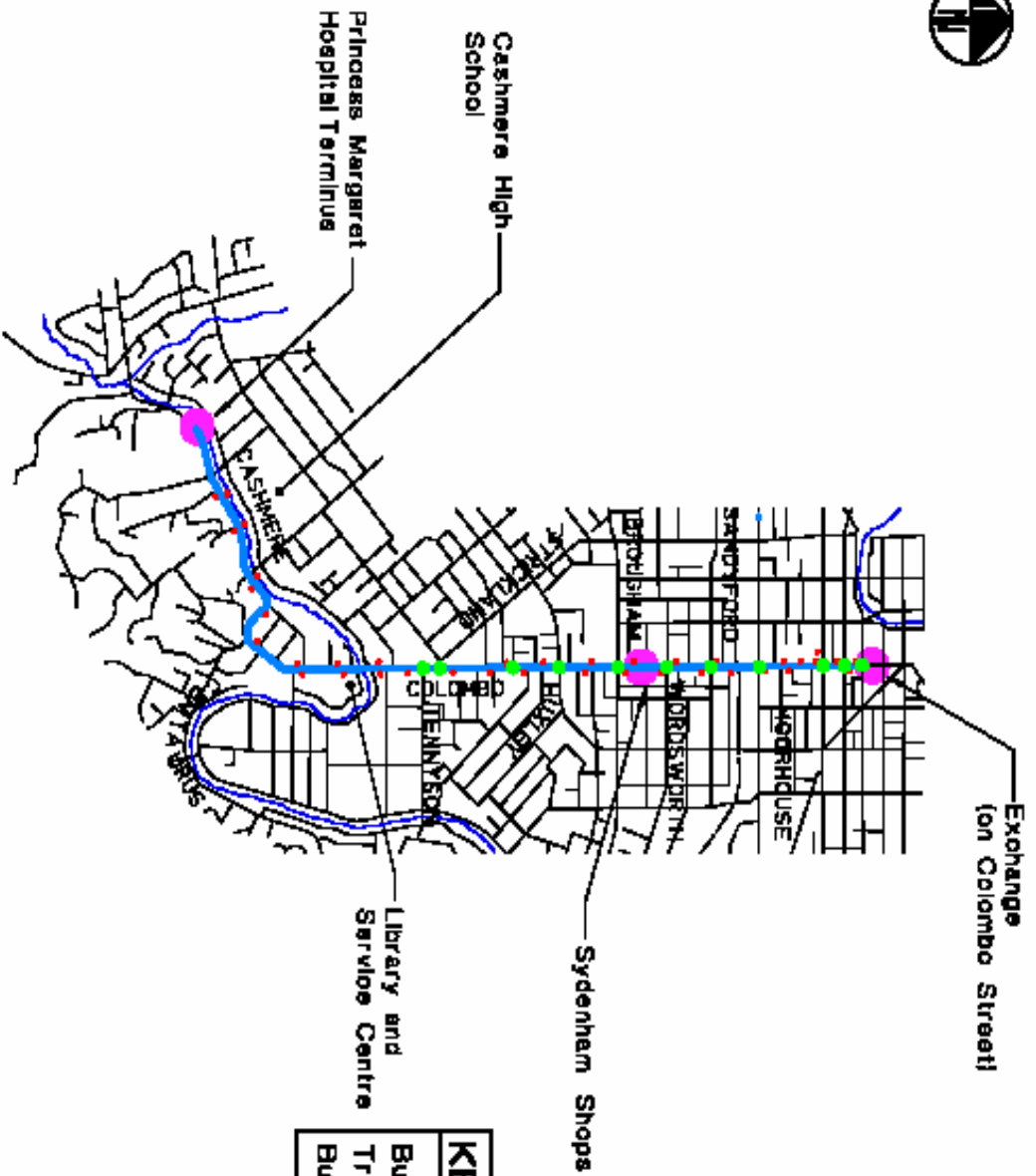
This plan further recommends the importance of developing communication and road user education strategies on the use of bus priority facilities and the need to review implemented corridors and the priority list to demonstrate ongoing best use of capital funding.

8 APPENDICES

1. Corridor plans
2. Corridor analysis data
3. Peak period corridor bus frequencies
4. Market research report
5. Associated capital projects 2004 to 2009

APPENDIX 1
CORRIDOR PLANS





KEY	
●	Bus Stop Timing Point
●	Traffic Signals
●	Bus Stops

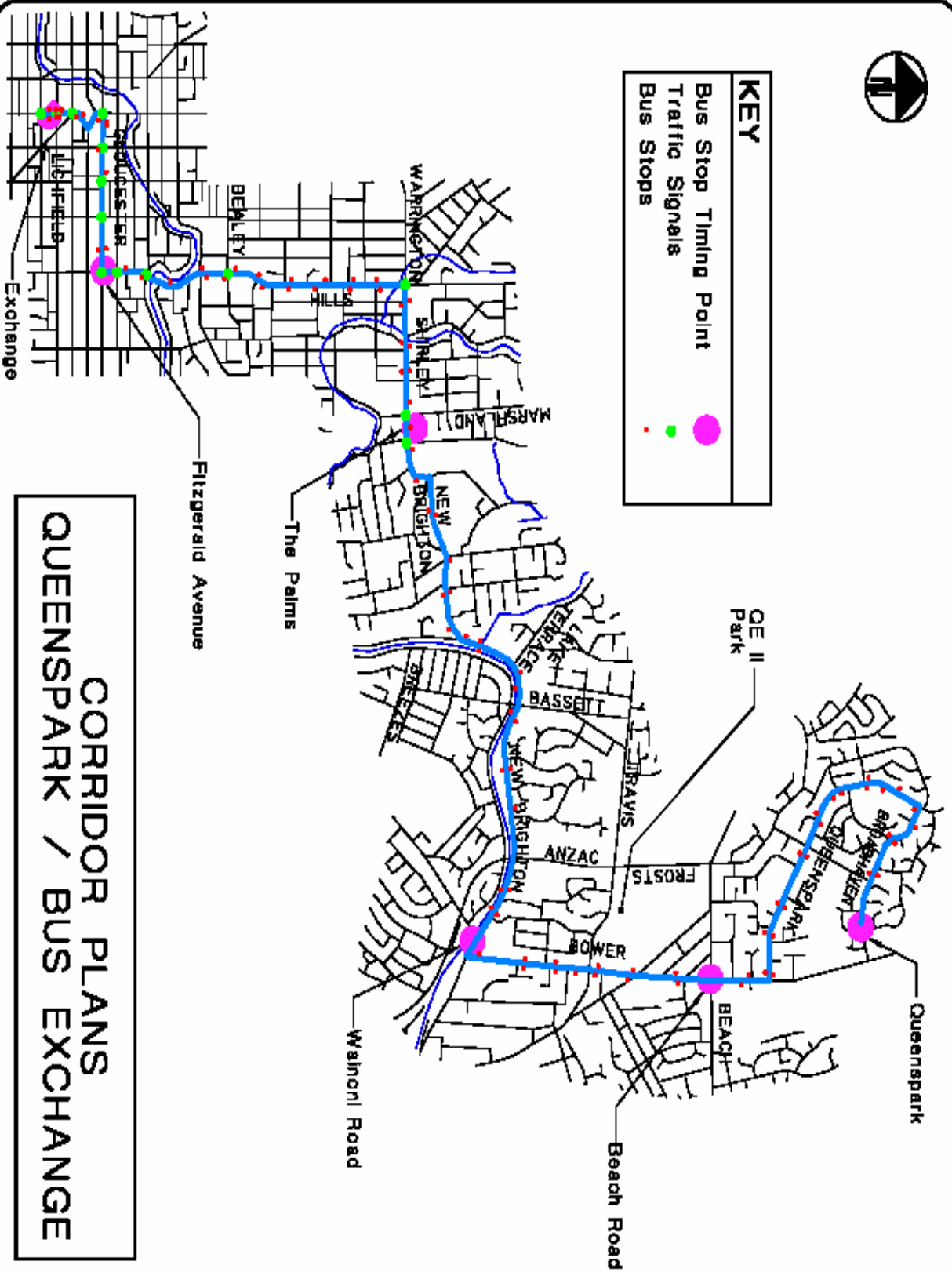
**CORRIDOR PLANS
PMH / BUS EXCHANGE**

FIGURE 1
22/08/14
R180000003



KEY

- Bus Stop Timing Point
- Traffic Signals
- Bus Stops

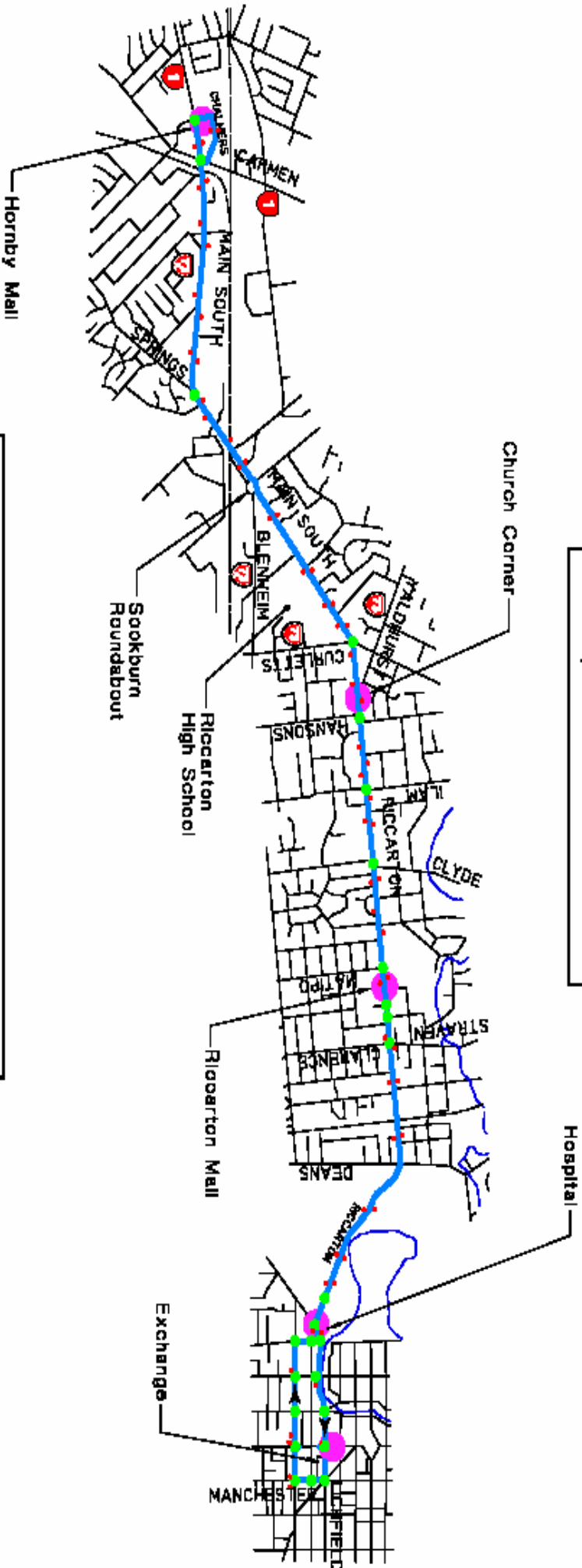


**CORRIDOR PLANS
QUEENSPARK / BUS EXCHANGE**

ISSUE 1
22/05/04
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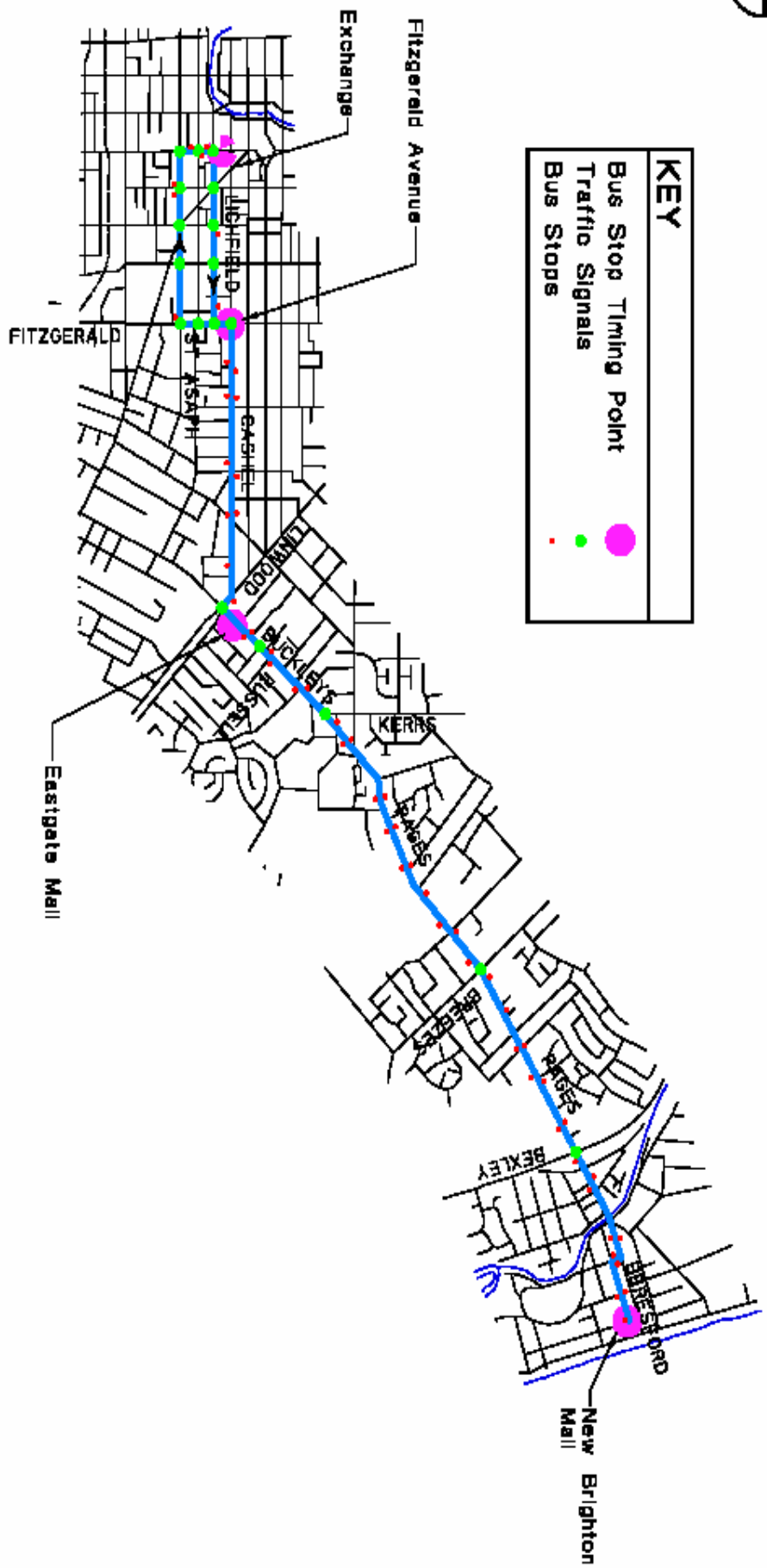


**CORRIDOR PLANS
HORNBY / BUS EXCHANGE**

ISSUE 1
22/08/04
RD0008004



KEY	
	Bus Stop Timing Point
	Traffic Signals
	Bus Stops



**CORRIDOR PLANS
NEW BRIGHTON / BUS EXCHANGE**

ISSUE 1
22/05/04
R10008007



**CORRIDOR PLANS
OAKLANDS / BUS EXCHANGE**

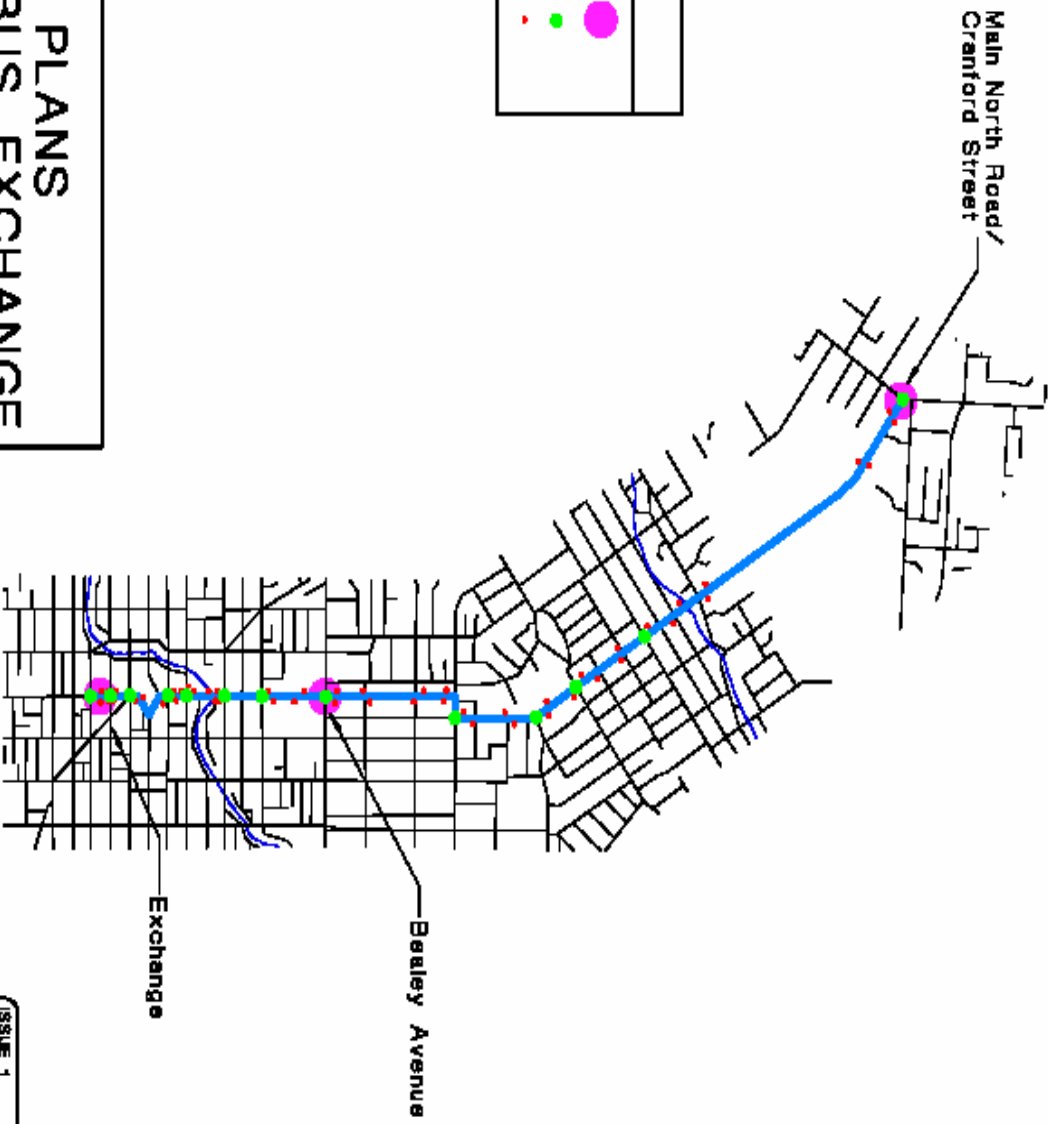
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Traffic Signals	●
Bus Stops	●

ISSUE 1
22/08/14
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Main North Road/
Cranford Street

KEY	
Bus Stop Timing Point	●
Traffic Signals	●
Bus Stops	●



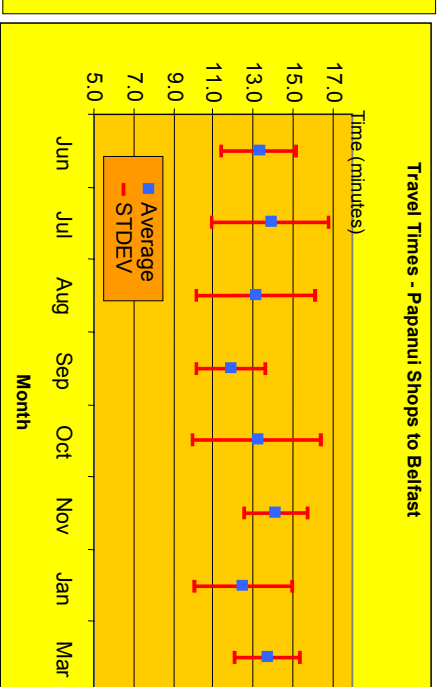
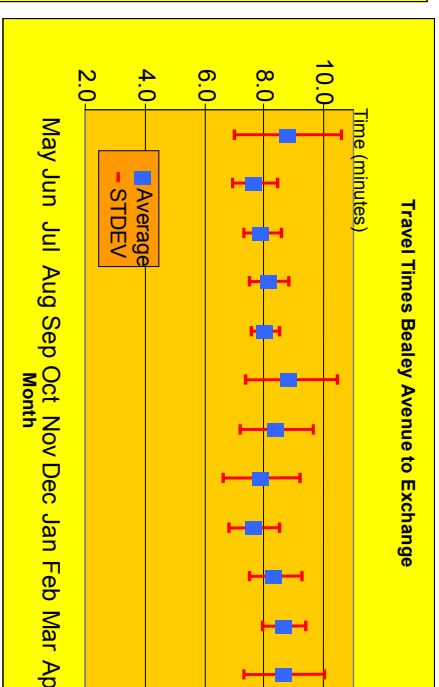
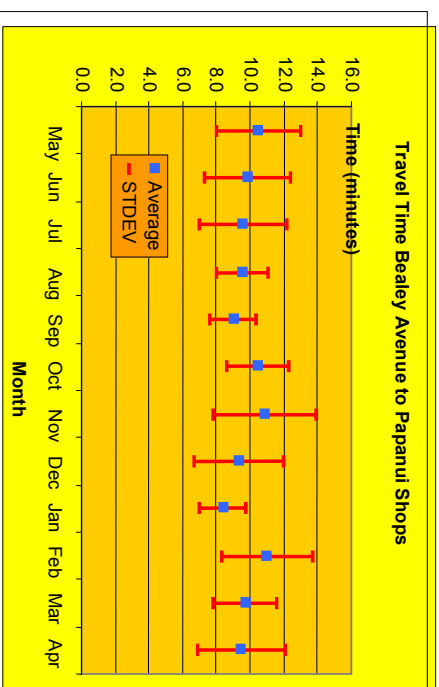
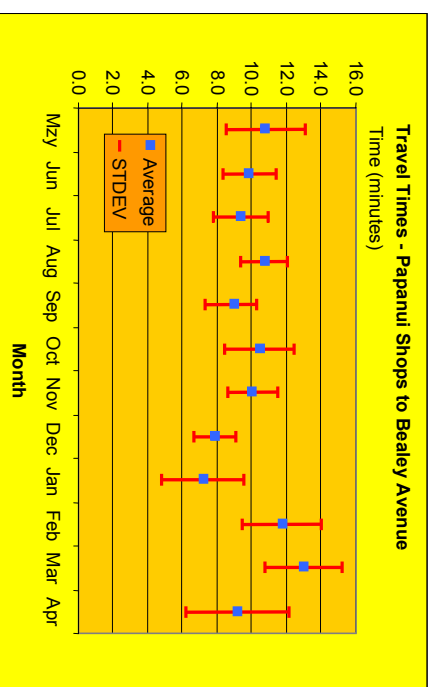
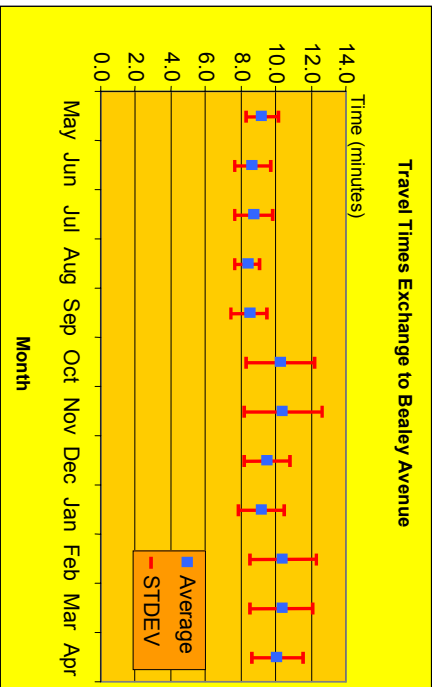
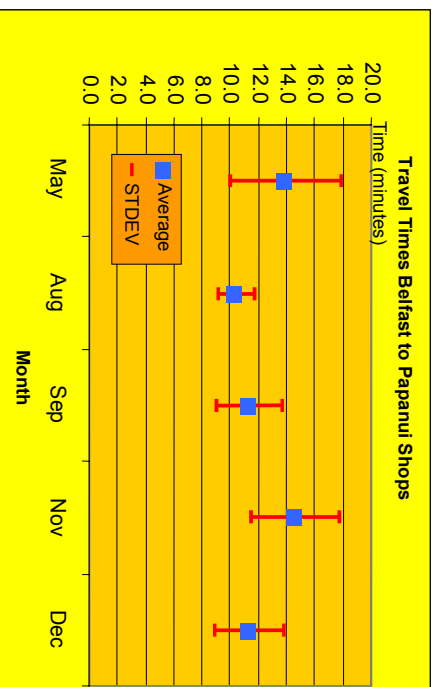
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CRANFORD ST / BUS EXCHANGE**

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22/05/14
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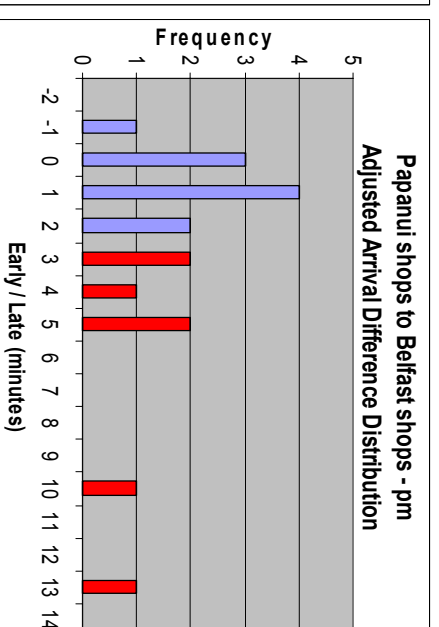
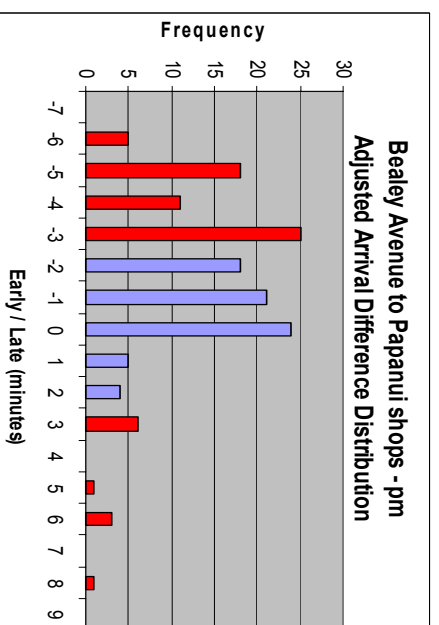
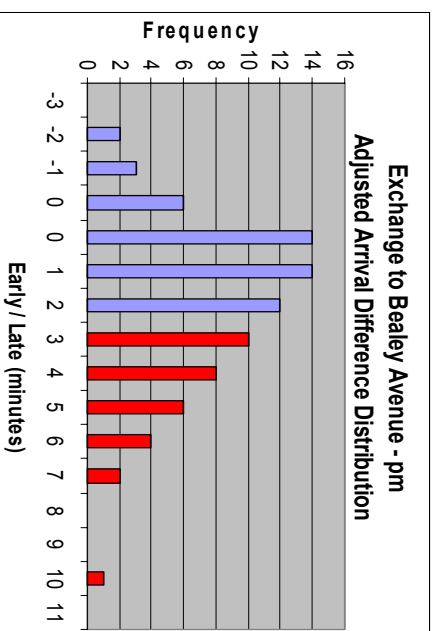
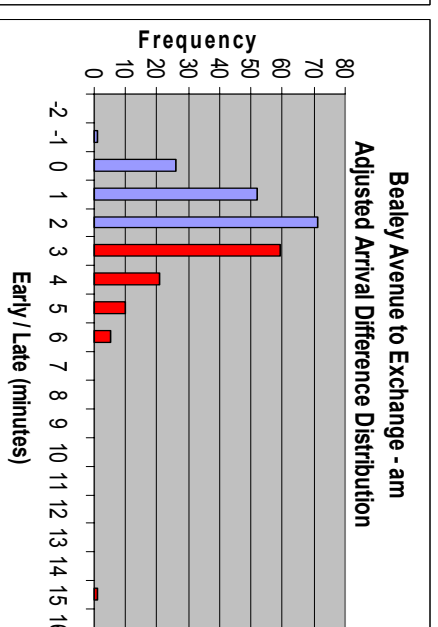
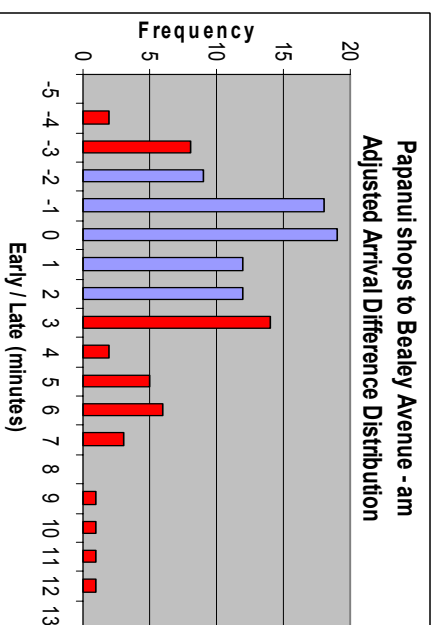
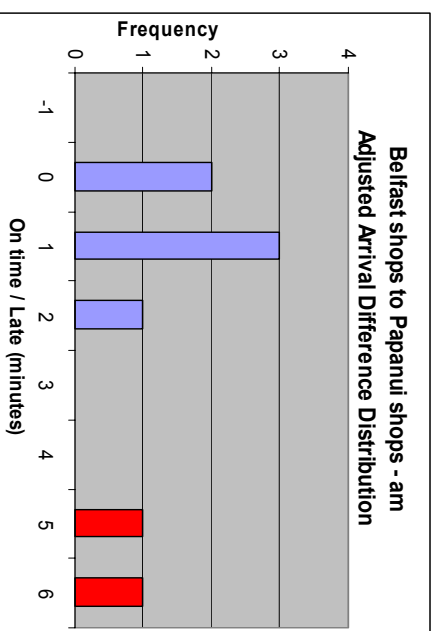
APPENDIX 2
CORRIDOR ANALYSIS DATA

ANALYSIS DATA FOR BELFAST TO / FROM BUS EXCHANGE

Annual sections review of monthly travel times and standard deviations from the average

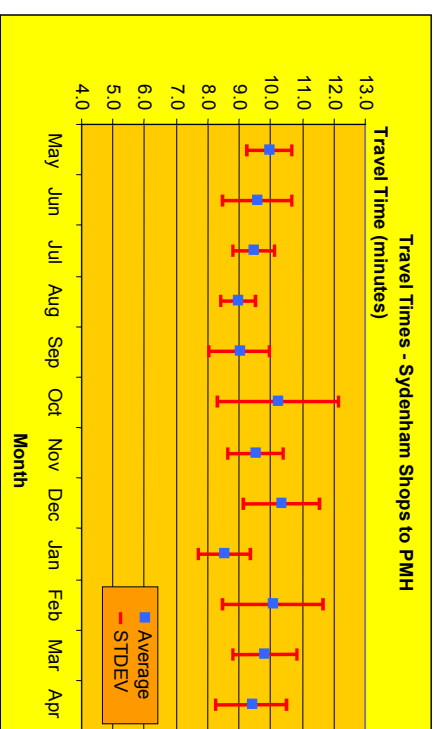
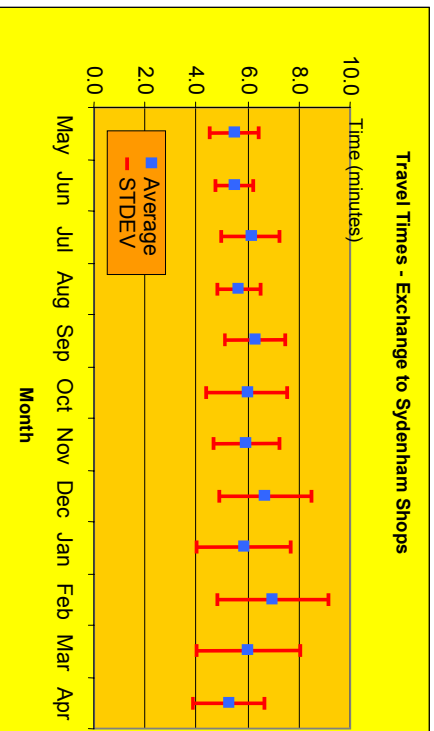
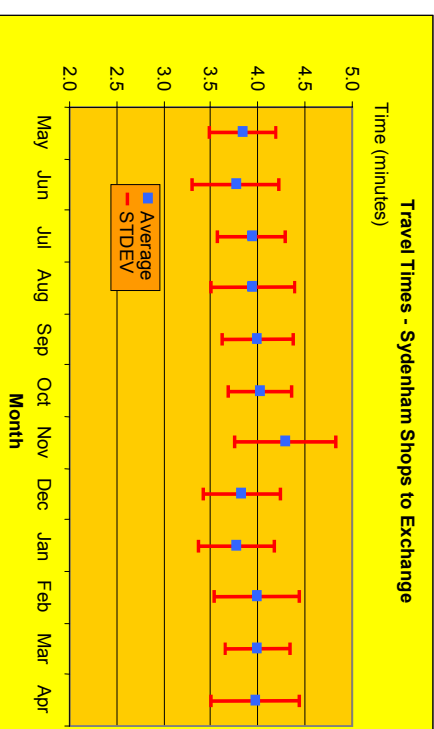
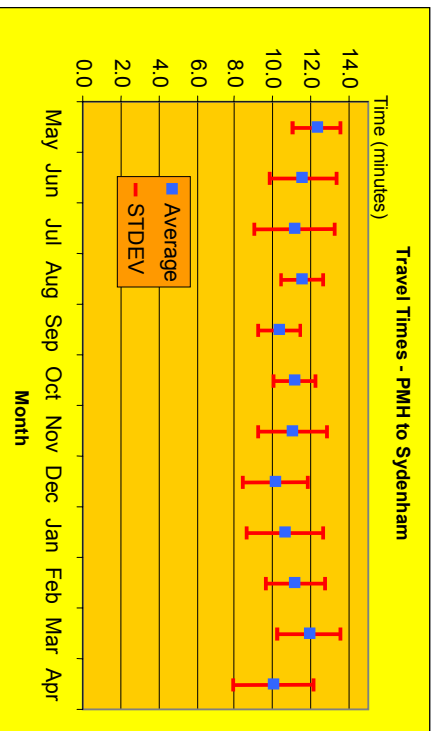


February and March review of section unreliability

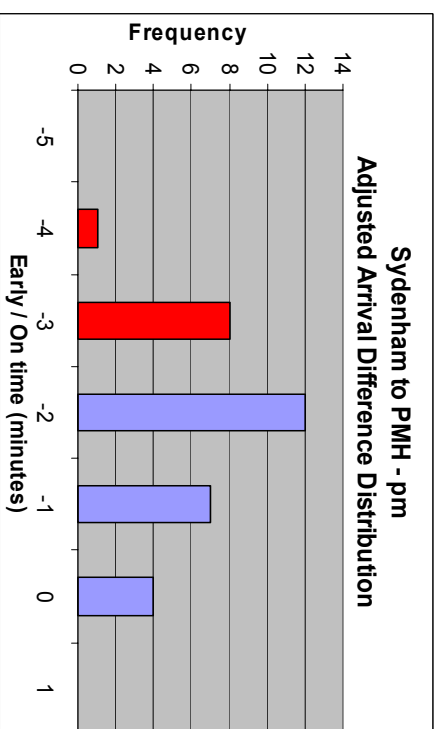
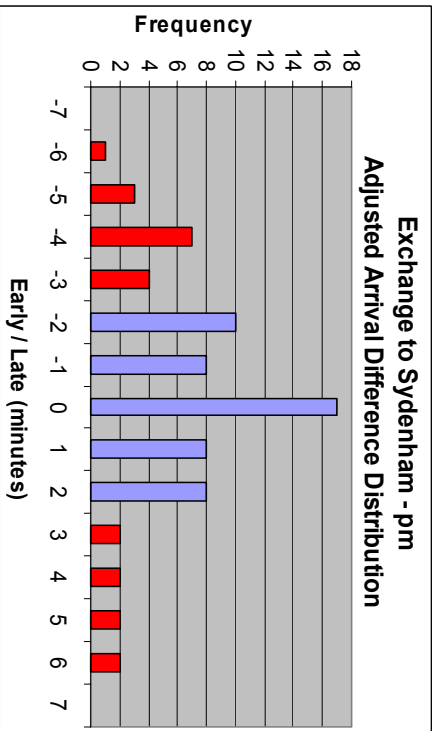
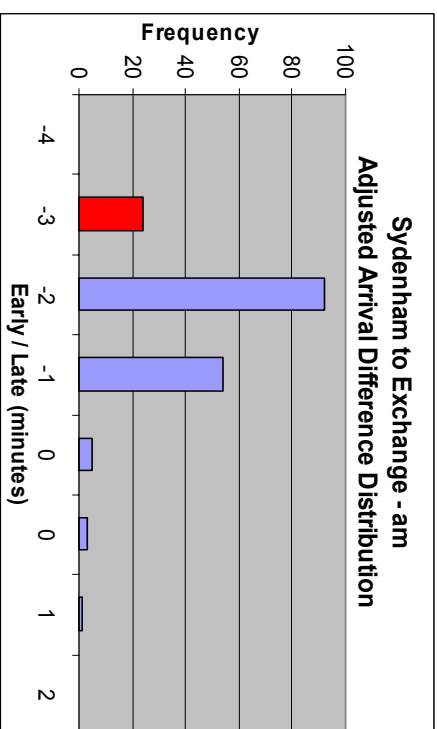
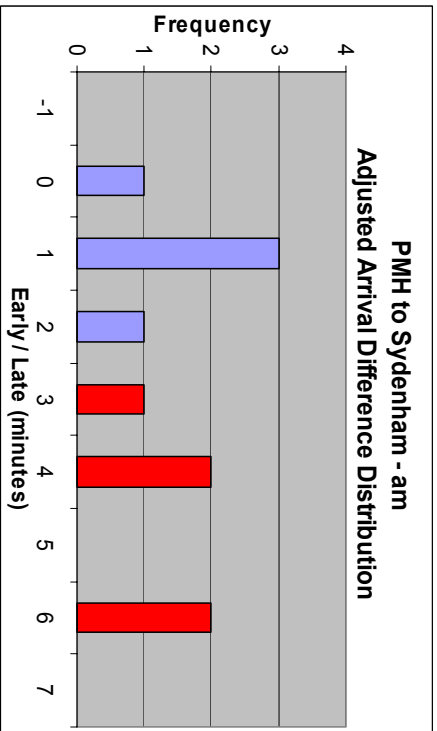


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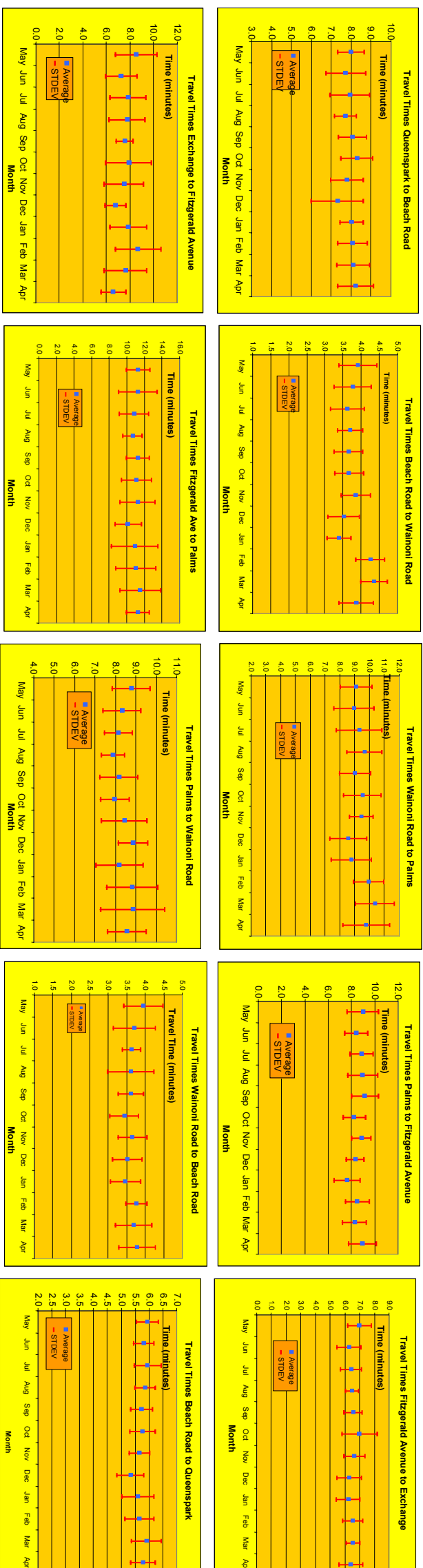


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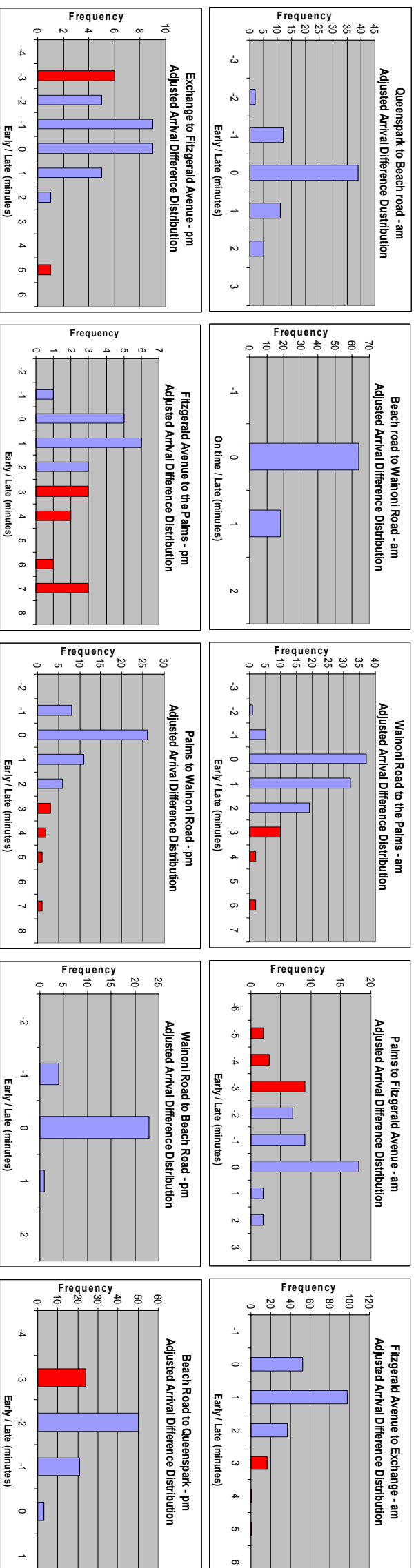


ANALYSIS DATA FOR QUEENSPARK TO / FROM BUS EXCHANGE

Annual sections review of monthly travel times and standard deviations from the average

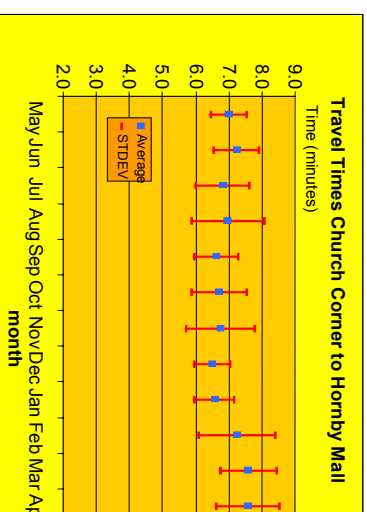
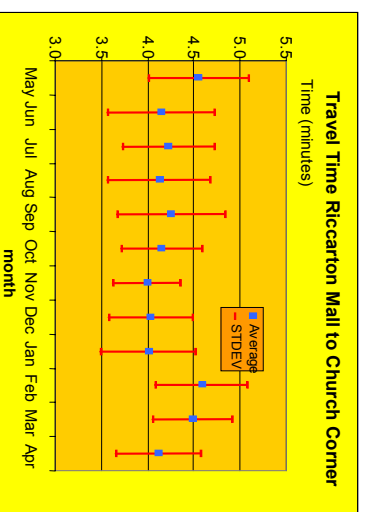
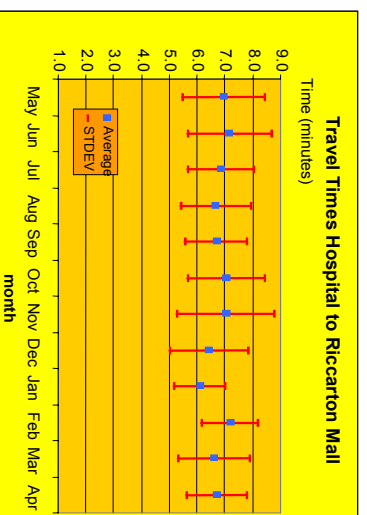
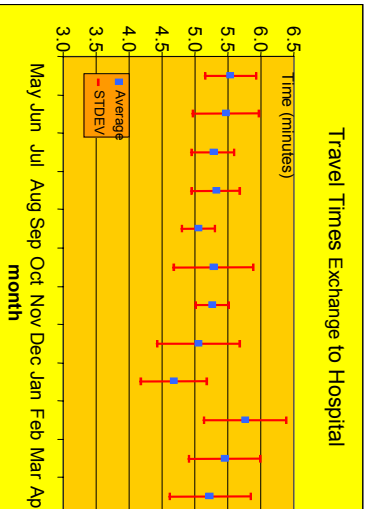
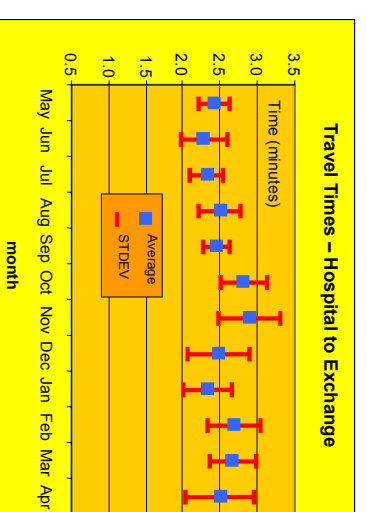
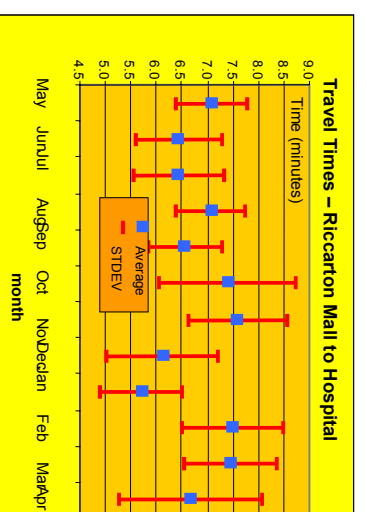
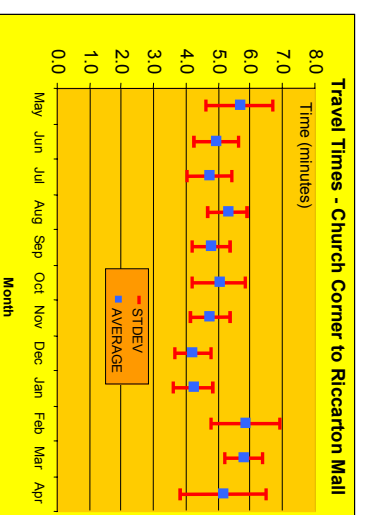
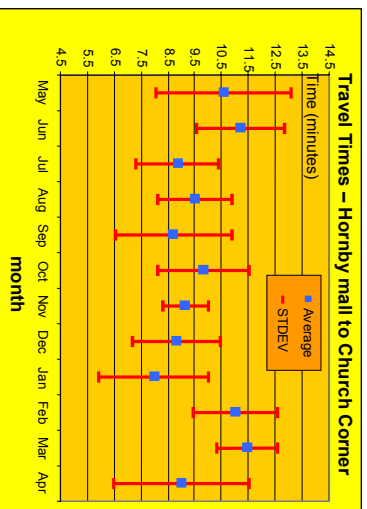


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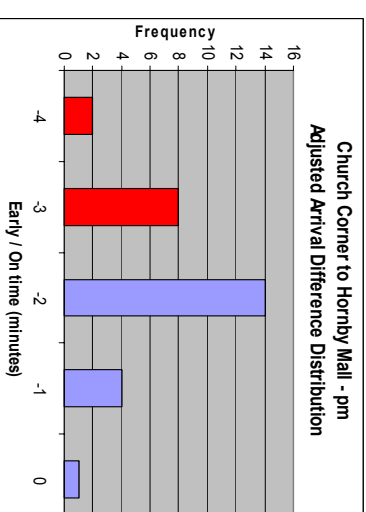
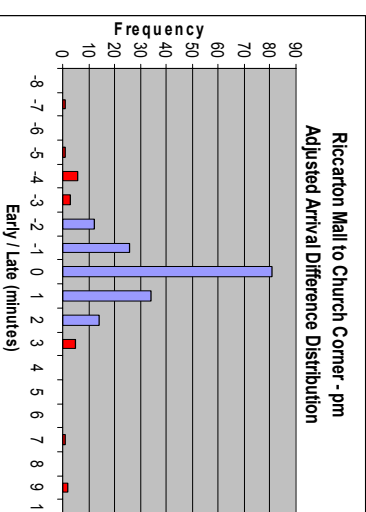
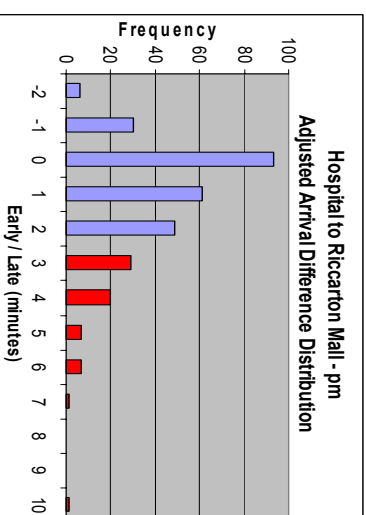
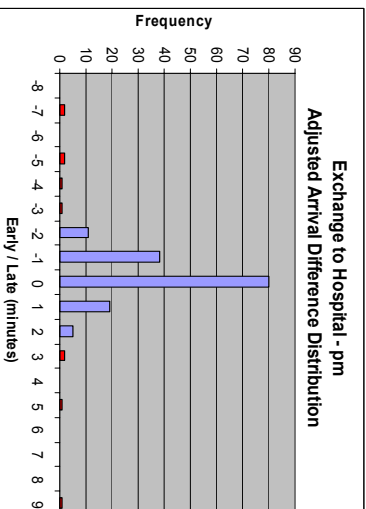
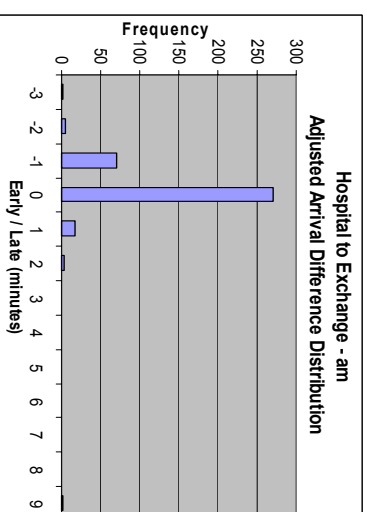
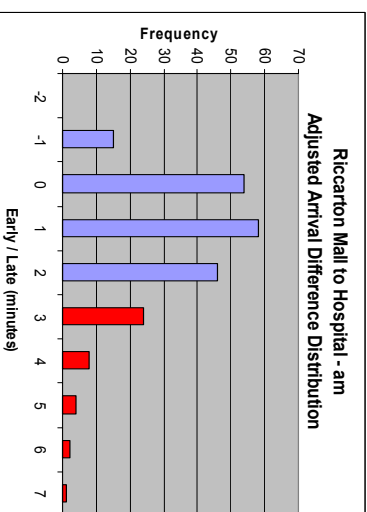
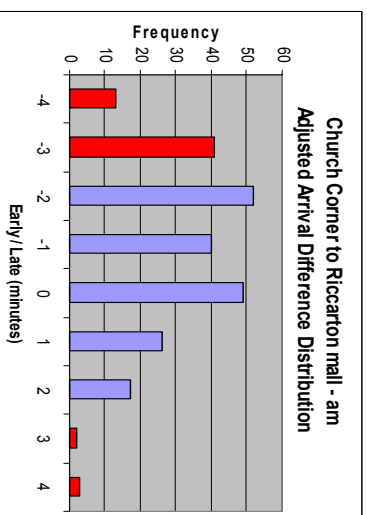
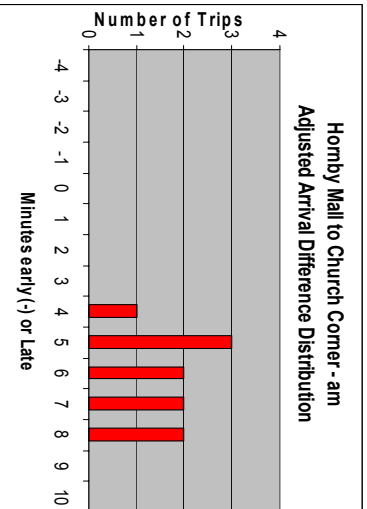


ANALYSIS DATA FOR HORNEYBY MALL TO / FROM BUS EXCHANGE

Annual sections review of monthly travel times and standard deviations from the average

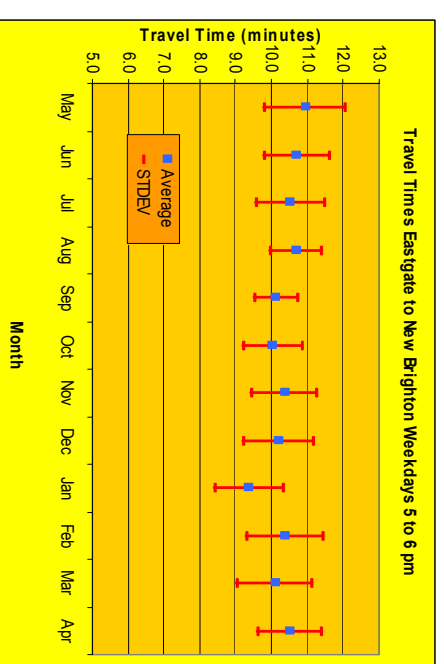
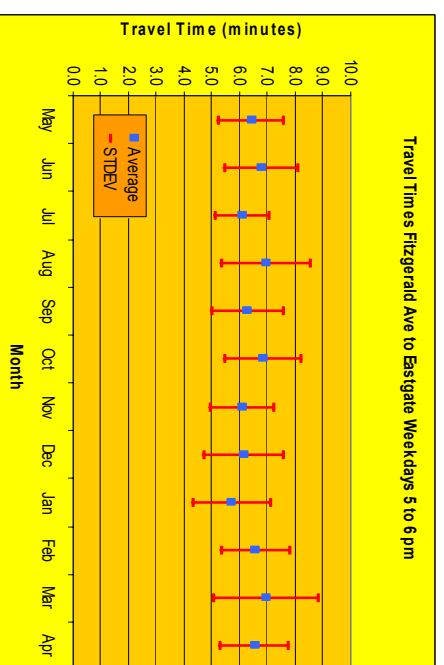
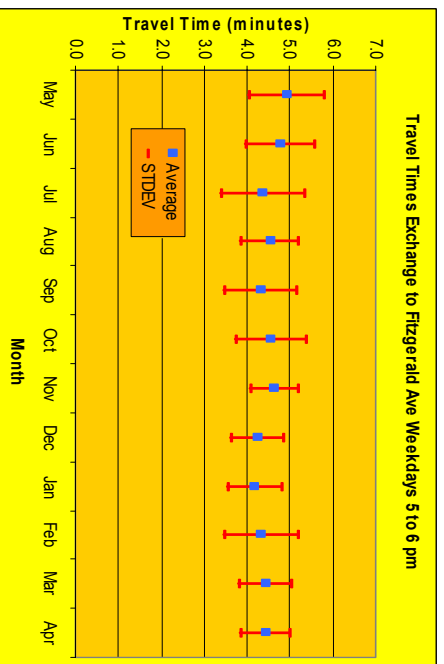
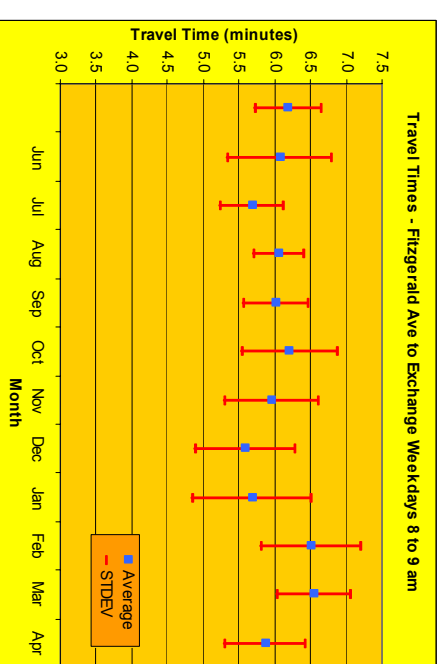
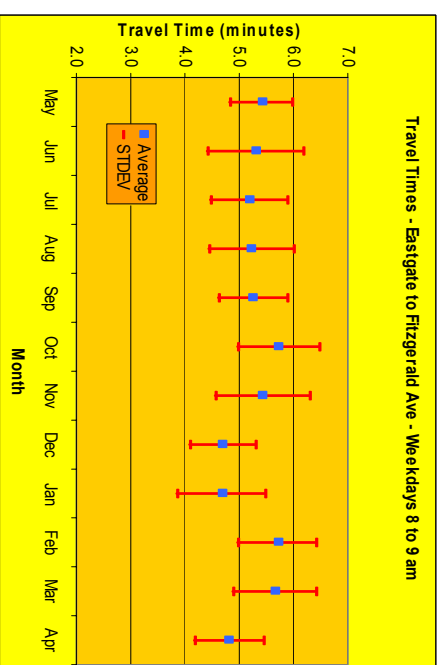
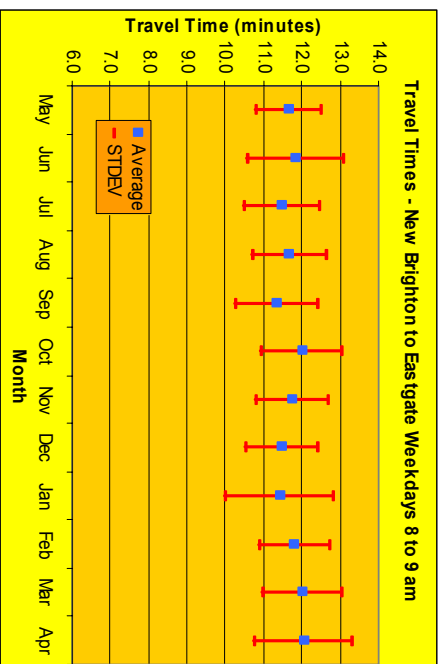


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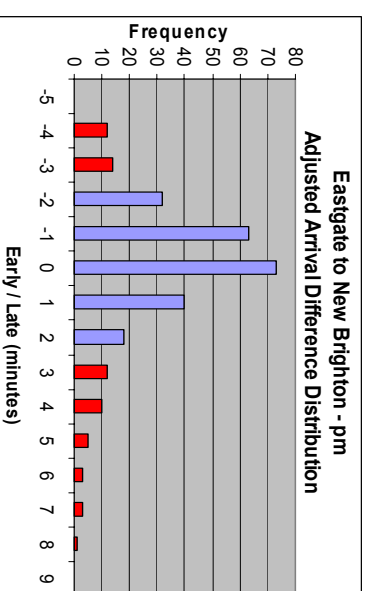
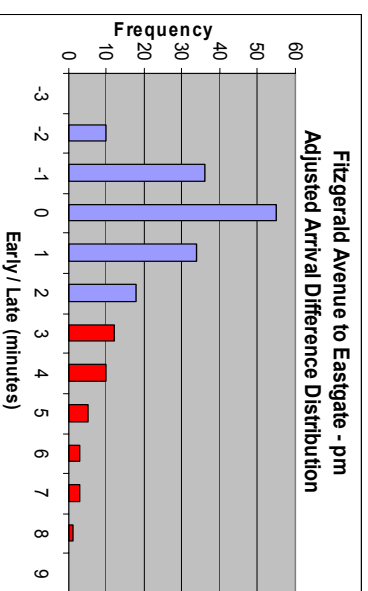
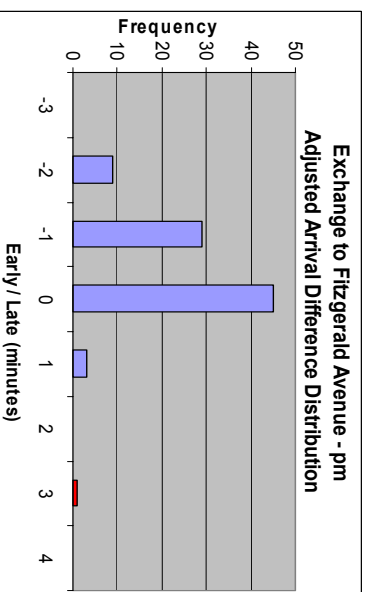
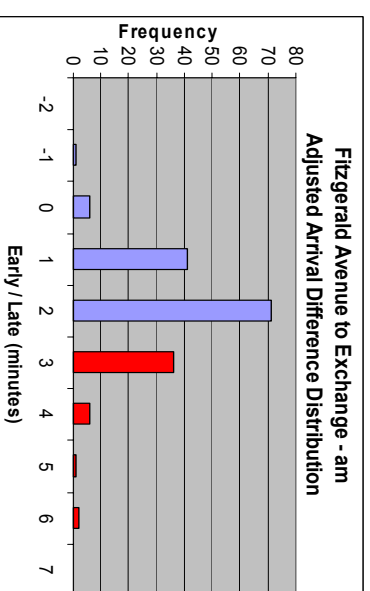
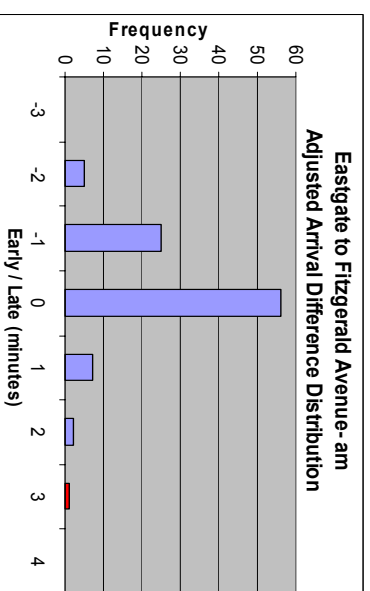
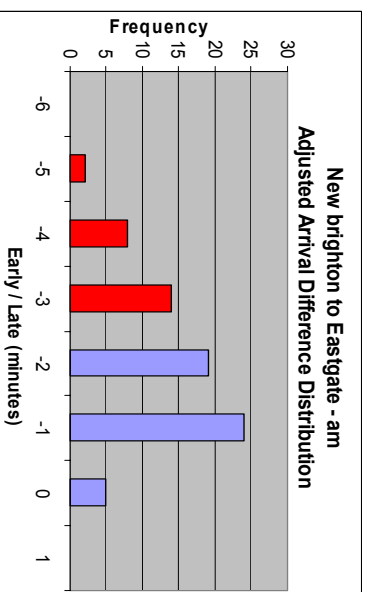


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Annual sections review of monthly travel times and standard deviations from the average

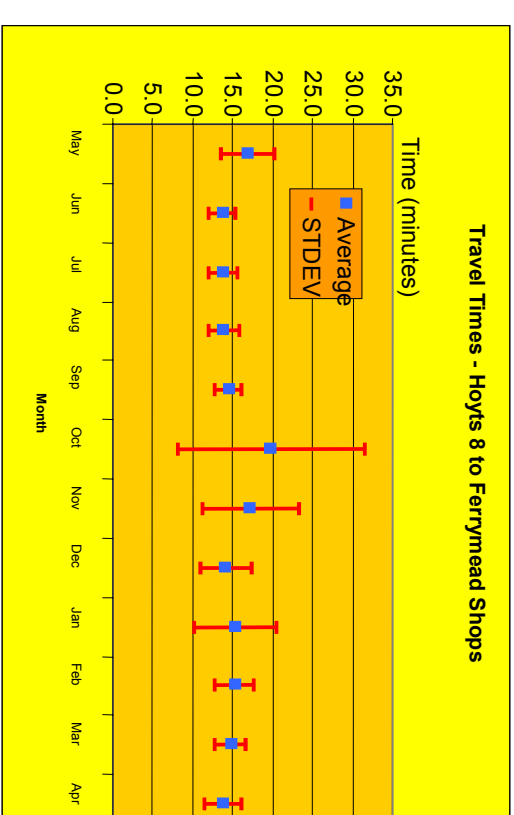
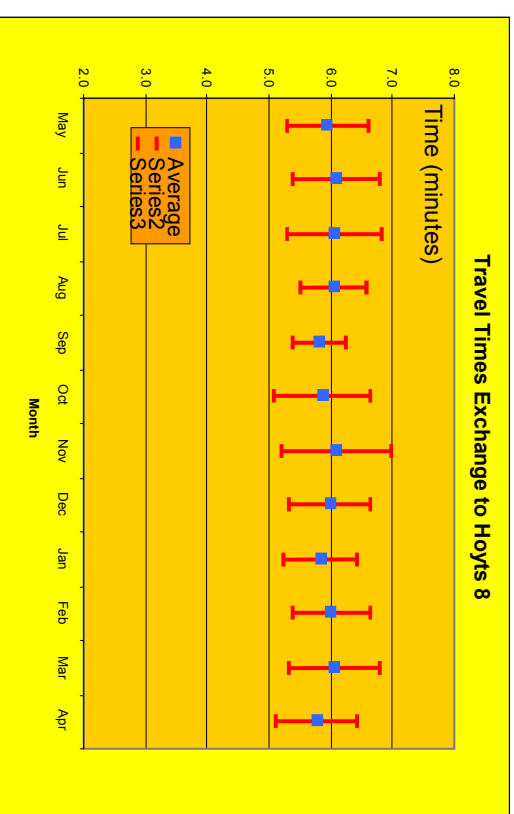
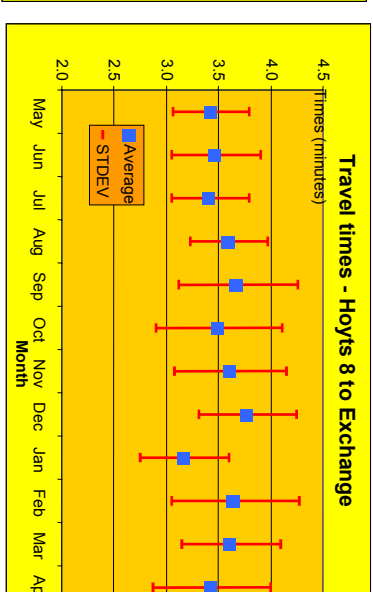
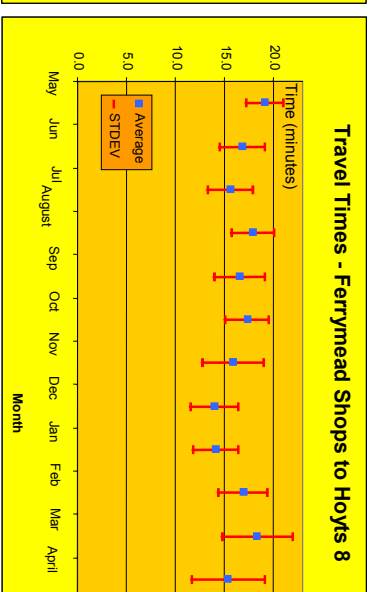
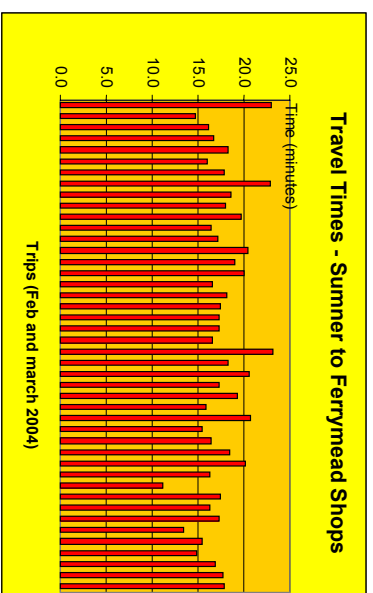


February and March review of section unreliability

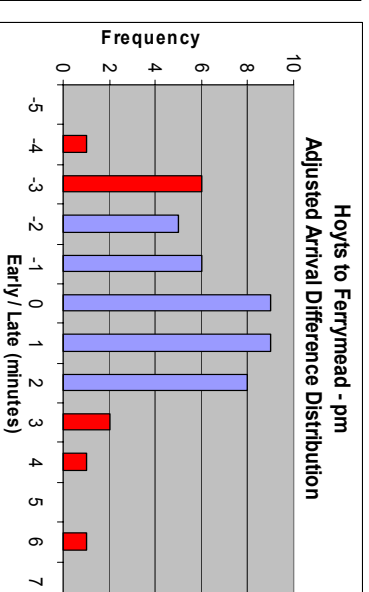
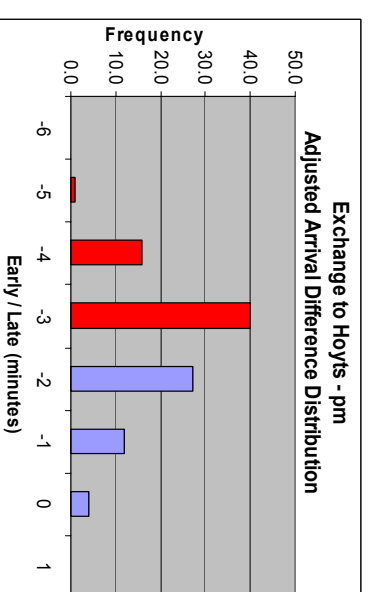
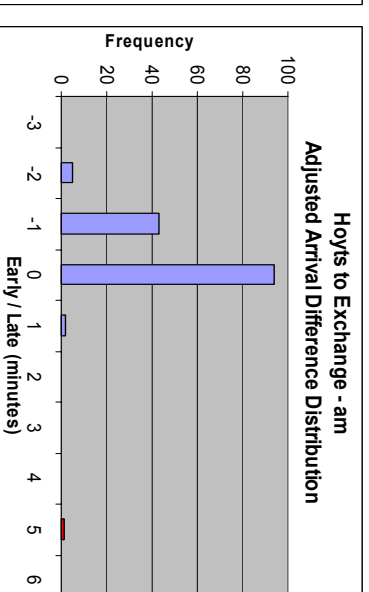
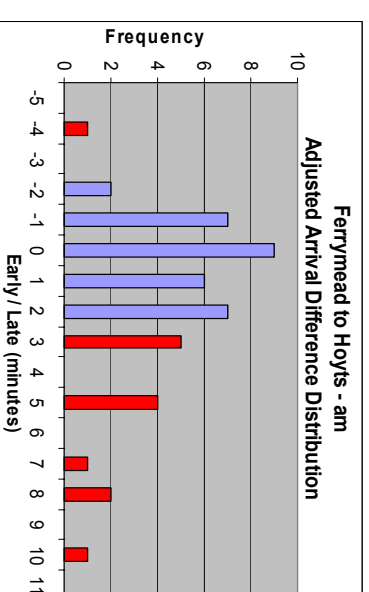
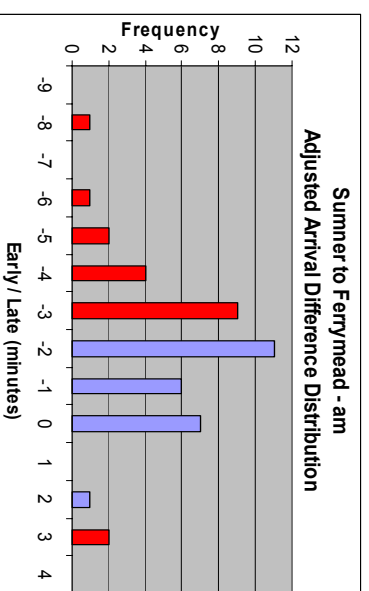


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Annual sections review of monthly travel times and standard deviations from the average

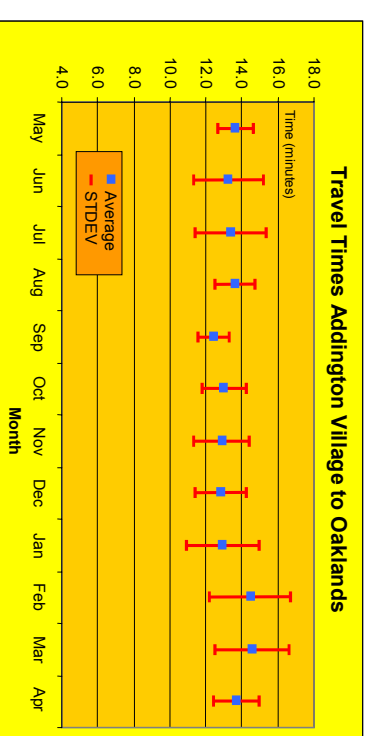
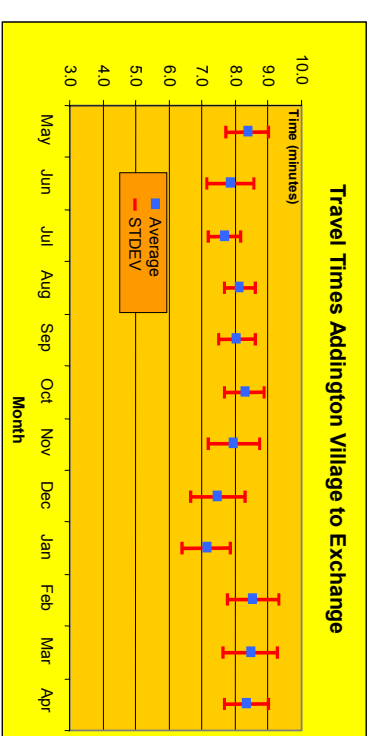
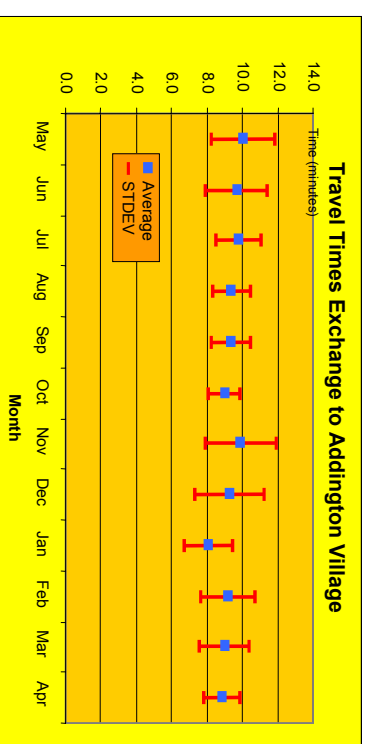
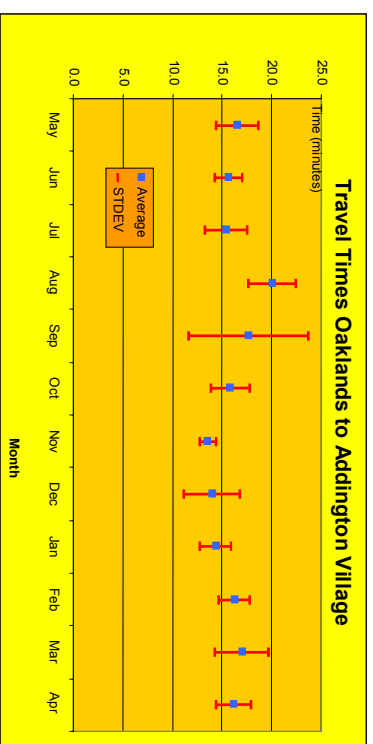


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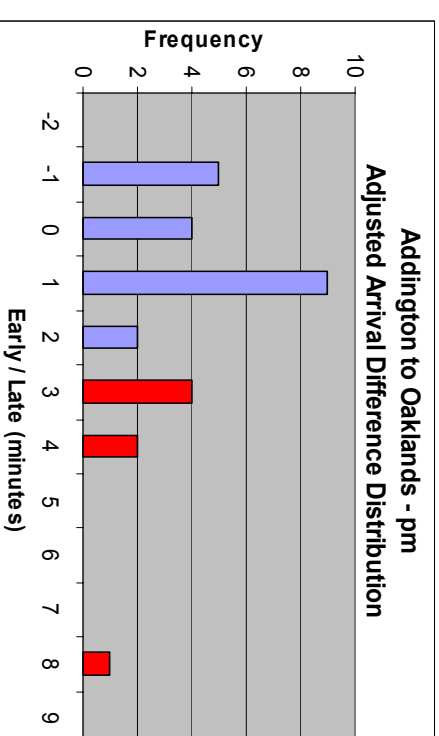
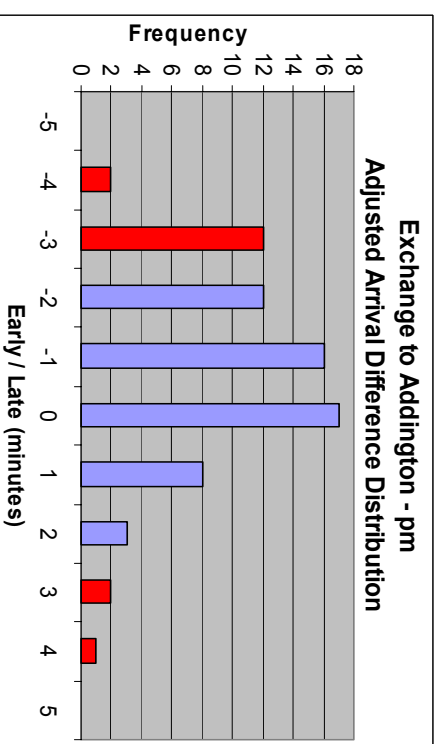
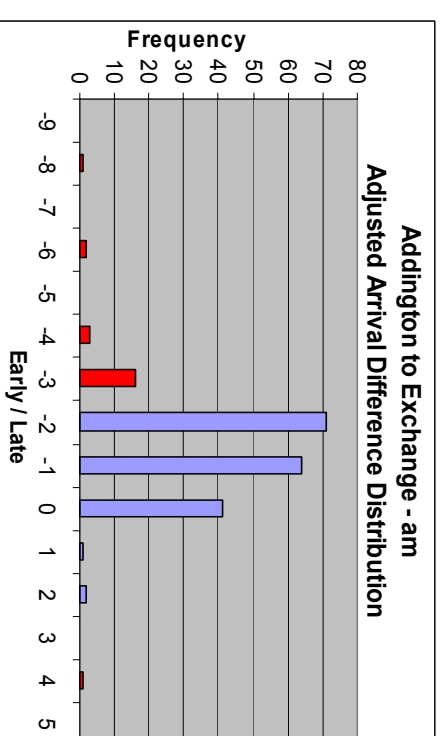
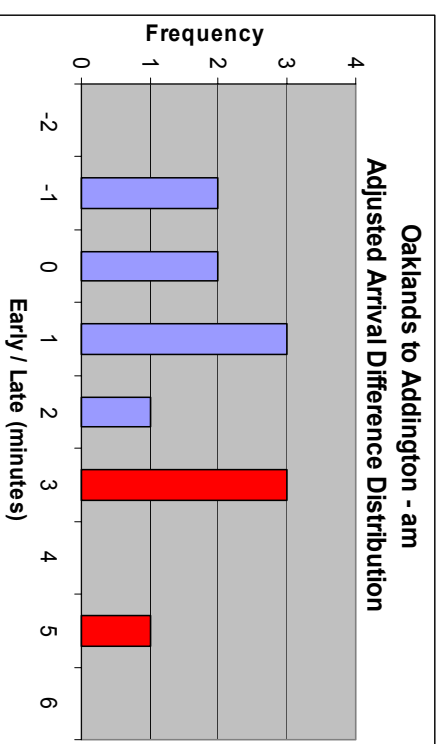


ANALYSIS DATA FOR OAKLANDS TO / FROM BUS EXCHANGE

Annual sections review of monthly travel times and standard deviations from the average

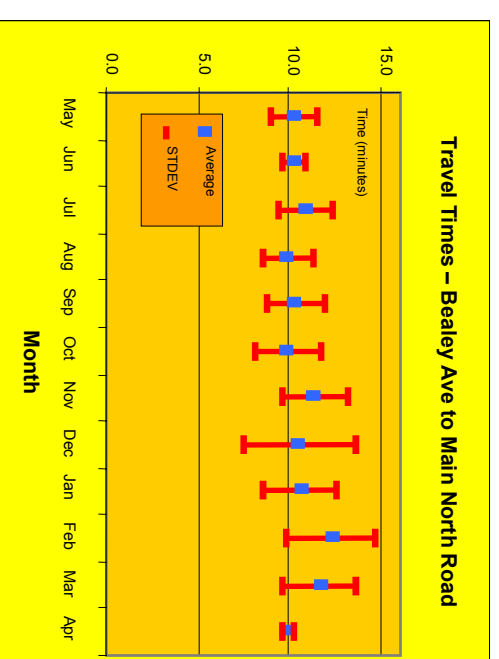
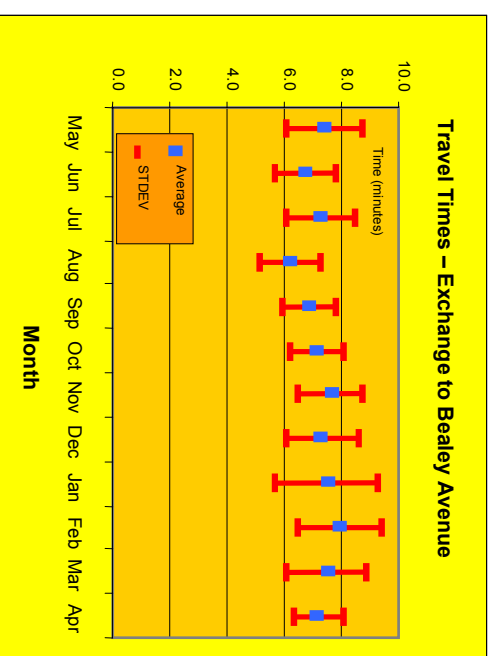
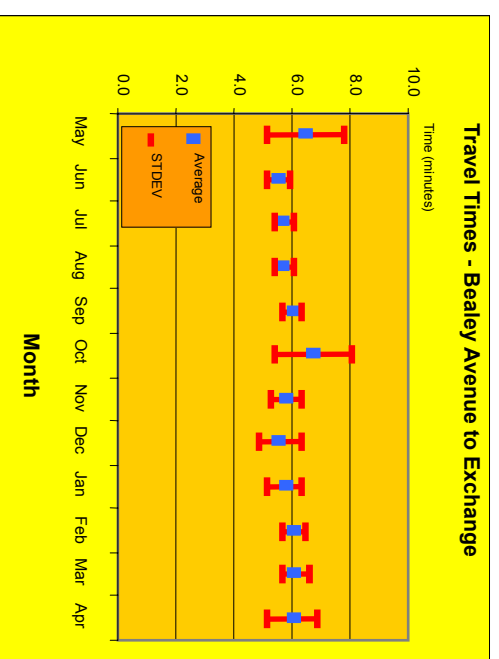
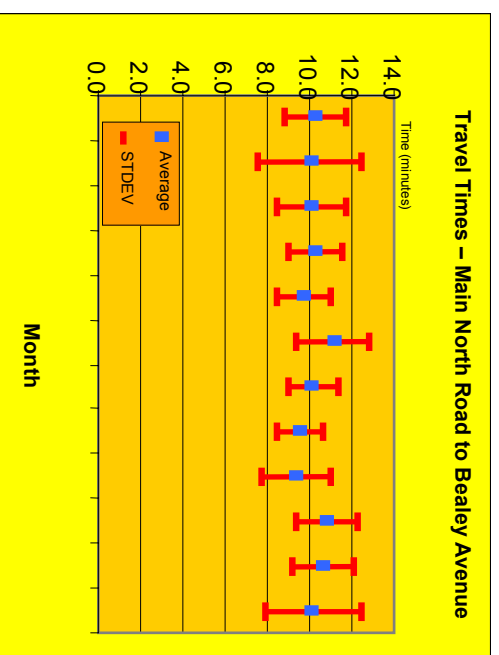


February and March review of section unreliability

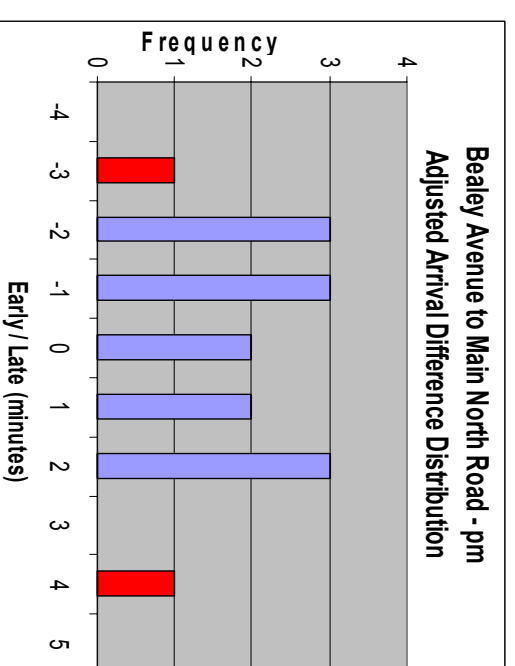
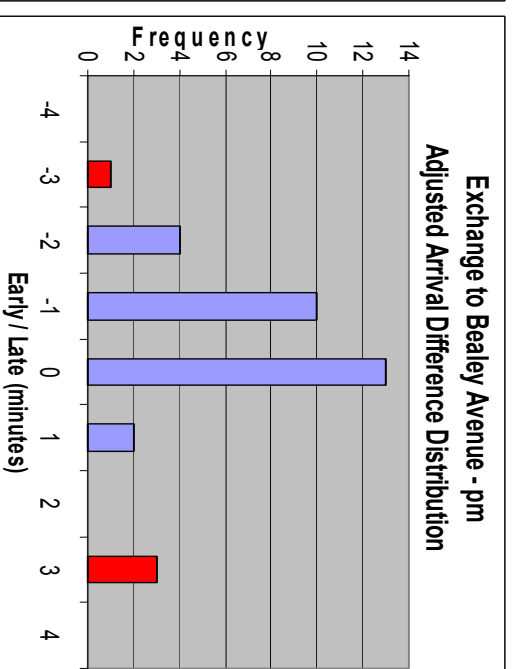
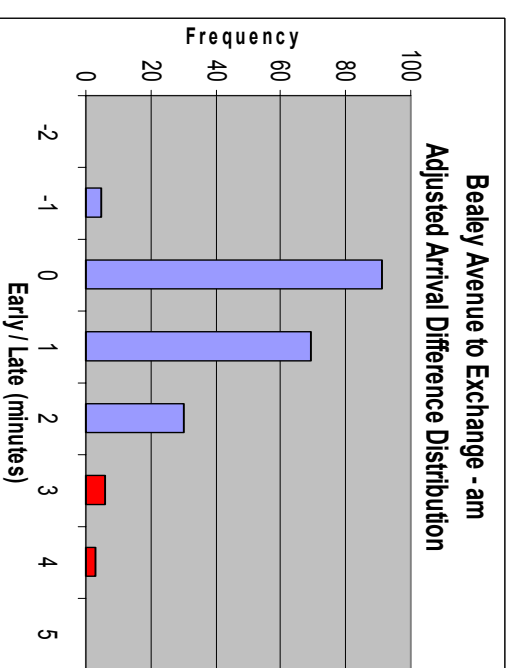
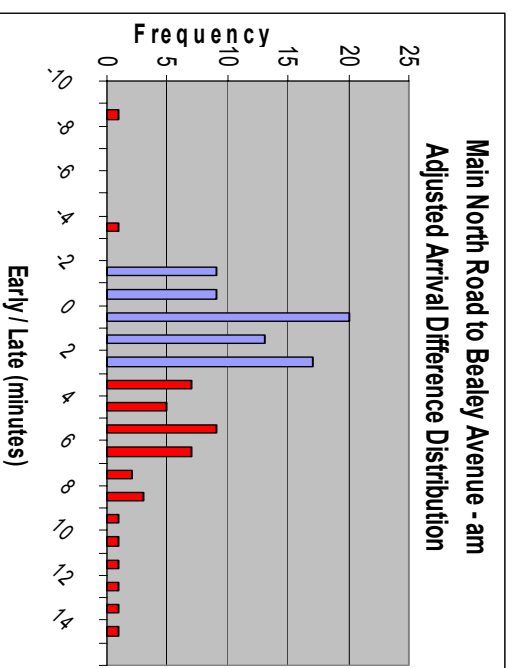


ANALYSIS DATA FOR MAIN NORTH ROAD TO / FROM BUS EXCHANGE

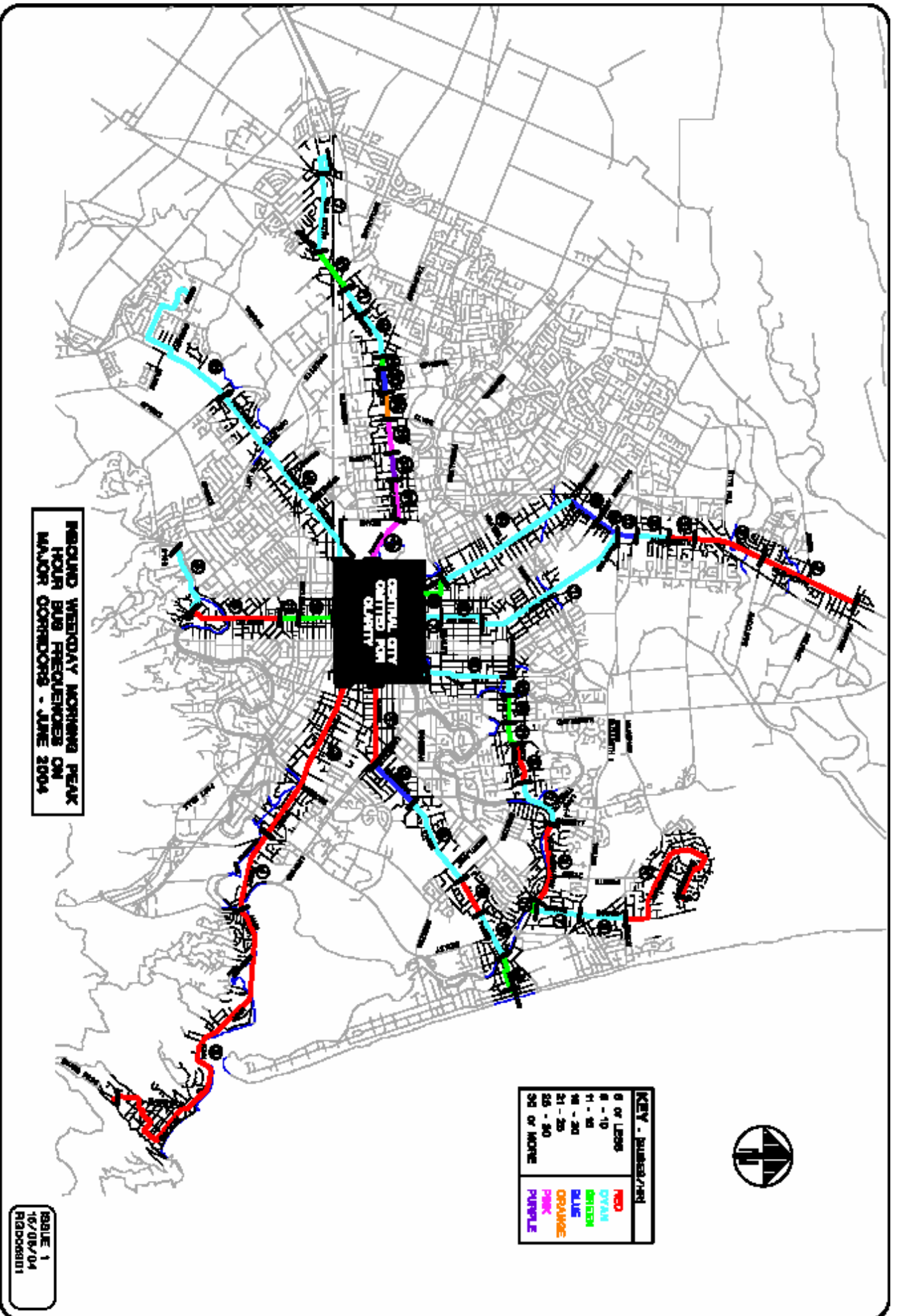
Annual sections review of monthly travel times and standard deviations from the average

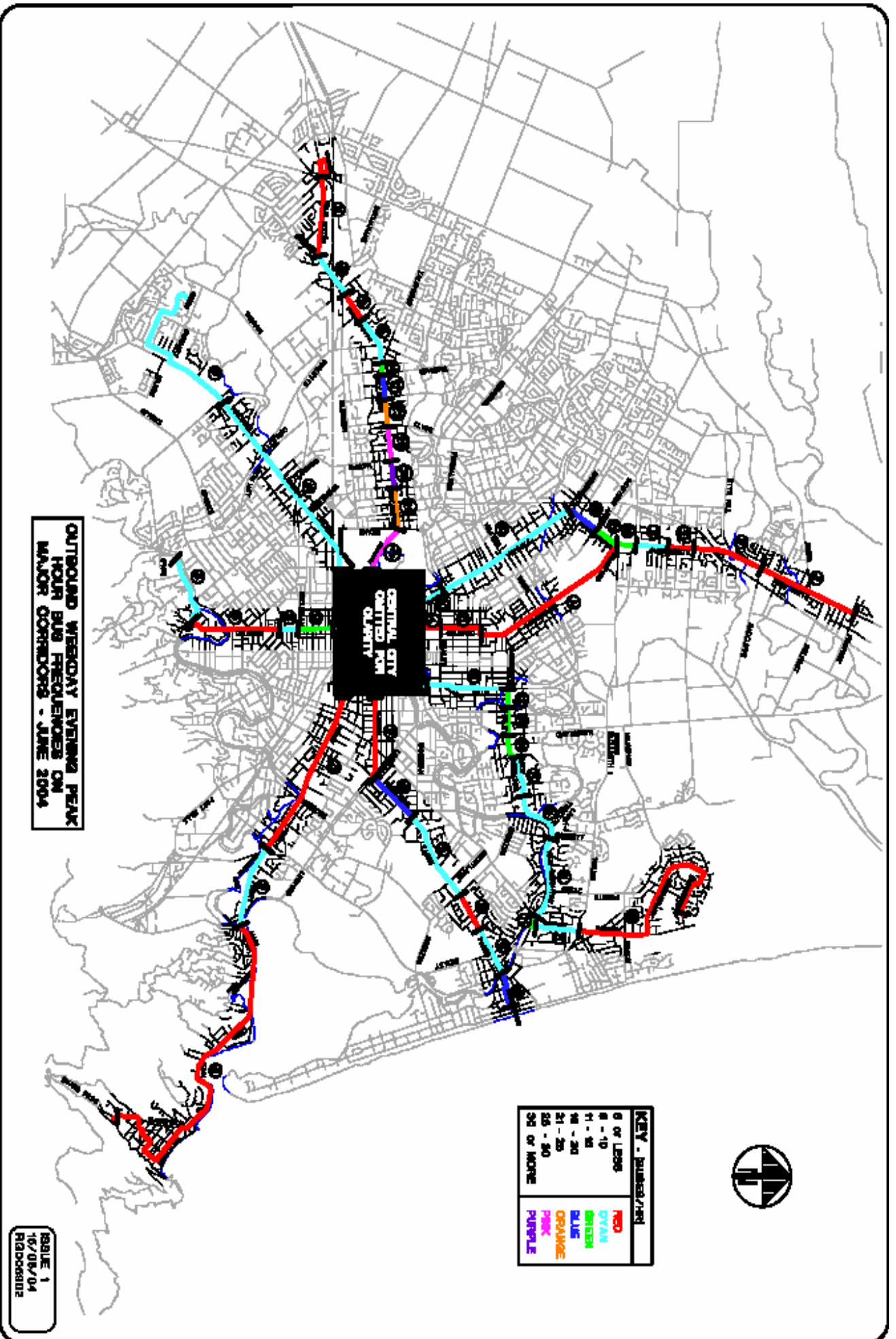


February and March review of section unreliability



APPENDIX 3
PEAK PERIOD CORRIDOR BUS FREQUENCIES





APPENDIX 4
MARKET RESEARCH REPORT
(prepared by The Field Connection Limited)

RESEARCH OBJECTIVE

The primary objective of this study was as follows:

- To gain an understanding of a variety of Christchurch road users' perceptions about bus priority measures and find out the best way to 'introduce' the development of these measures in Christchurch.

RESEARCH APPROACH

Qualitative research was the most appropriate methodology to adopt in order to fulfil the stated objectives.

Qualitative research is characteristically small-scale, intensive and unstructured and is concerned with an exploration of motivations, attitudes and behaviour rather than a measurement of the intensity or incidence of the experience.

Through the interaction of focus group members and the use of a range of facilitating and enabling techniques, group discussions provide a depth and breadth of understanding, providing information at both the rational and emotive levels.

RESEARCH SAMPLE AND METHODOLOGY

In total, four focus groups were conducted within the Christchurch market, structured as follows:

- Group 1** Aged between 16 – 35 years
Mix of motorists and cyclists
Spread of demographic profiles
50% male, 50% female
- Group 2** Aged 36 years plus
Mix of motorists and cyclists
Spread of demographic profiles
50% male, 50% female
- Group 3** Business owners / managers
Mix of industry categories
Mix of industry size
50% male, 50% female
- Group 4** Aged 36 years plus
Mix of pedestrians and bus users
Spread of demographic profiles
50% male, 50% female

Respondents for the focus groups were randomly recruited in-house, via telephone, by The Field Connections' team of qualitative recruiters.

A structured questionnaire was utilised as the survey tool.

The focus groups were conducted at The Field Connection's premises in Hereford St.

Each focus group had a duration of approximately 2 ½ hours.

An experienced qualitative director from The Field Connection moderated the focus groups.

Fieldwork was conducted between the 19th April - 7th May 2004.

SAMPLE PROFILE

GROUP 1

Number of respondents	8
Male	5
Female	3
Age	
18 – 24 years	3
25 – 35 years	5
Working	4
Non working	4
Occupation	
Mechanical Engineer	1
Public Servant – IRD	1
Courier Driver	1
Waitress / Student	1
Student	2
Housewife	1
Beneficiary	1
Income	
\$0 - \$15,000	4
\$30,001 - \$40,000	1
\$50,001 - \$70,000	1
Refused	2
Currently holding a driving license	
Yes	7
No	1
Currently drive a motor vehicle on any of the main arterial routes in Christchurch	
Yes	7
No	1
Main arterial routes used by motorists & bus users	
Riccarton Road, Papanui Road, Colombo Street	
Ferry Road, Lincoln Road, Hills Road,	
Marshlands Road and Worcester Street	
Frequency of driving on the main arterial routes	
Daily	3
5 times a week	1
Once a week	1
Once every 2 weeks	1

Never	2
Frequency of cycling on the main arterial routes in Christchurch	
5 times a week	1
Once a week	1
Do not currently cycle	6
Frequency of walking on main arterial routes when either simply going for a walk or as a shopper	
Daily	2
Twice a week	1
Once every 2 – 3 months	1
Less often	4
Frequency of using the Metro Bus System	
4 times a week	2
1 – 2 times a week	1
Once a week	1
Do not currently use	4
GROUP 2	
Number of respondents	9
Male	4
Female	5
Age	
36 – 44 years	4
45 - 54 years	2
55 – 64 years	1
65 plus years	2
Working	6
Non working	3
Occupation	
Professional Driver	1
Secretary	1
MAF Quarantine Officer	1
Professional Gardener	1
Clerk	1
Office Administration	1
Retired	2
Housewife	1
Income	
\$15,001 - \$30,000	3
\$40,001 - \$50,000	1
\$50,001 - \$70,000	3
Refused / Don't know	2
Currently holding a driving license	

Yes	7
No	2

Currently drive a motor vehicle on any of the main arterial routes in Christchurch

Yes	7
No	2

Main arterial routes used by motorists & bus users
 Riccarton Road, Papanui Road, Colombo Street
 Ferry Road, Lincoln Road, Hills Road,
 Marshlands Road and Worcester Street

Frequency of driving on the main arterial routes

Daily	3
3 – 4 times a week	1
Twice a week	1
Once a week	1
Once every 3 weeks	1
Never	2

Frequency of cycling on the main arterial routes

Twice a week	1
Do not currently cycle	8

Frequency of walking on the main arterial routes when either simply going for a walk or as a shopper

3 – 4 times per week	1
Twice a week	1
Once a week	2
Once every 3 months	1
Less often	4

Frequency of using the Metro Bus System

Daily	1
3 – 4 times a week	1
Once a fortnight	1
Twice a month	1
Do not currently use	5

GROUP 3

Number of respondents 7

Business owners located on the main arterial routes in Christchurch 7

Businesses located on:

Lincoln Road, Papanui Road, Marshlands Road
 Hills Road, Ferry Road, Riccarton Road,
 Colombo Road, Worcester Street

Business Type:	Number of Employees
Furniture manufacturer	35
Tyre company	5
Florist	4
Chemist	25
Spa Pools	5
Knitwear retail	20
Bakery	80 (5 in that branch)
GROUP 4	
Number of respondents	10
Male	5
Female	5
Age	
18 – 24 years	2
25 – 34 years	2
35 – 44 years	2
45 - 54 years	2
55 – 64 years	1
65 plus years	1
Working	5
Non working	5
Occupation	
University Tutor	1
Engineer	1
Brewery technician	1
Office Administration	1
Process Worker	1
Retired	1
Housewife	1
Non working	1
Student	2
Income	
\$0 - \$15,000	2
\$15,001 - \$30,000	3
\$30,001 - \$40,000	1
\$40,001 - \$50,000	1
\$70,001 - \$100,000	1
\$100,000 plus	2
Currently holding a driving license	
Yes	6
No	4
Currently drive a motor vehicle on any of the main arterial routes in Christchurch	
Yes	6

No 4

Main arterial routes used by motorists & bus users

Riccarton Road, Papanui Road, Colombo Street
Ferry Road, Lincoln Road, Hills Road,
Marshlands Road and Worcester Street

Frequency of driving on any of the main arterial routes

Daily	1
Twice a week	2
Once a week	3
Never	4

Frequency of cycling on the main arterial routes

Daily	1
Three times a week	1
Twice a week	2
Once a week	2
Do not currently cycle	4

Frequency of walking on the main arterial routes when either simply going for a walk or as a shopper

Daily	2
5 times a week	1
3 times a week	3
Twice a week	1
Once a week	1
Twice a month	1
Once a month	1

Frequency of using the Metro Bus System

3 – 4 times a week	1
Twice a week	3
Once a week	2
Once a month	1
Do not currently use	3

SUMMARY OF RESULTS

CURRENT PERCEPTIONS

Overall, market perception is that currently, traffic flows around Christchurch are generally good with the exception of peak hour traffic (i.e. between 7.30 a.m. and 9.00 a.m. and from 3.00 p.m. to 5.30 p.m.). Market consensus was that the impact of peak hour traffic was particularly bad on major routes such as the following:

- Papanui Road
- Riccarton Road
- Cranford Street / Main North Road
- QE11 Drive
- Johns Road

- Lincoln Road
- Marshlands Road
- Deans Avenue (weekends)
- Colombo Street
- Hagley Park environs beside Riccarton Road
- Ferry Road
- Sumner into the city

“Peak hours are diabolical! I had to come into Hereford St in early December and I left home at twenty to eight to be in town at 8.30. I just made it to where I had to be at 8.30 and I only live just outside the central city. On the trip, second gear was the highest gear I got into. Anywhere from 7.30 to quarter to nine when the majority of the city is travelling is bad, and the end of the day is just as bad”

“Generally it’s great apart from rush hours, when you’re in a hurry and so is everyone else”

“I have to use the car all the time because I’m self employed and I have clients all over the city. If I’m heading from Papanui, where I live, and over to Hoon Hay I avoid going before 9.00 because the traffic is diabolical, and if I leave at 9 a.m. I can get through far more quickly. I have no choice but to drive because I can’t take my gardening equipment with me on the bus”

Papanui Road and Riccarton Road were identified as being particularly problematic streets relative to traffic congestion at any given time.

“My husband drove down Riccarton Road the other day to get to an appointment there, the traffic was so bad he actually missed his appointment even though he left home in plenty of time!”

“I caught the bus from just off Riccarton Road at five past nine, and at 9.25 we arrived at the exchange. It is only meant to be a ten-minute journey according to the timetable and going down Riccarton Road meant it took double that – I could have walked quicker! The traffic was all backed up and people were just getting off and walking”

“I travel a lot and it can take me 35 to 40 minutes to get from Papanui Road to Riccarton, everyone is just diving around trying to find different ways to go. It’s mad at times”

“In general the traffic flows quite well, but it can get very congested by St Georges on Papanui Road, at certain times of day it gets really clogged up and you’re asking for trouble if you’re on the road at that time”

Comment was expressed that Fridays appeared to be a major problem at this point given the sheer quantity of vehicles travelling on Christchurch roads throughout the day and the effect this had on the flow of traffic. It was also felt that inclement weather increased the number of vehicles travelling on the road as people elected to travel by car rather than cycling or walking, and that this tended to exacerbate the problem of congested streets.

For proprietors of businesses that were situated on main arterial routes, the volume of traffic travelling along these routes was felt to impact negatively on the ease of access into and out of their premises for both staff and customers.

“We have a shop on Marshlands Road and trying to get out of there safely is impossible – you are taking your life in your hands. Even though it’s a 50km zone people are still travelling at 70km and you are asking for trouble trying to get out into the traffic, I find that the traffic light is the only thing that allows you to get out into the traffic from my shop”

“I have a factory on Ferry Road and trying to get out of there to head over to Redcliffs is impossible. I have to do a U turn and go back around because I can’t turn across the traffic”

In some instances these respondents attempted to identify alternative routes to and from their place of work in the mornings / evenings to avoid the perceived hassle of having to wait in a slow moving stream of traffic, which then added travel time to their journey.

“My partner has a business on Chaneys’ Corner off Marshland Road, and he avoids Marshland Road, particularly during the peak periods - the peak traffic there is much worse than it used to be 3 years ago”

There was a high degree of frustration expressed with what was perceived to be a worsening situation within the city, which respondents felt had led to peak times expanding out as the number of vehicles on the road increased, particularly, it was felt, over the last two years.

“I think the traffic is really getting worse – I’ve noticed the change especially over the last six months, there are more people using cars than there used to be”

“I think it’s definitely getting worse, and it seems to be population based, there are more people and more cars in Christchurch”

As demonstrated by the above verbatim, this was felt to be the result of a growing population and a higher percentage of vehicle ownership within families than in the past. Housing density was also felt to have increased within certain areas of the city – particularly Merivale and Ferry Road – and with the development of new subdivisions on the outskirts of the city such as Northwood and Aidanfield. Some respondents also highlighted the development of inner city hotel / apartment complexes as contributing towards traffic congestion.

“With all the new suburbs popping up, like Northwood and the ones in Prebbleton, the traffic has probably doubled going into town”

“It’s the density of housing in places like Rossall Street, you used to have the quarter acre section with the house and two cars and now you’ve got four or five townhouses with eight cars. It’s got very congested because of that. As the housing density increases so has the traffic”

“I wonder what will happen when the hotel complex goes in on the corner of Riccarton Road, because of all the extra traffic that will generate – staff and customers – where will they park?”

While the development of the ring road system was perceived to be a major benefit in assisting traffic flows, some respondents felt that roading development and traffic planning had not kept up sufficiently with the increased demand placed on the system by a higher volume of traffic as the population increased and the environs of Christchurch expanded. This feeling was particularly

evident within the business persons' group, where comment was expressed that there appeared to be no real evidence of a forward-thinking, proactive approach to traffic planning and decision making on the Council's behalf when considering how best to manage the traffic congestion issue.

"One thing I think that they have done right is the ring road, my staff all use them and its easy to get around"

"The roads into the city were designed for when the external boundaries of the city were closer in, but now the boundaries have gone past that"

"I think it shows a considerable lack of forward planning, it's the inability of decision making bodies to deal with the future. It's too late to do a lot of things that should have been done when the opportunity was available. To be honest I think they are inept, I understand that they (Council) are meant to be authorities in their field and I don't see any evidence of that"

"They need to plan ahead, see what the traffic will be and what the projected housing density will be, and put spokes in the wheel to support that. It's all commonsense really"

"The infrastructure has not kept up with the expansion of the population in the city. The environs are expanding at a horrendous rate and there hasn't been any evident development in the infrastructure"

"The unfortunate thing is that our civic fathers don't think enough ahead, they get an idea and think 'oh that's great' and they just move on it without considering the overall picture"

"Surely planners should be talking to roading engineers but it doesn't seem to happen. I do feel that sometimes they don't talk to each other and there is commercial pressure placed on the planners and that sometimes the current roading situation just isn't taken into consideration"

Some residents and business proprietors within the Merivale area voiced concerns relating to the development of environmental / traffic measures which were perceived to hinder rather than assist the flow of traffic, particularly to Merivale Mall. The development of 'calming zones' within surrounding side streets were perceived by one respondent as 'stress zones' given the negative impact these were considered to have on traffic flow. The narrowing of some streets, contrary to the increase in traffic flow within the Merivale area, and the presence of car parking on each side of the road were further felt to complicate the process of negotiating a vehicle through the streets in a safe and efficient manner.

"I wonder why the Council narrows the streets when the infill housing comes along, houses that will hold a family of five, four of which will probably have cars, and yet they narrow the streets and create calming zones despite the fact that there is a greater volume of traffic. Those calm zones, I think they are stress zones actually. Around Merivale Mall the street is so narrow that only one car can get through, it's one lane because of the car parking on both sides – surely when it's congested people would make decisions to ease traffic flow rather than hinder it?"

"In Aikmans Road they have taken out the equivalent of a bus length away from the road and planted trees on it, it's all no parking because you are down to two very narrow lanes and yet that's the road that feeds the car park to the mall! It's just diabolical. They could have given it to a turning lane, the space, yet they chose to plant bloody trees!"

As demonstrated by the above verbatims, some respondents are frustrated by what they see as the introduction of traffic measures which do not appear to have a visible benefit in terms of creating an improved traffic flow. While the enhancement of streets via plantings and other environmental measures was considered to have a positive aesthetic benefit, it was strongly felt that this should not be done at the expense of traffic flows, particularly in areas with a high volume of traffic.

The reduction of roadside car parking and the creation of speed bumps and low speed zones – particularly within high volume areas such as around shopping malls – was perceived by some to assist in increasing pedestrian safety by slowing the traffic.

“All of the things they do are to slow down traffic round the malls and the high density areas, I think it’s for the pedestrians really, to slow down the traffic and make it safer for them”

Some respondents questioned the rationale behind the decision making processes relative to traffic planning, with the perception being expressed that in some instances decisions appeared to be politically motivated and driven by the needs / preferences of Residents’ Associations without due consideration being given to traffic needs.

“The residents groups exert pressure because they want the traffic cut down, and I wonder if the Council put these things in for that reason, but doesn’t actually realise that they are potentially causing a hazard. An accident could easily happen because they are unsafe, they have a legal requirement to keep the traffic flowing”

“I have always thought that the calming zones are there to deter trucks because the residents don’t like them to come along their road”

“In Aynsley Terrace they have created those calming things in a small area, there are almost 45 degree turns in the road to slow the traffic down, and if a truck went through and a car was parked there he would almost certainly hit the car. There is no room there at all. It’s very nicely done there, with the plantings and that, but you have to drive around it and swerve!”

“Is there an element in the City Council that just wants pretty streets at the expense of the traffic flow?”

Currently there appears to be a gap within understanding and communication from the Christchurch City Council, particularly to businesses, as to the logic and rationale behind the decisions that are made relative to physical changes to city streets. As can be noted above, the view is held that there is an element within the Council that places priority on the environmental appearance of streets rather than the improvement of current traffic flows.

For bus users, there was some frustration expressed relating to the impact of peak traffic on the timeliness – or otherwise – of bus services. The Orbiter service was also felt to be affected by peak traffic in not delivering to its 10-minute frequency when roads were congested.

In some cases respondents elected to travel by another means of transport such as bike, car or walking given the perceived inconsistencies of the bus timetabling system within these time frames.

“The bus takes too long which is why I travel by bike in rush hour, the traffic slows the bus up and they are stopping at every stop, so I tend to bike. It

can be a bit of a joke with the timetables, I caught the bus the other day because my bike had a puncture, but when I went to catch the 8.20 bus it had left early!”

“They fill up the bus and it stops at every stop, then while its stopped more cars go past and then you have to wait for some nice person who will let the bus into the traffic. I used to take the bus and now I bike, and it took me the same time in peak hours to bike! When you’re stuck in a bus for ages you wonder if it would have been quicker to take the car”

“I find that when I want to go somewhere during the rush hour times that I have to take the car or bike because the bus won’t be guaranteed to have you where you need to go on time”

“I catch the bus home at night and start early in the morning. Even at 7.00 there is a build up in traffic, I have been catching the Orbiter home but I’ve stopped getting that because the buses are so late with the build up of traffic round Riccarton Road – they are supposed to come every 10 minutes but at the moment it’s half an hour apart. Then sometimes you get 3 buses coming at once so there has obviously been a hold up somewhere. When you wait half an hour for a ten minute service you get fairly ratty – that’s time I could have spent at work”

Currently it was perceived that some high use arterial routes were not equipped to take the volume of traffic they were processing, and that this caused some problems for professional drivers such as couriers, taxi / bus drivers, and other delivery vehicles attempting to negotiate around the central city each day.

“Colombo Street is a nightmare as it is, with buses and taxis lined up in the loading zone where you need to park to do your pickups, then the buses come along and beep at you to get out of the way because you have had to double park! I’m just trying to do a job, just like they are”

“In town there aren’t that many alleyways you can duck up to do your deliveries because they have all been blocked off now, and when you have all these couriers and service vehicles trying to deliver to restaurants and bars and shops.... You get people who come into town and think ‘oh I’ll just park on the loading zone, I’m only ducking into the shop’ because there is no parking anywhere nearby, and then they turn out to be much longer and you can’t get into the loading zone!”

Cyclists and pedestrians identified some safety issues relating to the difficulty they perceived in negotiating safely around the city given the volumes of traffic they encountered. In some cases, this acted as a deterrent to cycling or walking – respondents instead felt safer travelling by car. Some respondents indicated that they attempted to cycle or walk at times when the roads were perceived to be less congested and therefore safer, but acknowledged that this was not always possible, particularly when travelling to or from their place of work or to appointments / other commitments at set times of the day.

“I feel unsafe cycling round Christchurch because of the congestion. It’s terrible, you find that drivers will swear at you, cut you off – so I won’t do it. I will just take the car instead”

“I used to bike down the bottom end of Colombo Street and it was so dangerous. With the parked cars, me biking, and then with the traffic being so slow I’d have to dodge around the cars in the traffic”

“I have a friend who got hit biking to work down Blenheim Road and had his bike crushed by a truck – he got it back and had it fixed, then a week later it happened again”

“I will sometimes cycle to work, Blenheim Road has a cycle lane and it’s completely nuts – you get a truck and semi trailer going past at 60kms and it’s pretty scary”

“I walk, and I find that some streets, like Matipo Street, are very dangerous. There are no traffic lights you can cross at and there is only one zebra crossing which drivers don’t really take much notice of even when you are halfway across it, and when I am standing there with four children they will just whiz past then I have to rush to get across the other side”

At this point in time, the market is actively trying to take alternate routes in order to escape the perceived ‘hassle’ of having to wait in traffic. However it is perceived that this will only have short-term gains given that other road users are also attempting to do the same – thus simply shifting the traffic congestion to other streets rather than solving the problem per se.

“You try and find a different way to travel and then everyone else finds it too, and it’s just as bad!”

“I finished up taking a lot of the back streets to work so I never really got involved in the traffic flow”

“I used to bike, and I went up all the back streets but I still have to travel up Cranford Street so there was no getting away from it”

THE IDEAL

Respondents were asked to develop their ideal scenario to deal with traffic flows and congestion issues within Christchurch. The following is a list of elements that the market perceives would assist in addressing some of the issues that are currently perceived to exist.

Overall there was a strong preference for a holistic plan to be developed and effectively communicated, encompassing a variety of options and applications. It was generally perceived that in order to effectively address the issue of traffic congestion with the city that any solutions formulated needed to consider the wider implications for all road users both currently and into the future, and that there appeared to be no singular solution at this point in time.

“I don’t think that one solution is necessarily going to solve all the problems”

“If we want to make the traffic situation better it’s not just a case of looking at one solution. There is rail, bus, overpasses, all sorts of things – but of course it all costs. We need to look at the big picture really”

Several solutions were mooted by respondents:

- Introduction of toll roads / lane swapping to accommodate inbound traffic in the morning, and outbound in the evening. However there was some concern relating to road user behaviour should this occur.

“Maybe they could consider changing the lanes around to cope with the traffic, so in the morning take one of the outgoing lanes and turn it into an incoming lane to take the pressure off the traffic, then have it revert back at night. It would be a lot cheaper than trying to put in another lane”

“Maybe they could have a toll road people could use, get the private sector involved”

“Have some roads where they turn it into two or three lanes going in in the morning and one out, then reverse it in the evening, so the traffic could flow quicker”

“I don’t know how easy it would be for some people to pick this up – you would have to publicise it a lot and have signs and all that sort of thing. Some elderly people might get confused by it and then there might be an accident”

- Development of overpasses / underpasses particularly within problem areas / main routes

“We are one of the only cities in the world that doesn’t make use of flyovers over the arterial routes to improve the traffic. A lot of major cities have flyovers where you can travel over the city and hardly have to deal with any traffic lights at all”

“I think they need to be cleverer in intersections – overseas you can go over or under an intersection and the traffic flows well, it gives you options”

“Overbridges or underpasses, preferably underpasses because then you can’t see them, whereas overbridges are quite intrusive”

- Promotion of car-pooling as an alternative. However there were some doubts as to whether this would alter a large proportion of the market’s behaviour given changes within work practices / longer working days requiring independent travel, and the perceived ‘hassle’ involved in waiting for others to finish work or indeed travelling to their residences to pick up / drop off passengers. It was also perceived that there would need to be some incentive for this behaviour to occur – i.e. parking reductions for car-pooling into the city. Market perception is that promotion of this concept could assist in altering some road users’ behaviour but on a smaller scale, as part of the ‘big picture’ for the future.

“It’s the work ethic and expectation now, people stay till the work is done so they don’t know when they will be leaving, therefore they take their own car. It can be too hard for some people to merge their travel with others because they need the independence to be able to do that extra bit of work”

“For me, if I need a ride home I have to hang around till my friend finishes and that’s half an hour’s wait for me”

“There will be a proportion of people who, if given enough incentive, will use an alternative like car pooling”

- Rates reductions for businesses encouraging staff to work outside of ‘normal’ hours – thus reducing peak time traffic on the roads.

General perception was that this would be a beneficial concept for businesses that were able to structure their working hours in this way – (such as factories or enterprises that were able to

operate on a shift work basis) – but that the retail sector would find it necessary to observe standard opening hours (i.e. 8.30 a.m. to 5.30 p.m.) to service consumer demand and avoid potentially inconveniencing their customer base.

“Perhaps they could offer incentives for people to work outside of normal hours, offer a reduction in rates for them because they aren’t travelling in peak hours and causing congestion”

“We could solve the problem by having half of our staff start at 6.30 and half at 10.30, we would be able to do that”

“We don’t have the incentive to do that, but if the Council gave us an incentive we could rotate our hours around for our shift workers. Maybe a tax rebate or free parking in town or something as an incentive”

“We have a retail operation so we have to be open for the public, so it wouldn’t really be an option for us”

- Developing bus hubs in suburban areas with a ‘park and ride’ system into and around the city.

It was perceived that free or reduced car parking rates offered as part of the ‘park and ride’ system could assist in changing behaviour. However there is an expectation that bus services operating in this manner would run to their timetables to assist in promoting uptake of this service, as currently there are some frustrations evident with some bus services not operating in a timely manner because of peak hour traffic congestion. But respondents perceive that this measure could potentially reduce the number of vehicles commuting into and out of the central city, therefore creating a concurrent reduction in congestion and enabling bus services to reach their destinations on time as a result.

“Having a park and ride system in the suburbs where you could park for free or for a nominal fee and then get a bus ride in would be good, then you don’t have to worry about sitting in traffic for an hour and you can have an easy ride in”

“If you normally pay \$7 or \$8 for all day parking and the park and ride is \$3 or \$4, it will save you money, plus reduce the time of getting into town by car in the peak periods”

“One place in the States I went to had parking precincts where you could park and get a free bus service which came every 10 minutes and could drop you directly in town”

“If I knew that there was a car park in say, Papanui, where I could park my car then catch a bus into the city that was on time, I’d use that service”

- Private enterprise working alongside the Council to introduce alternative methods of transport such as rail / tube

“Maybe they could look at a partnership with a service provider for a train system, to spread the cost a bit because that would be expensive. But it is working in Auckland from what I can see”

“The train service they have in Auckland is good, where you can park out in a suburb and then catch a train which takes you into the central city”

“Is there another way of doing it – other cities have subways and all that sort of thing. I think it would be better to look at introducing an alternative form of public transport like that. Plus, it is not as if you are introducing another vehicle onto the road because they would have their own place to travel”

- Allowing traffic to turn only into the flow of traffic from side streets – i.e. making some main routes left / right turn only / developing one way roads to assist with traffic flow

“Perhaps they need to alter some of the roads they have got, say Papanui Road or Marshland Road, block off the side streets by making them left turn or right hand turn only so people go with the traffic flow”

“Maybe they should look at developing the one way system more effectively – in the States they have one route going into town and one out of town that are both one way only, the difference in kilometres is minimal and the traffic flow was superb”

“There are too many streets going into the main arterial routes when the streets are full of traffic already, so you get all the extra cars coming in from all the side roads when the roads are already full”

- Roads built in the future to have two lanes to accommodate traffic flows / continued development of ring road system

“To me, surely every time they build a road it should be two lanes. When they develop the ring road they should make sure that it is two lanes on each side – it is illogical to me to have only one lane for traffic travelling on a ring road”

- Future mall development in outer suburbs with new arterial routes developed to cope with them
- Increasing width of roads on primary / ring routes
- Removal of car parking from major arterial routes to improve speed of traffic / develop car parks around malls

“If you took out the car parking on the main roads it would give two lanes each way which would give a faster flow of traffic, you could also make it a clearway in peak times. That’s why some areas – like the malls, for example – have such huge car parks because they know there is a parking problem and they want to get the cars off the road, especially in the busy areas”

- Remove car parking from one way streets to make double lanes – however when car parks are removed they must be supported by parking alternatives elsewhere

“Maybe they should get rid of the parking on the one way streets and make it two lanes on each side, that would give four lanes and speed up the traffic. But then you have got to have the appropriate parking somewhere for people”

- ‘Clear Zones’ within Papanui / Riccarton between 6 – 10 a.m. and 4 – 6 p.m.

“That might be a good solution for some of the busy roads, have a clearway. They do that in Vancouver, if you park in the clearway between 4 and 6 you are towed, no exceptions. That’s the measure that ensures you don’t park there”

- Improvement of the public transport system – greater frequency / comfort, extension of services i.e. across town routes

Some respondents expressed the perception that if the bus service operated more frequently, they would consider utilising buses rather than driving within the city. For some, as previously stated, there was a degree of distrust relating to the timeliness of the bus system, created by past experiences when the service had run late and impacted on prior appointments or arrival at work on time.

“People I know who don’t use the bus don’t because they don’t know if it will actually get them to where they need to go in time. My bus stop is 100 metres from my house and although it says a bus will be along in ten minutes, twenty minutes later I can still be sitting there waiting for it. That’s why I don’t use it that often”

Some issues were also raised regarding the congestion within buses during peak periods, which was problematic for respondents from a comfort perspective and was also felt to impact on timeliness of some services.

“They need better public transport – I take my car, I used to bus but I always had to stand, there was never a spare seat. So they need a better service, more buses, more timeliness, so it’s every ten minutes – then why would people choose to drive?”

Comment was also expressed that the lack of across town routes tended to deter some potential users from taking the bus given the need to travel into and out of the city via the Exchange in order to get from one side of the city to the other.

“I live in Redwood and I work in Hornby, but there’s no bus route for me to get there without having to travel into town and transfer. It doesn’t cater for people like me who want to travel around the outer suburbs”

For some respondents there were some issues relating to a poor perception of the people who used the bus system, and this was felt to have some bearing on the decision to utilise another mode of transport. This attitude was particularly evident within the business community.

“There is the perception that if you travel on the bus that you can’t afford a car – a lot of people on the bus don’t dress that well, they don’t look like they are in the top socio-economic of society. You just find that managers in suits don’t seem to use the bus!”

At this point in time it was perceived that the Council was focusing primarily on traffic ‘meaning cars’ rather than taking a holistic look at traffic control within the city environs, the roading system, the types of vehicles utilised and cross town routes for buses. The market ideally desires to see a long term, wide ranging view to be taken towards future traffic planning and traffic control measures within the city. Currently respondents perceive that the management of traffic flow and related issues is a little piecemeal and reactive, focusing on the short rather than long-term picture of the city. However, as previously stated, the market sees a multi-faceted approach as being the best methodology to adopt in terms of planning for the future.

“It’s a matter of the Council saying ‘What can we do now that’s going to facilitate roading in the long term time frame’, we don’t want to get like Auckland. Be proactive and actually plan ahead, don’t be short sighted – think ahead to 20 years time and ask ‘What are we going to do that people will thank us for?’”

“People still need their cars, so its not a matter of ‘either / or, car or bus’. But it’s about providing solutions that are convenient, reasonably cheap and practical. It’s about finding a solution for people”

Within the business group, there was a strong desire for more of a consultative process to take place between business enterprise, residents and the Council at the point where issues are identified within their local area, to facilitate constructive discussion and enable local residents / business owners to input into the decision making process.

“With all the stresses and strains happening now with the traffic, everyone is waiting for something to happen. We are all frustrated by it but we haven’t heard anything from the Council about what is going to happen”

“I have been here in Merivale with my business and as a resident for seven years and I have never been consulted about any traffic changes”

Comment was also expressed that it could be beneficial for the Council to consider the example of overseas models relative to traffic flow, to identify possible alternatives and assess the viability of the processes / strategies implemented in cities overseas and their success in solving traffic issues, vis-à-vis the current status quo within Christchurch.

“We are still pretty young as a transport system, so are there other countries or cities that have done more and see the pros and cons of doing what they’ve done? Maybe that would give us some good ideas about attacking it”

“I think that the Council has obligations to make decisions and show leadership by first doing homework offshore to see if it works, if it is proven to be successful”

BUS PRIORITY LANES

This measure was freely mentioned by group participants during the course of discussion as a possible solution to traffic congestion.

It was generally perceived that the introduction of bus priority lanes on the more congested streets would provide a greater incentive for non-users to consider public transport as a viable alternative given the benefits this system could offer relating to improved timeliness and frequency, while also reducing the number of cars travelling around the city.

“I would think it would seriously make people think about taking the bus, especially if it was down the likes of Papanui Road and the bus was smoking through the piles of traffic, and the same through Riccarton Road. You could easily use it to good effect, it’s all education, getting people out of the car and onto the bus”

Respondents identified the cost savings gained in travelling via bus as opposed to the costs of travelling by vehicle (both in fuel and parking fees) but felt that this benefit was negated if the bus

system was not operating in a timely or reliable manner, or if the congestion on the bus was such that the journey was uncomfortable / unpleasant. It was perceived that in order to present this option as a real alternative, that the volume of buses currently operating would need to be increased in order to alleviate current congestion on the buses at peak times, and the timeliness of the bus service would have to be such that it could be relied upon particularly for users travelling to and from their place of work.

“They need priority bus routes so people can see it’s quicker and cheaper to travel by bus than by car, so then you get less cars. But they need to address the problem of overcrowding on buses too, perhaps then it would allow buses to run to their timetables”

“Maybe a designated bus only lane has a lot of merit, because if people knew that the bus was on time every 10 minutes and it was going to get you where you needed to go as efficiently as possible, then that would be the incentive for people to use the bus”

The major strengths of this initiative were perceived to be:

- Improved timeliness – less ‘hassle’ particularly when travelling into town
- A potential increase in bus users (as stated above) given the advantages of the service
- A concurrent decrease in the number of vehicles travelling at peak times
- Assisting with traffic flows particularly in ‘rush hour’ traffic
- Directness – less delays caused by bus drivers having to pull in and out of traffic

“It would be much more practical, the buses could just drive to their stop, pull in, let off their passengers and then drive away again – no need to wait for the traffic to let them in”

“It would let the bus go through without being held up by other traffic, and the reverse, cars won’t get held up by the bus stopping every five minutes”

“I’d be more inclined to use it when I was going into town – it’s not nice having to drive around looking for car parks”

“It would be good if there was one lane specifically for buses that they could stay in so that the cars can just whiz past them without having to negotiate around them, it would speed up the traffic for both”

Within the business group, respondents held the view that the population within the city was not necessarily large enough to support the introduction of bus lanes. This market segment displayed a high degree of cynicism as to the effectiveness of bus lanes/ bus only lanes for the future, which was initially prompted by considerable gaps in knowledge relating to bus patronage figures and projected growth of the public transport system.

“I feel that these wouldn’t be utilised to their fullest, therefore why have them?”

“Really they have to get more people on the buses first, I just don’t think that there would be enough people on the buses to justify them having their own lane”

“If we want traffic off the road, can’t we do something else – like rail? Who wants buses – who uses them anymore, they are old fashioned”

“It’s a big punt in a city as small as Christchurch – it’s not like London”

“I personally think that we would need humongous education just to get people on buses in the first place – we are a very independent nation of people who are used to travelling by car”

This market segment would require further information to be disseminated as to the proportion of bus users and growth of the public transport system in order to actively see the proposed benefits of this type of service. Currently there is a high degree of scepticism as to the benefits – if any – of introducing this type of initiative on a broader scale, coupled with a low image held of both the bus service and indeed the users of the system.

While this group was aware of the initiatives implemented in Colombo Street and Moorhouse Avenue relative to bus lanes, they did not see any real benefit in this for road users given the perceptions described previously and expressed within the following verbatims.

“It (bus lane) doesn’t get used that often because there aren’t that many buses. I don’t know that I have even seen a taxi over that side of town, and yet 50% of the road is taken up by it”

“If the bus came every three minutes or something it would have a purpose, you would have an argument, because they would be there all the time”

In order for this concept to be fully accepted by this market segment, it would be The Field Connection’s recommendation that the business case surrounding the benefits, value proposition, increased routes, frequency and patronage figures would need to be understood by business people in order for acceptance of the initiative prior to its implementation. There is a strong feeling that if capital expenditure were involved in the implementation of the concept, that the value proposition relative to the proposed benefits offered is made clear at the outset of the planning / consultative phase before changes physically occur.

“They have to prove that the strategy is going to work, because it’s our money”

“The benefits of this have to be sold to us – at the moment it seems that there don’t seem to be enough benefits to justify the expenditure. If the initiatives are logical and worthwhile it’s not a problem, but we don’t see them as worthwhile”

The major weaknesses of this initiative from the market perspective were perceived to be:

- The potential for ‘chaos’ as the measure is installed on city streets

“I really think that it would be massive chaos while they were installing it, it would really slow the traffic down more for a while”

- Potential problems relative to bus breakdowns while travelling on the bus priority lane
- The requirement for an attitudinal change within the Christchurch public to view this measure as a viable alternative to vehicular transport

“I think that you will get people who will see it as a waste of time, not see the point of it because they don’t use the bus”

“It’s looking at the overall picture, you can’t just say that you want to cut the cars down because realistically people are still going to want to drive and the cars have to go somewhere”

- Retailers on the main roads would not be happy at losing car parking given the potential for decrease in patronage. However it was generally perceived that appropriate education as to the benefits offered by the new initiative relative to improving congestion, along with the provision of appropriate alternatives for parking by the Council, in areas around the arterial route, would assist in alleviating retailers’ concerns in this area.

“Taking cars away from parking areas like on Riccarton Road would be unpopular with business people because they are relying on people using these parks to use their businesses. If they did that they would have to offer an alternative to accommodate that”

“You are going to get retailers who won’t be happy because they lose parking spaces outside their shops, they’d be up in arms. I suppose it’s a bit of a goodwill thing with the retailers and the Council, they would need to have a discussion and try to identify places nearby for parking, see if a concession could be offered to shoppers and retailers for that perhaps”

- Bus priority lanes have the potential to slow the rest of the traffic down if one car lane only
- Bus routes currently do not cater for across town journeys (with the exception of the Orbiter) which is problematic from a user perspective. Expansion of routes is desirable from a user perspective in order to increase uptake of bus patronage.

TERMINOLOGY

The following terminology that is utilised by both the Christchurch City Council and ECAN was explored relative to market understanding within each focus group.

Overall, it was very apparent during the course of the focus groups that there was a lack of understanding and clarity as to what the terminology meant in real terms – most respondents were guessing.

Bus Priority Measures

Both residents and business people were not particularly clear as to exactly what this term defined.

“Give way to buses – they have the right of way”

“I’d need an explanation”

“Something to encourage people to use the bus”

“Certain areas with lines on the road where the buses are allowed to go – like Colombo Street”

“A policy, for sure”

“A step to try and change the emphasis from cars to public transport”

"The bus has some priority somewhere, with lights or through the bus lane"

Bus Lanes

"It's a priority system, surely?"

"A lane for buses only"

"A lane dedicated to buses, whether at certain hours of the day or full time"

"I'd say it was for all buses – travelling buses, tour buses, Red Buses"

"It's where the buses go!"

"It's only for buses"

Bus Only Lane

There was a degree of confusion as to the difference – if any – between a bus lane and a bus only lane as the following verbatims demonstrate.

"I'd say they were both the same thing"

"I would think that these terms (bus lane and bus only lane) would get easily confused"

"It's the same thing, it's just making it clearer I guess"

"There is no real difference – just a couple of extra words"

"More paint on the road that we have to pay for"

"Is it for all buses? What about shuttle buses, are they allowed?"

Priority Vehicle Lanes

"It suggests that some vehicles would get a higher rating up the scale than other things"

"Would it mean rapid response vehicles? Ambulances, fire, police – transport that has got to get there first?"

"It's not defined enough – it could mean anything"

"It depends on your interpretation - you could define yourself as a priority if you were running late for a meeting"

"Available for people who can afford it – like a toll booth thing"

Public Transport Measures

"That one might need a bit of explaining"

"A rule for public transport"

“A policy”

“Political pontificating!”

“You talk about everything when you talk about ‘public’ – so maybe then that would incorporate people walking and cycling too. Then it gets a bit fuzzy”

“It depends on what you mean by measure – I mean, what’s that?”

“It would deal with forms of shared transport”

“Ways to create public transport”

Public Transport

“Where you and other people travel on the same thing”

“It’s about a group – more than one person”

“In Christchurch it’s buses, in larger cities its subways, trains, buses, boats”

“Provided by the state to the people”

“I think of buses, not me in my car going into town”

“A communal vehicle carrying passengers”

“Discretionary transport available for users at their choice for a fee”

Clearway

“Somewhere you can’t park within certain hours”

“Something that has to be clear at all times, say in front of a roller door or something, or an area where no one is allowed to park within a certain time or hours”

“No parking at designated times”

“A place that you have to keep clear, not have anything on it within certain times – you can’t park or stop”

“A place where service vehicles park”

“Somewhere that is clear within rush hours”

Metro

Perceptions varied as to the meaning of this term – some respondents identified the term as the brand name of Christchurch’s bus service while others saw Metro as a more generic term encompassing the city per se (i.e. ‘metropolitan’) or other forms of transport such as the underground.

“Bus services – the bus has ‘Metro’ on it”

"I think it's a brand name, there is 'Metro Info' which is to do with the buses"

"It's been coined by the Council as a brand name under the one banner for all the different bus services"

"I associate it with the Metro card that Ecan puts out – and it's also the Christchurch bus service"

"It makes me think of the lady on the posters with her hand up holding the tickets, the blonde lady (Metro Mandy)"

"It's pretty broad"

"It means the centre of town for me"

"It's just short for metropolitan"

"It sounds like the underground, isn't that what they call it in the UK?"

"It means transport for me – public transport"

ON ROAD PUBLIC TRANSPORT MEASURES

Respondents in each focus group were shown a PowerPoint graphic of each concept and presented with a written description of the concepts provided by the Christchurch City Council relative to Bus Lanes, Bus Only Lanes and Bus Signals.

Respondents were shown each type of graphic and concept sheet in isolation in order to gauge their thoughts and feelings.

Bus Lane

Respondents were firstly shown a PowerPoint Graphic and written concept sheet of a Bus Lane currently in use in Colombo Street.

This concept was generally well regarded by most respondents with the preference being expressed for a lane that was 4.2 metres wide to enable buses to overtake cycles safely without the need to change lanes. It was also perceived that the wider lane would be safer when accommodating cycles, taxis and buses travelling within the lane.

"With the lane being 3 metres wide, there is a problem if the bus stops in the lane. Where would the cyclists go? They are forced to go around on the outside and be in an awkward situation having to go into the traffic stream. 4.2 metres would alleviate some of the problems"

"If it's 4.2 metres rather than 3 metres wide, that would be fine – there is room for taxis and bikes"

The suggestion was also made that it could be beneficial to consider redirecting cyclists away from bus lanes on major routes in peak periods by providing a clearly marked alternative route. This was felt to have the advantage of providing a safer and less congested route for cyclists whilst also reducing the potential for accidents resulting from uncertainty over road user behaviour in and around the bus lane.

“I guess that the city really is trying to promote cycling and so it would be cool to give them another route to go on, a parallel route so it’s safer for them (cyclists)”

“There are a lot of cyclists travelling into town down the arterial routes, so it would be good to provide a close alternative route for them to travel on”

As previously stated, perceived benefits centred around the ability for buses, cyclists and taxis to be separated from the main body of traffic and the advantage this would have in expediting traffic flow. It was generally felt that this lane would be best utilised only within peak hours (i.e. between 7.00 – 9.00 a.m. and 3.00 – 5.30 p.m.) and in between would revert back to ‘normal’ road status.

“It’s a good start – that there is a demarcation for taxis, buses and cyclists away from the other traffic”

“It would give the taxis the opportunity to go a little bit quicker, so that would help in moving more people around the city”

“It would be more pleasant with buses not trying to cut in and out, it would keep the traffic flow going”

Some respondents perceived that it would be more beneficial to consider introducing longer rather than shorter bus lanes to enable buses particularly to gain a greater benefit in moving through the traffic during peak periods as opposed to a ‘stop – start’ movement created when negotiating out of the bus lane into the flow of traffic. Specifically, Riccarton, Papanui and Ferry Roads were felt to be the roads that would most benefit from a longer bus lane, with respondents also seeing the benefits of the initiative in Colombo Street if the roadside car parking was removed.

“It’s a short lane, it could be better if it moved along for 3 or 4 k’s, and what happens when it ends – do they move into traffic or what?”

“All that these seem to do is get the buses started so that they can push their way into the traffic – give the bus a running start”

“A long bus lane would give the bus a good start where they could travel along a decent stretch of road”

“The longer the lane, the better, you’d have more advantage then”

The question was asked as to whether bus lanes would actually be used by taxis in areas with a number of bus stops along the route, particularly if the frequency of buses was to be increased – meaning that taxis would either be forced to wait behind buses if they were stopped to let passengers off within the lane, or pull out into the main stream of traffic. The general consensus was that education would be necessary as to ‘road user etiquette’ when this situation occurred, and likewise to designate whether buses were to give way to cyclists / taxis when stopping or vice versa to clarify best practice in this area.

“How does it work with giving way? Who gives way, the taxi or the bus, or the cycles? And if the bus or the taxi has to pull into traffic – who gives way then?”

Respondents are also looking for roadside signage prior to the commencement of the lane, reinforcing the road markings to clearly indicate the purpose of the lane and road user behaviour when approaching the lane. The proposed roadside signage every 100 metres was felt to be beneficial in reminding road users of the presence of the lane, but it was strongly preferred that

clear signage – particularly in the initial stages of implementation of the concept – began at a considerable distance before the entry point into the lane.

“It would be good if there was signage up before the lane started, a fluoro sign that tells you what and who it is for”

Concerns were raised relating to a perceived safety issue around schools for children arriving / leaving school and attempting to cross the road across a bus lane. Controlled crossings, reduced speeds and appropriate warning signage were suggested in order to assist pedestrian safety during peak periods when the lanes would be in operation.

“I would feel for the kids in peak hour traffic when they try to get across the road, there should be a high priority placed on safety around schools if these lanes were to be put in”

“They would have to have lights or something, or a designated crossing area”

“Maybe they should put controlled crossings outside all the schools for safety – if they are going to all the expense of putting in these bus lanes then they should really just add in the cost of some traffic lights for safe crossing”

Within the business persons’ group, there was some feeling that this type of lane would not deter cars from choosing to drive on it particularly if buses/ taxis did not appear to be utilising the lane frequently enough (i.e. every 5-10 minutes) to justify its presence. Some respondents within this group indicated that they already used bus lanes when driving and took the signage as ‘recommendation only’ as opposed to a legal requirement given their cynicism as to the rationale behind the implementation of this measure in the first instance.

“I drive on it the whole way down, if there’s not a bus there then why not use it – why sit in traffic like an idiot when there is a free lane there?”

“You come up to it, look in your rear view mirror and see no buses and taxis there, so what the hell are you going to do?”

“It’s easy to abuse it, you’re in a line of traffic and there’s no bus, so people just scoot in there, drive on 35 metres of green and get on the correct spot again so it’s fine”

“It’s your own interpretation of what you see is dangerous or not, and I don’t see that as being dangerous”

“If you were sitting there stuck in traffic and that lane was unused for ages, you’d feel it was unfair and that you were hard done by”

To prevent this situation, it was generally considered that enforcement would be necessary to reinforce correct behaviour from the outset, and to establish road user patterns of behaviour. Appropriate education was felt to be necessary in the first instance to alert residents as to the presence of the lanes, their purpose, correct road user behaviour and the penalty for infringement. A short ‘settling in’ period was desired while the concept was in its initial stages of usage, and respondents saw this phase being closely monitored by police via the presence of police vehicles adjacent to the bus lanes.

“You would have a grey area to start with when it’s being phased in, and give people a warning to shake them up. But as time goes on you would need to make the money that you are taking off them enough to deter them”

“I’d think you would have to have a certain amount of discretion in the beginning, maybe let people off with a first warning, but you have to make the level of enforcement enough to put people off”

“I think having police there initially to observe what happens and following up on people who aren’t behaving appropriately, but not fining them – just having a settling in period while the changes are taking place”

Cameras similar to speed cameras situated on the roadside alongside the bus lane, the use of cameras on the front of buses to record infringements, and ongoing ‘health checks’ by police were felt to be the most effective measures for monitoring usage of the bus lanes for the future.

“In England they have cameras on the front of the buses to snap cars that use the bus lanes”

“You are better off having a camera that snaps people in the lane, they get a fine, if they do it again they get another one – you have got to start somewhere and get people to learn the hard way if it is necessary”

“Why not have something like speed cameras on the front of the buses, they have the technology so if there was something like a wee transmitter on the bus to signal the camera... Make people think, ‘Can I afford to use the lane?’”

It was generally felt that penalties for infringement should be relatively high (i.e. \$200 or more) to attempt to deter repeat offending for people either parking or driving within the bus lane.

“They need ticketing that actually hurts, make people think twice before they use it again”

“Perhaps if you use it more than once and get ticketed then the amount goes up, say \$200, \$250 for the first offence and then upwards from there – something that makes people think ‘Do I really need to use that lane?’”

As previously stated, some respondents within the business group indicated that they currently drove down bus lanes. It was their perception that the concept had not been ‘sold’ to the people via appropriate marketing / educational strategies to enable road users to fully understand the reasoning behind the implementation of the concept, and that this was necessary in order to support and give credence to the initiative from the market’s perspective.

“I really think it is important for people to understand that this is important for the wellbeing and safety of our city and that the Council is charged with the responsibility of looking after us and our city as very best they can”

“You really have to make sure that the education is done properly, with the hard facts about the benefits and how much time it would cut down, all that sort of thing”

“If you are looking at planning realistically for the future then something has to be done. I think people would need to get used to it, they’d have to be educated about the overall plan and why it’s all happening”

“I think it would be in the Council’s best interest to promote it because you will get some people kicking up because they haven’t been told”

“They just haven’t sold this to us, sold us the benefits of it”

Utilisation of a mix of media was considered to be the most appropriate methodology to adopt in terms of promotion of the concept to the market. Suggestions were expressed that the following methods of communication could be successfully used to explain the concept and its benefits / usage to residents and business people.

- Signage / pamphlets on buses
- Advertisements / articles in community/ city newspapers
- Television campaigns on local networks
- Pamphlets included within rates demands
- Letter box drops

Graphic illustrations of the road layout with the appropriate signage and instructions were felt to be necessary to provide a visual reference for residents in the first instance, but it was strongly preferred that this information was kept as simple and straightforward as possible to encourage people to take the time to read it. As previously stated, it was felt to be essential that the rationale behind the development of the concept was explained – and factually supported where possible – to enable the market to view the concept as being worthwhile and practical, and to encourage correct / safe road user behaviour.

Bus Only Lane

This measure was felt to have a more limited application than the Bus Lane, but was felt to be appropriate in certain areas around the city – primarily on main arterial routes. In the markets’ view this concept would assist in encouraging use of the bus as a more direct mode of transport given that there would be a lane solely dedicated to buses – thus enabling promotion of the buses as a more efficient alternative, provided of course that this concept was supported via an increase both in the volume of buses on the road and in the frequency / reliability of the service.

“I think that a bus only lane is the best way to ensure that you’ve got an uncluttered lane for buses to travel on”

However it was acknowledged that if this were to happen, it would be necessary to consider how best to cater for cyclists given some respondents’ perceptions that it would be unsafe for them to cycle between the buses and other road traffic. Respondents were polarised as to potential solutions to address this issue – some felt that it would be preferable to incorporate cyclists into the bus only lane while others indicated a preference for cyclists to be given their own designated area on the road, or indeed to be routed away from main arterial roads and into less congested streets.

“If there was a bus only lane there would have to be something put into place just for cyclists”

“What are they going to do with the cyclists? They can’t go on the pavement, whereas the taxis can join the normal traffic – this means that the cyclists will have to ride between the buses and the traffic”

"In Hagley Park they have a divided lane for cyclists and walkers, with cyclists on one side and walkers on the others, so maybe they could do that on some streets"

"Maybe it would be better to have a bus lane and then maybe a definition of where cyclists could go within the lane"

"I think this would work very well, I think there should be cyclists in it because that addresses the issue of cyclist's safety"

Again there was a requirement stated for a 4.2 metre lane width in order to accommodate buses while providing a buffer zone between buses and other traffic using the road – particularly if cyclists were to be integrated with the main body of traffic. However, market perception is that there would still be a danger of both cyclists and cars electing to travel in the bus only lane.

"You would probably find it quite hard to keep the cyclists out. They would probably be looking for a safer route to get them away from the cars, you can see them thinking 'Oh I will just whiz into the bus lane'"

"I could see bikes being a hassle in the bus lane"

As with the Bus Lane concept, respondents are looking for an increase in pedestrian safety measures, particularly around schools, if this concept were to be implemented on a broader scale.

Again education followed by enforcement (i.e. tickets / fines) was felt to be the key in reinforcing user behaviour.

"I'd see raising awareness as being the first place to start, then looking at other measures like fines. You have to create an incentive for people, let them know what is happening and how it will help them"

The clear benefits of the concept would need to be explained, again via appropriate promotional/communications strategies to the market, as if volumes of buses are not seen to be using the initiative within regular time frames during peak periods, frustration will inevitably develop which will negate the purpose of the concept.

"If it isn't used logically and buses aren't frequent enough, it's going to frustrate drivers and then it will be a darn sight worse!"

Bus Signals

Most respondents indicated that they found the photographic illustration straightforward and easy to understand.

"I like this – it's workable"

"It's easy to understand"

"They have these on the Colombo Street overbridge, a bus light for the bus only to go and then you have to wait for your light"

"I think it's obvious really, with the big B for bus – I think most drivers would figure it out"

A small number of respondents considered that the positioning of the 'B' signal would have to be at an appropriate height for motorists to see over the top of buses to avoid the misconception that

cars were also being given the 'go ahead' at traffic lights simply because the bus was seen to be moving across the intersection.

"There needs to be a big light and sign that is arced out over the street so the motorists can see it. It's fine for the bus to see it but the motorists need to see the 'B' light as well so they know what it's for, or they will just take off after the bus without looking"

Education was felt to be necessary to promote user understanding of the meaning of the signals, again with a warning sign beside the traffic lights, as depicted in the photograph, to alert road users that the signals had been changed.

The illustration of road markings was slightly more problematic as the following verbatims demonstrate.

"It's going to cause confusion, the one on the left has got the bus lane coming all the way up so the people turning left have to be in the straight ahead lane and then are wondering what the hell the bus is going to do, is it turning or going straight?"

"Why don't they have it so that the whole thing is red, so the bus is the only thing that gets the green light and once he's been and the lights change, everyone can go?"

"The arrows on the road would make it easy, I'd know what to do I think. If you're turning you'd see that it was the turning lane and you'd know to go there"

"Older people might not know what to do with this"

"Until people know what the signals mean it would be difficult"

"I don't understand it at all"

There was some confusion as to how easily this concept would be adopted by users initially, but it was perceived that there would be sufficient education / promotion of the concept prior to implementation to ensure that road users would identify the changes when travelling on Christchurch streets and alter behaviour accordingly. The colouring of the road itself was felt to be important in providing a visual point of reference to the bus lane.

As previously stated, respondents are seeing these measures as part of a progressive roll – out of extensions to the current service offer within a long term traffic management plan for the city.

"If their strategy is well planned, well thought out and done in a managed situation then the ideal is to have something that will have a good easy traffic flow for people. Start the ball rolling with this and look at the fiscal impact, see if it's financially achievable within the next 2 years, 10 years, 20 years"

"I think that it is important that they don't just rely on the buses to solve Christchurch's problems because that won't solve all the problems. They have got to look at other options too – a number of things"

"They have to think of this on the long term, 10-20 years ahead"

"This is just a small part of the big picture"

“This is a realistic short term option to buy them time as opposed to more expensive things like rail or train or toll booths, this is a relatively small cost compared to some of the other options but it would buy the Christchurch community time to thoroughly investigate what’s going to be best for the future. This is not going to be the be-all and end-all”

“When we have a better sense of what we are aiming for it’s easier to plan. We need to find a way now to change what we have had, and improve what we will have for the future – and for it to be sustainable, not just a band-aid to fix the situation”

CONCLUSIONS AND RECOMMENDATIONS

- Overall, traffic flows in and around Christchurch are perceived to be generally good with the exception of peak hour traffic (i.e between 7.30 – 9.00 am and 3.00-5.30pm). The impact of peak hour traffic was felt to be worst on the following routes:
 - Papanui Road
 - Riccarton Road
 - Cranford Street / Main North Road
 - QE11 Drive
 - Johns Road
 - Lincoln Road
 - Marshlands Road
 - Deans Avenue (weekends)
 - Colombo Street
 - Hagley Park environs beside Riccarton Road
 - Ferry Road
 - and Sumner into the city
- Currently there is a high degree of frustration expressed with what is perceived to be a worsening situation within the city. This is perceived to be the result of a growing population and a higher percentage of vehicle ownership within the city, impacted by an increase in housing density via infill housing in certain suburbs and the development of subdivisions and inner city apartment complexes. Market perception is that roading development and traffic planning has not kept pace with the higher volume of traffic as Christchurch has expanded its environs. This was particularly evident within the business person's group who are currently cynical as to what they see as a lack of forward thought and planning by the Christchurch City Council in this area.
- Some respondents (particularly those within the business persons' group) are frustrated by what they see as the introduction of traffic measures which do not appear to have a visible benefit in terms of creating an improved traffic flow (i.e. calming zones, roadside plantings). While the enhancement of streets via plantings and other environmental measures was considered to have a positive aesthetic benefit, it was strongly felt that this should not be done at the expense of traffic flows, particularly in areas with high volumes of traffic. There was some concern that these decisions were being driven by Residents' Associations / Councillors without due consideration for traffic needs.
- At this point in time, some less positive views are held within the business community relating both to the bus service itself (relating to frequency, the range of routes available and bus congestion) and to the people who use the bus which impact upon some respondents' ability to see the service as a viable alternative for their transport around the city. The Field Connection would respectfully recommend that further education of the market is necessary in this area, to identify the benefits of using the service and to dispel some of the perceptions that are currently held relative to the 'type' of people that are perceived to use the bus.
- It was generally perceived that a holistic traffic management plan should be developed and communicated, encompassing a variety of options / applications. Respondents did not see

a singular solution as being feasible in terms of the 'big picture' for the future of Christchurch's traffic flow, but instead saw a combination of solutions being implemented to address the congestion issue for all road users – cyclists, pedestrians, bus users, professional drivers (i.e. couriers, taxi / truck drivers) and car users.

business people actively desire a consultative approach to be taken by the Council at the point where traffic issues are identified within their local area. Constructive, open consultative discussion between the Council and business people was felt to be vital to enable input from business people into the decision making process and to facilitate a greater understanding of the rationale behind the decisions that are made relative to traffic measures for the future.

- Bus priority lanes were freely mentioned by respondents as a possible solution to traffic congestion. It was perceived that this initiative could potentially attract a greater number of non-users to consider the bus – provided that, as stated above, timeliness and frequency delivered to the market need set appropriately. This was also felt to have the concurrent benefit of reducing the number of private vehicles travelling on the road.
- Business people displayed a high degree of cynicism to the concept of bus lanes given their perception that the city's population base was not large enough to sustain this measure. Given that this perception was driven by an absolute lack of knowledge / understanding as to bus patronage figures and the growth of the public transport system, education is required prior to further implementation in order to convince this market segment of the feasibility and potential demand for this initiative. Business people are actively looking to identify the 'hard facts' as to the perceived benefits and value proposition of the initiative before acceptance is reached.
- In general terms, respondents included within this study demonstrated a lack of understanding and clarity as to what the terminology utilised by both the Christchurch City Council and ECAN actually meant in real terms – most respondents were guessing.
- The branding of the Metro System is not clearly established in the consumer mindset at this point in time. While some respondents associated the term 'Metro' with the bus system, others were not cognizant with the term in relation to the 'Metro' brand. The Field Connection believes that this is problematic relative to the development of initiatives that are designed to improve traffic flows. If the brand 'Metro' was synonymous with the public transport system then the brand values and benefits that the system delivers would be more easily understood, and any initiatives implemented to support the system and improve traffic flows would be more easily accepted. Consideration could be given to perhaps renaming the bus exchange to the 'Metro Exchange' or 'Metro Bus Exchange' in order to facilitate this process.
- Bus Lanes and Bus Only Lanes were well received, with the perception being that these could be utilised in strategic positions around Christchurch to assist in alleviating current congestion. It was generally considered that these lanes could be best utilised during peak periods only and revert to 'normal' lanes at other times of the day / evening to assist in maximising effective road usage. It was strongly felt that appropriate safety measures would need to be implemented for cyclists / pedestrians and around school areas in order to provide the requisite safeguards for these road users at the times when the lanes would be in operation.
- Given that currently some respondents are utilising the bus lanes already in place in Christchurch when driving private vehicles, consideration would need to be given to the development of appropriate punitive measures / enforcement in order to reinforce correct behaviour and deter this from becoming the norm. However any enforcement would need to be accompanied by educational strategies in order to ensure that respondents see the benefits of the system and fully understand the purpose and meaning of the initiative.

Current behaviour in using the bus lanes when driving appears to be provoked by a perception that these benefits have not been made clear to the market as yet – therefore some motorists adopt the philosophy of ‘why wait in a queue when there is a free lane to use?’

- It was generally perceived that successful promotion of the Bus Lane / Bus Only lane concept was best achieved via utilisation of a mixed media approach in order to reach as wide an audience as possible, thus minimising the possibility for driver error/ uncertainty and potential accidents when faced with the initiative while driving in Christchurch.
- The bus signals were felt to be straightforward to understand, but some confusion was apparent as to the correct interpretation of the road marking illustration. However it was perceived that there would be sufficient education / promotion of the concept prior to implementation to ensure that road users would identify the changes when travelling on Christchurch streets and alter behaviour accordingly. The colouring of the road itself was felt to be important in providing a visual point of reference to the bus lane.
- At this point in time it was perceived that the Council was focusing primarily on traffic ‘meaning cars’ rather than taking a holistic look at traffic control within the city environs, the roading system, the types of vehicles utilised and cross town routes for buses. The market ideally desires to see a long term, wide ranging view to be taken towards future traffic planning and traffic control measures within the city as currently respondents perceive that the management of traffic flow and related issues is a little piecemeal and reactive, focusing on the short rather than long-term picture of the city. As previously stated, market understanding is that the implementation of bus lanes would be part of a progressive roll-out of extensions to the current service offer within a long term traffic management plan for the city.

APPENDIX 5
ASSOCIATED CAPITAL PROJECTS 2004 – 2009

Appendix 5 – ASSOCIATED CAPITAL PROJECTS 2004 – 2009. Capital works in the current 5 year programme adjacent to proposed public transport priority corridors.

Belfast to/from the Exchange	PMH to/from the Exchange	Queenspark to/from the Exchange	Horriby Mall to/from the Exchange	New Brighton to/from the Exchange	Summer to/from the Exchange	Oaklands to/from the Exchange	Cranford Street to/from the Exchange
STREET RENEWAL PROJECTS							
Blighs Road (Irls - Papanui) Grants Road (Papanui - Culver) Homer Street (Papanui – Proctor) Loftus Street Mansfield Avenue Mays Road (Papanui - Rutland) Paparoa Street (Papanui - Claremont) Perry Street (Papanui - Erika) Proctor Street (Main North – Grants) Webb Street (Papanui – Bristol) Derby Street (Papanui – Springfield) Grassmere Road (Main North – end dish) McDougall Avenue (Murray – Papanui) Donegal Street (Main North – end) Knowles Street (Papanui – Bretts) Weston (Papanui – Bretts)	Angus Street (Colombo – Forbes) Faraday Street (Colombo – fence)	Warrington Street (Hills – Flockton) Bower Avenue (New Brighton – Ascot) North Avon Road (Hills – North Parade)	Kauri Street (Riccarton – Rimu) Harakeke Street (Riccarton – Rochdale) Puriri Street (Riccarton – Totara)	Union Street (Berestford – Owles)		Dickens Street (Lincoln – Poulsion)	
NETWORK IMPROVEMENTS							
			Riccarton Road / Clarence / Straven Riccarton Road Traffic Management		Ferry Road / Humphreys Drive Ferrymead Bridge		
CYCLEWAYS							
Bealey Avenue (Park – Fitzgerald) Main North Road (Sawyers Arms – Northcote) Papanui Road (Langdons – Bealey)		New Brighton Road (Avondale – Wainoni) Fitzgerald Avenue (Armagh - Gloucester)	Riccarton Road (Deans – Mandeville) Riccarton High school bubble	Buckleys Road ((Linwood – Pages) Pages Road (Buckleys – Breezes) Pages Road (Breezes - New Brighton) Fitzgerald Avenue (Lichfield – Cashel) Linwood Avenue (Worcester – Tifford)		Moorhouse Ave. (Colombo – Lincoln)	
MAJOR AMENITY IMPROVEMENTS							
		Latimer Square		Berestford Street			
SAFETY IMPROVEMENTS							
		Avonside / Fitzgerald					
NEIGHBOURHOOD IMPROVEMENTS							
Papanui / McDougall		Bowenvale Avenue					
ROAD RESURFACING							
Colombo Street (Lichfield – Hereford) Papanui (Imes – Weston) Papanui Road (Bealey – Derby) Papanui Road (Normans – Tomes) Main North Road (Winston – Langdons) Main North Road (Vagues - Cranford)	Cashmere Road (Colombo – Thorrington)	Hills Road (Whitmore – Gresford)	Riccarton Road (Picton – Clarence)	Pages Road (Breezes – Rowan) Lichfield (Manchester - Madras)	Ferry Road (Palinurus – Dyers)		