

Bus Rapid Transit

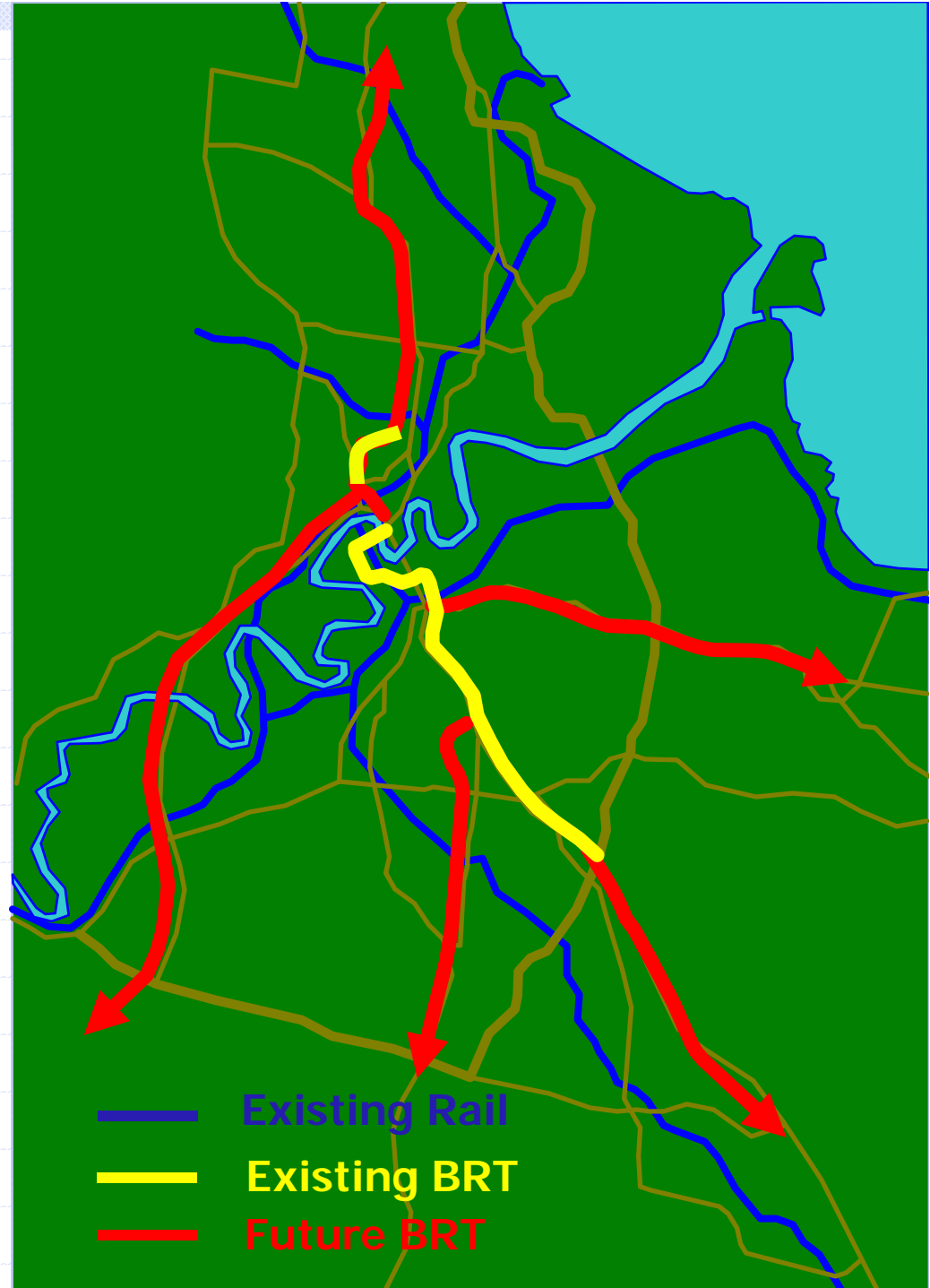
The Defining Elements Of A New Way To Go

Why the interest in Bus Rapid Transit or BRT?

- ◆ *Many communities are too dispersed to generate sufficient ridership to support rail effectively*
- ◆ *The cost to build and operate rail can make it too expensive*
- ◆ *Something better than ordinary bus service is required to solve the transport problems*

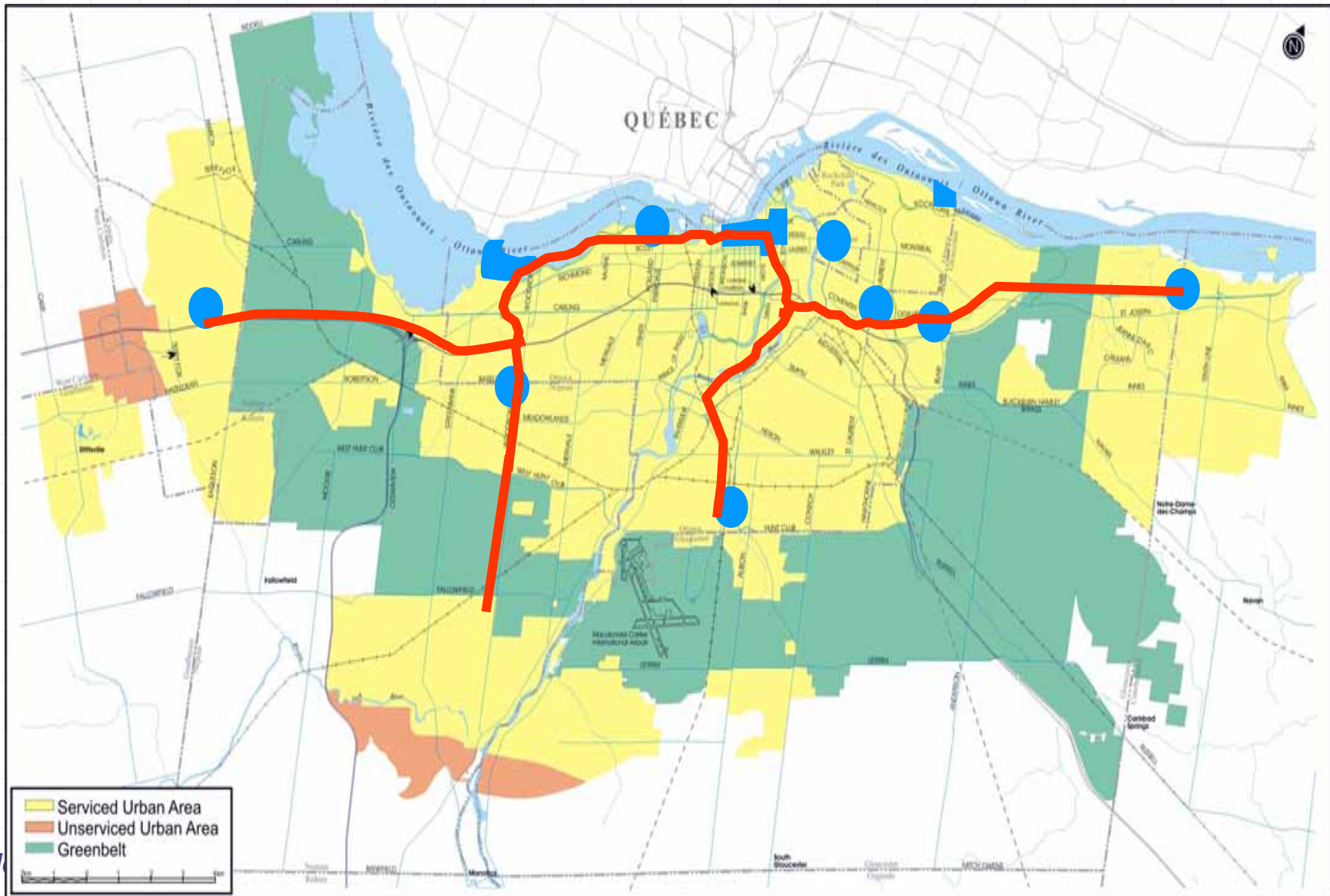
How has BRT been used?

In Brisbane BRT complements an existing commuter rail network



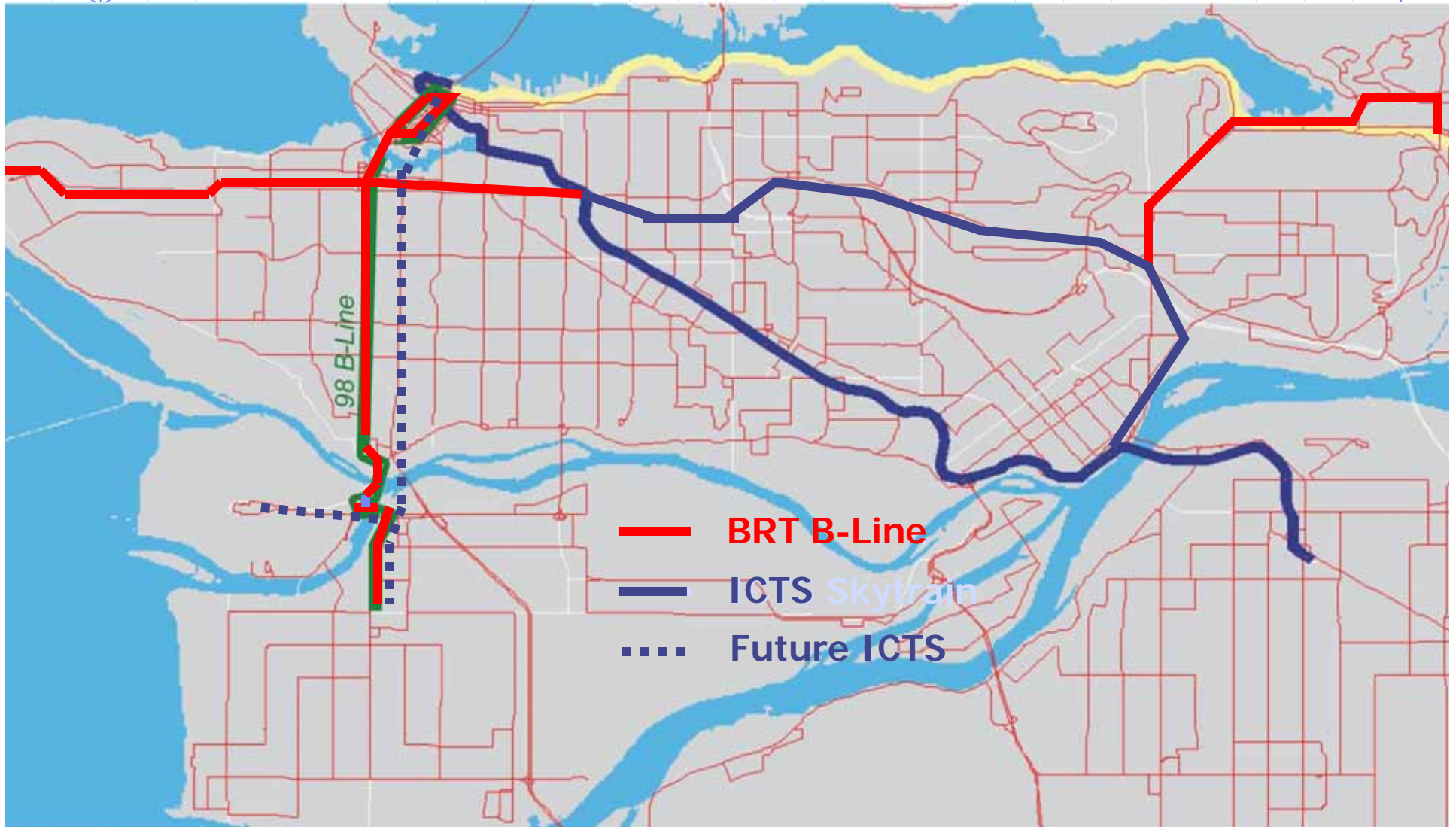
How has BRT been used?

In Ottawa BRT is the total rapid transit system



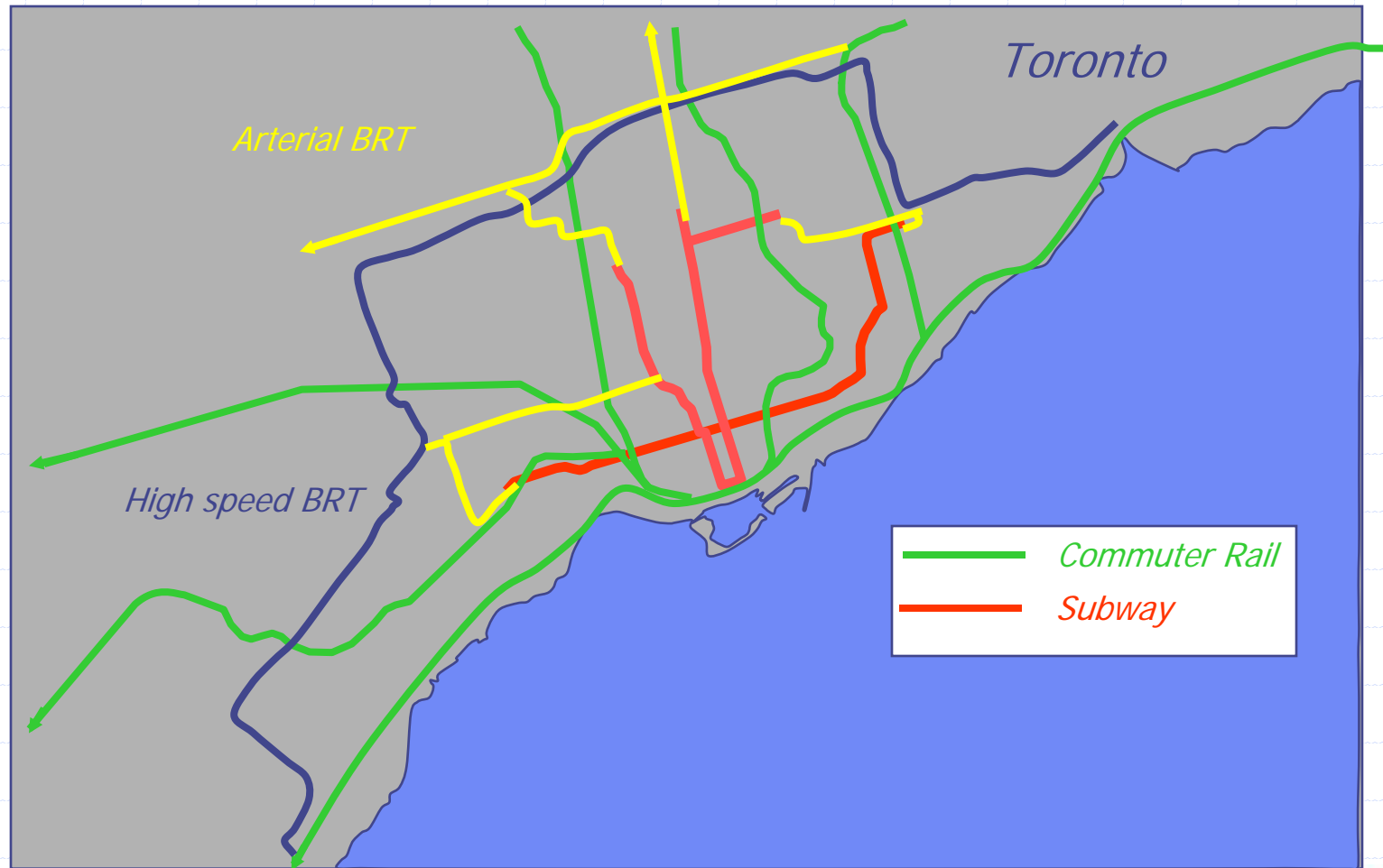
How has BRT been used?

In Vancouver BRT is a permanent corridor mode and a precursor for rail



How has BRT been used?

In Toronto BRT will complement a multi-modal network



What is Bus Rapid Transit?

BRT is rubber tired rapid transit



The stations are just like those on rail rapid transit



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Stations come in many forms to suite different applications



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There are many types of BRT running way



In its most developed form BRT uses grade separated high speed busways.....



BRT can also use at-grade bus lanes of one sort or another.....



...including arterial bus lanes



BRT may also be guided and the three most developed bus guidance systems which permit guided and unguided operations are...



Concrete guideway kerbs with horizontal guide-wheels



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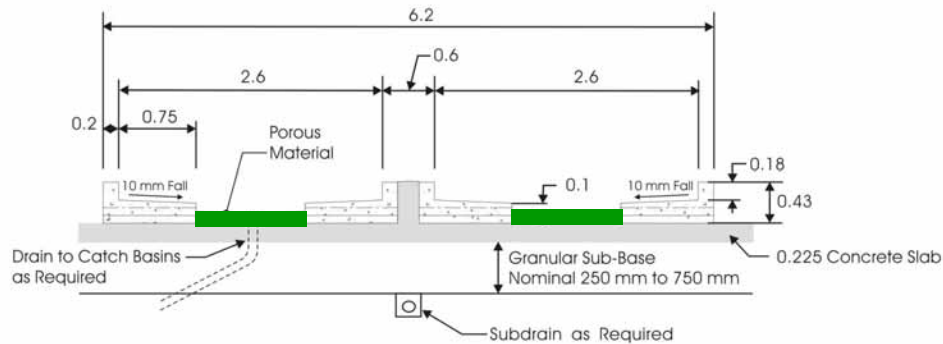
Video guidance in which a camera mounted at the front of the bus follows a painted line

BRT may also be guided and the three most developed bus guidance systems which permit guided and unguided operations are...



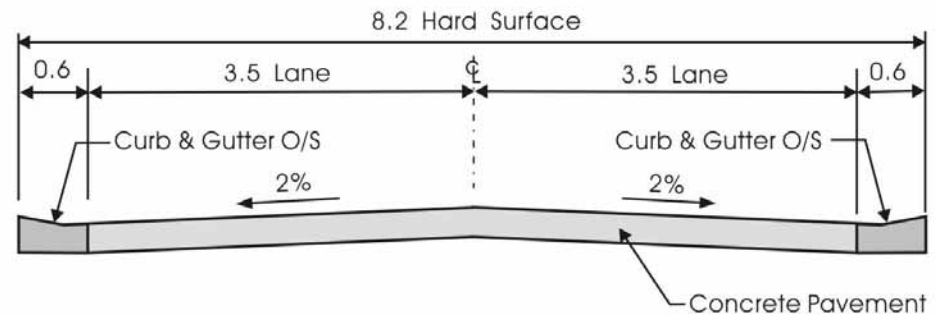
Magnetic guidance in which sensors on the bus follow magnets in the pavement

Guidance particularly kerb guidance is seen to have several important benefits



it has a narrower carriageway width and reduced environmental impact

Guided Busway



Conventional Busway

Guidance particularly kerb guidance is seen to have several important benefits



This narrower width has particular benefits where structures are concerned

Guidance particularly kerb guidance is seen to have several important benefits



Also it doesn't look like a road and is self enforcing

Guidance particularly kerb guidance is seen to have several important benefits



*and it provides
precision docking*

BRT is attracting new bus technology developments



And the latest ITS features including service control, signal priority



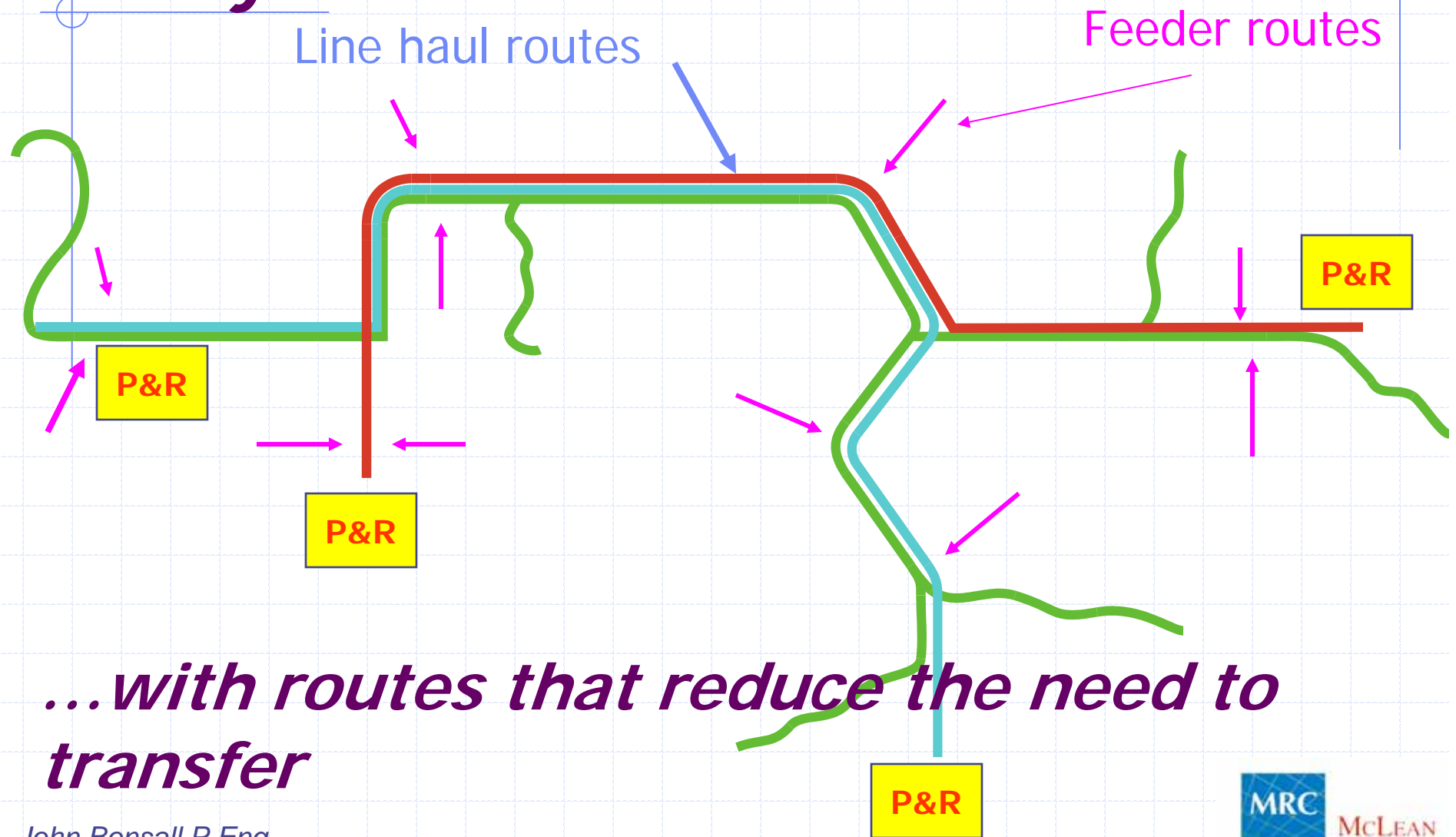
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...and public information



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BRT systems can serve low density suburbs effectively because they combine line haul service just like LRT...

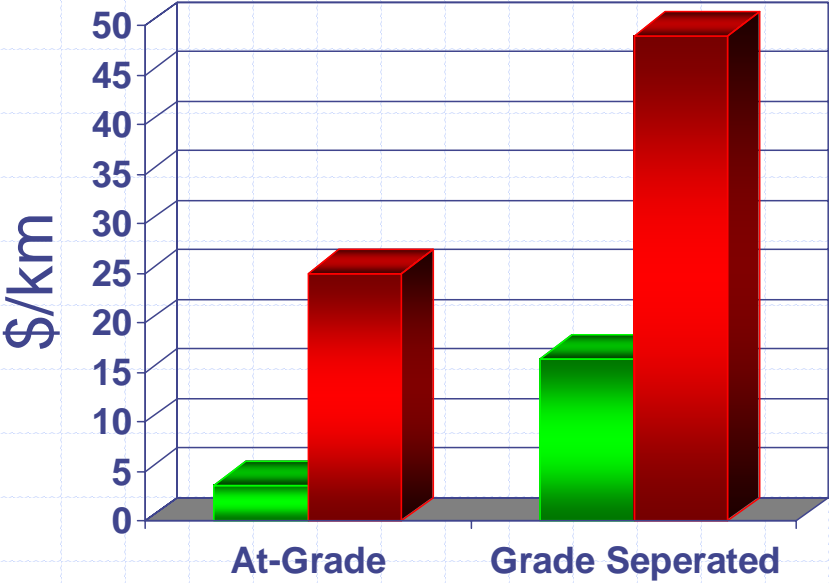


...with routes that reduce the need to transfer

This means that suburban detached homes are quite compatible with BRT

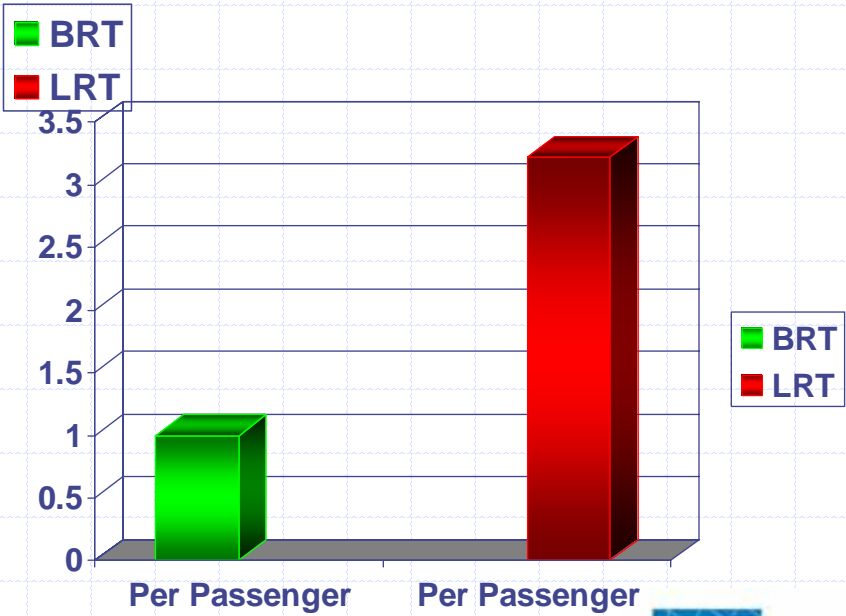


BRT can normally be built and operated at less cost than rail....



Pittsburgh Operating Costs

Average North American capital costs



Because BRT delivers operating savings compared with on-street bus services



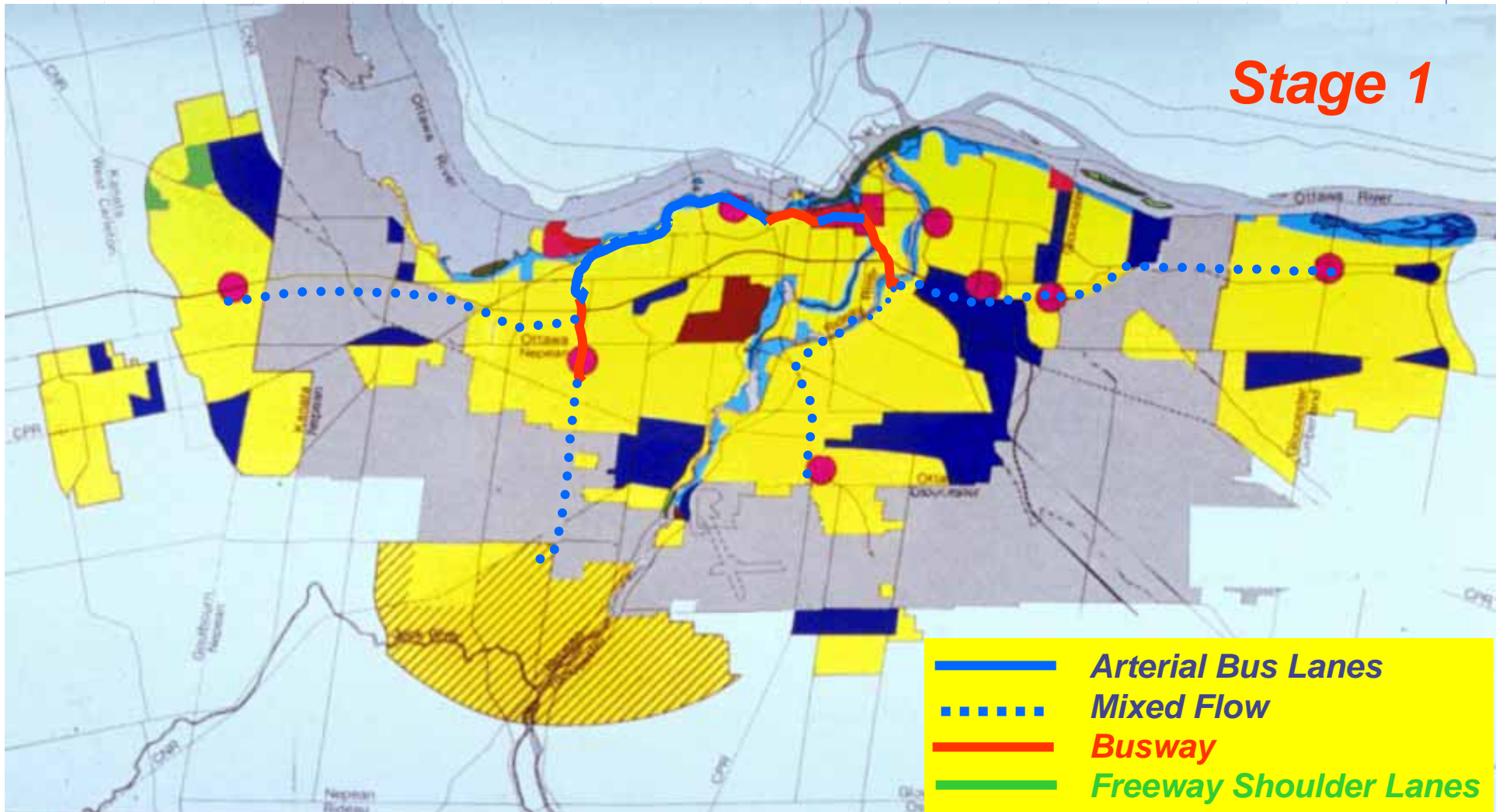
BRT infrastructure costs can be deferred without delaying service introduction because.....

The BRT vehicle can run in its own guideway...

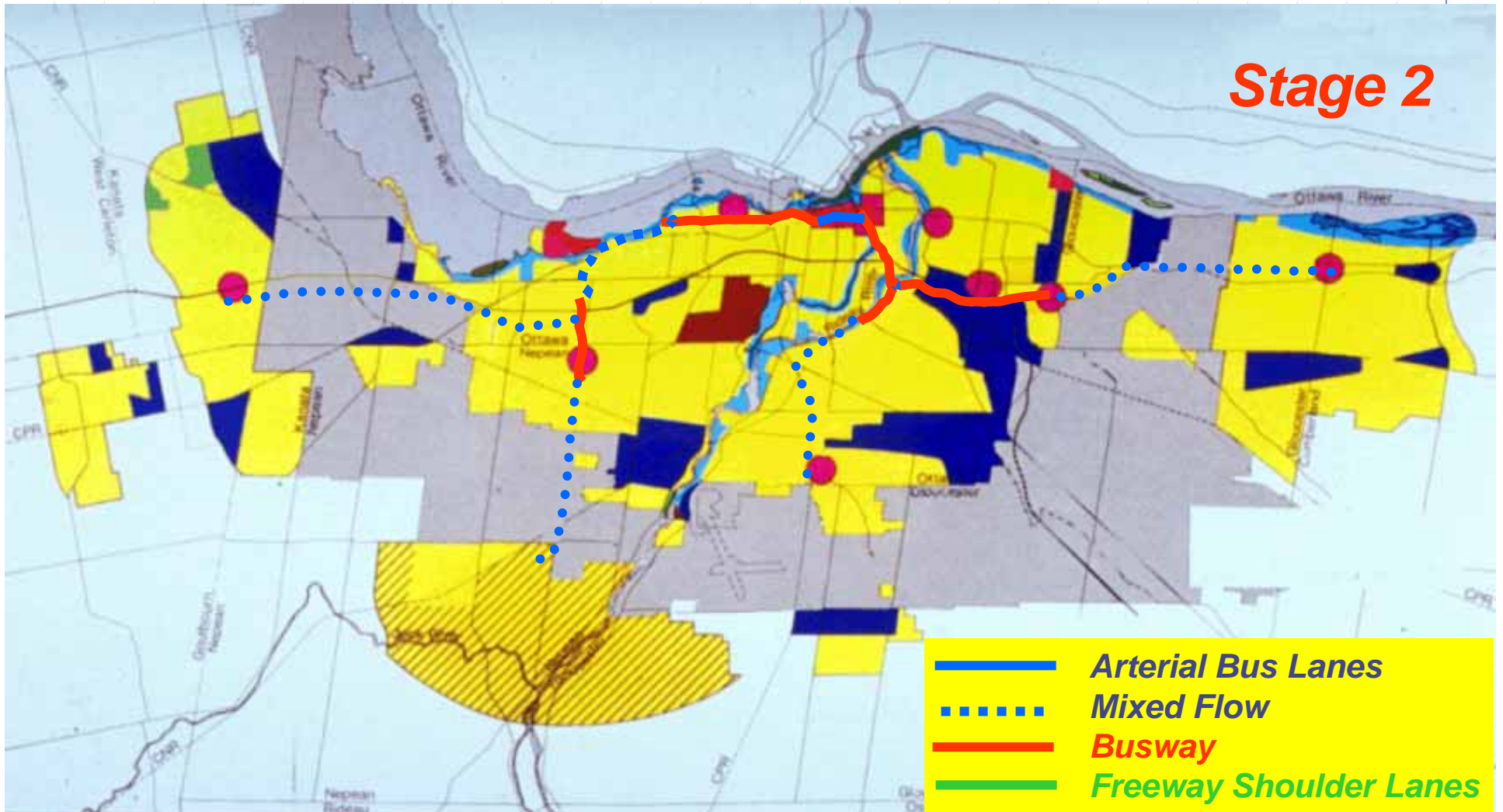


...or on-street

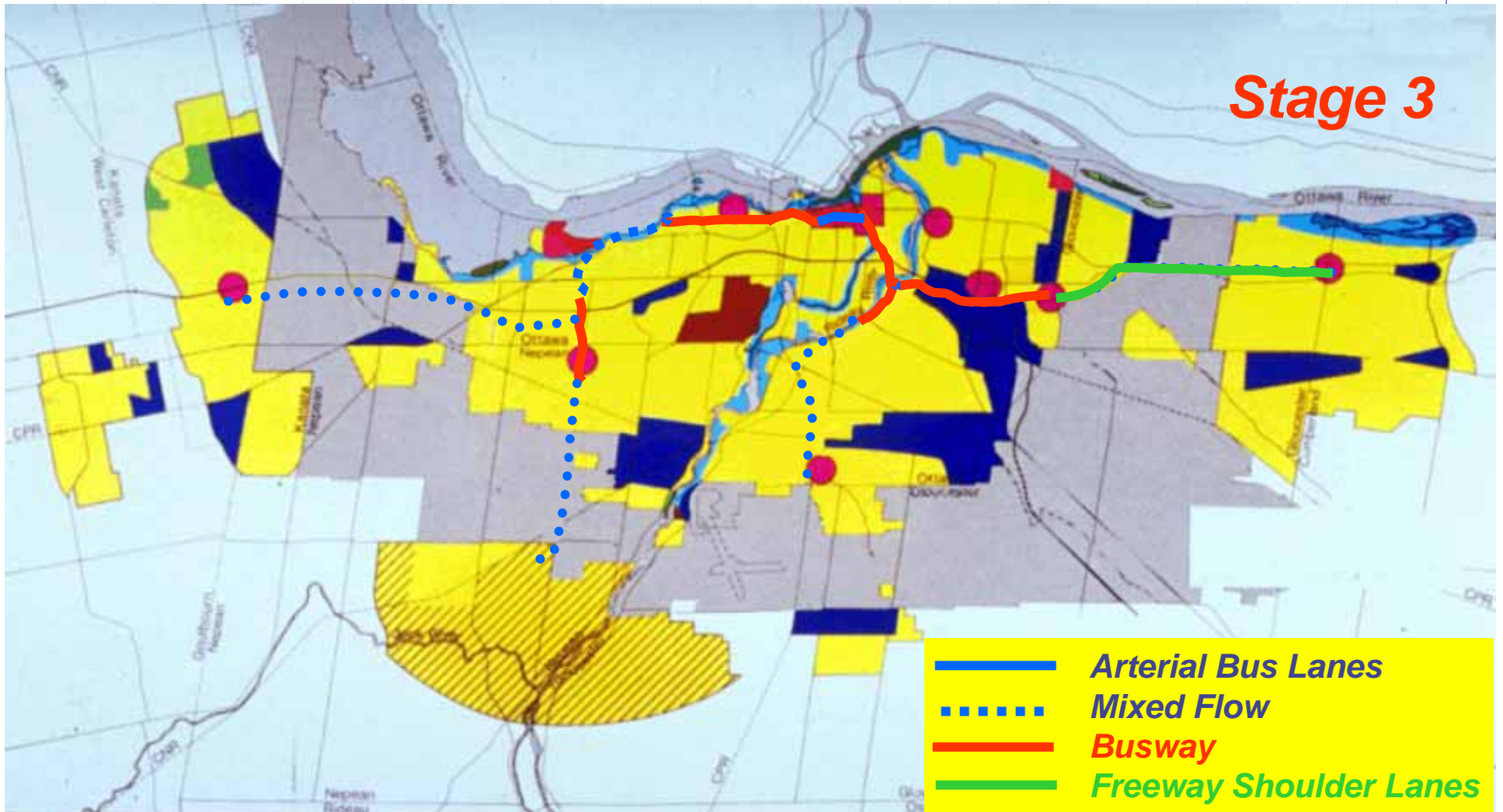
This means that BRT implementation can keep pace with development growth



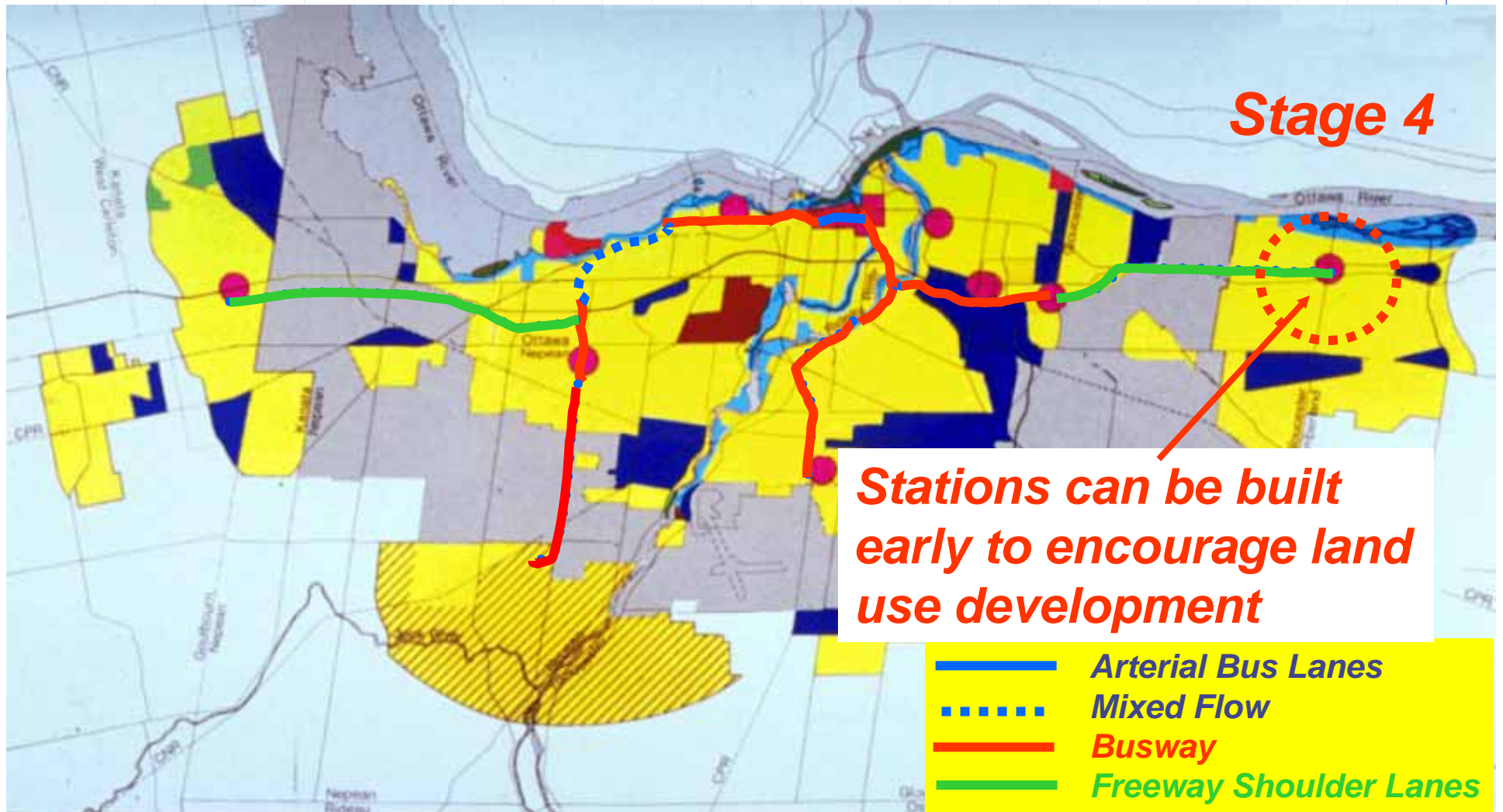
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This station was built early to encourage PT use as people came to the community



Linking BRT and land use has produced new mixed use development in older areas



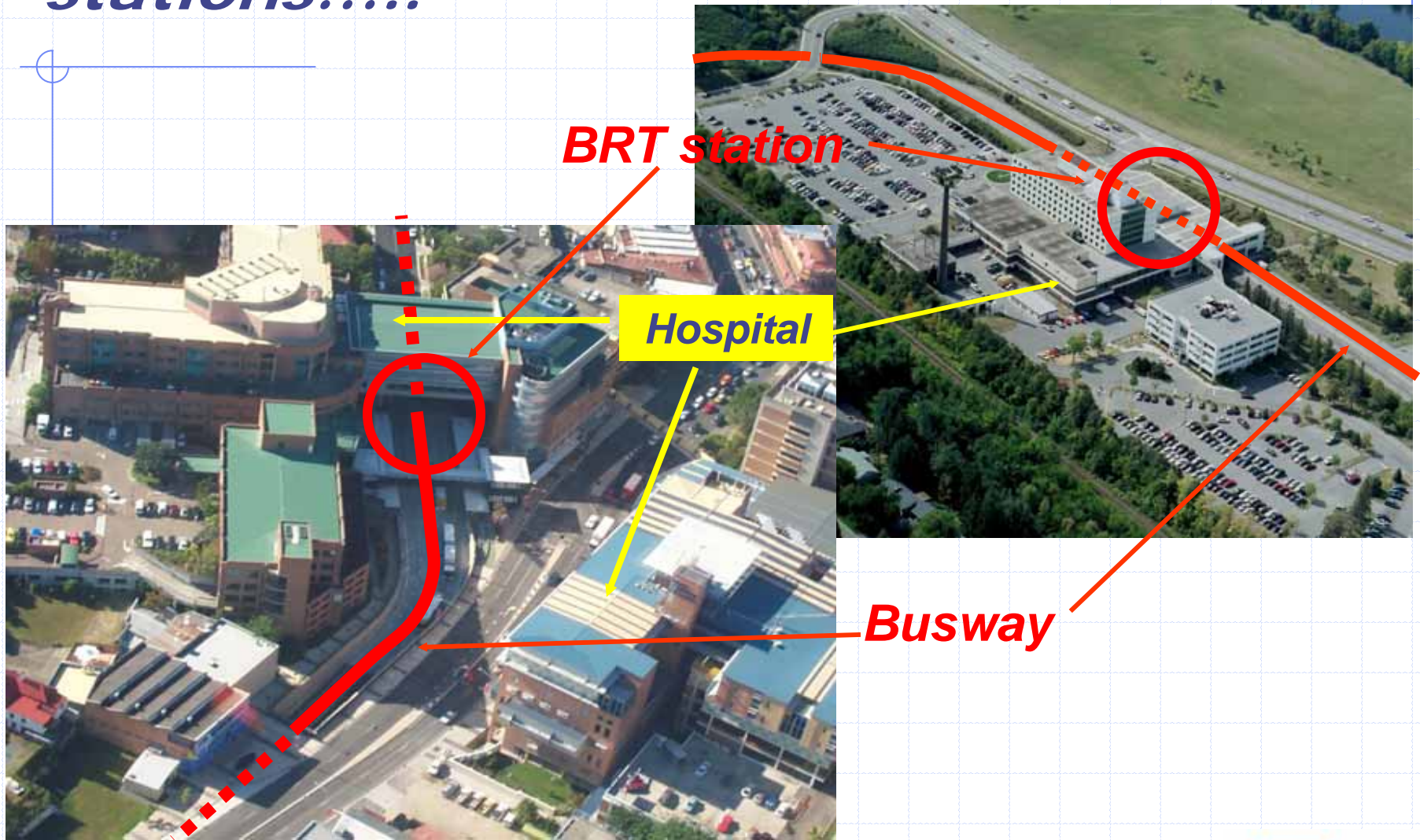
...new shopping centres and business parks in new suburbs....

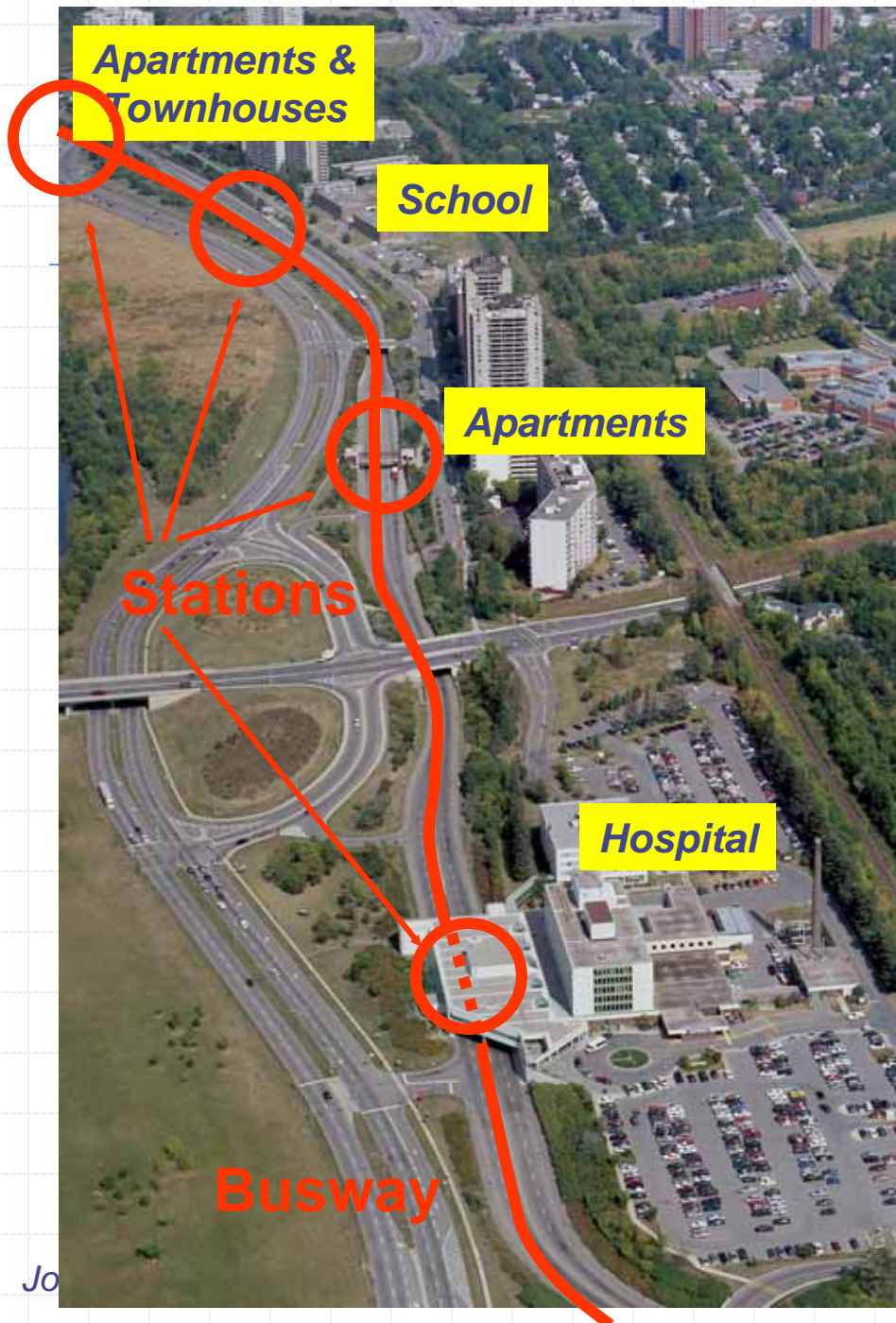


...shopping mall intensification in older suburbs.....



...air rights development over stations.....





..and linear corridor intensification

BRT can reduce car use and increase mobility

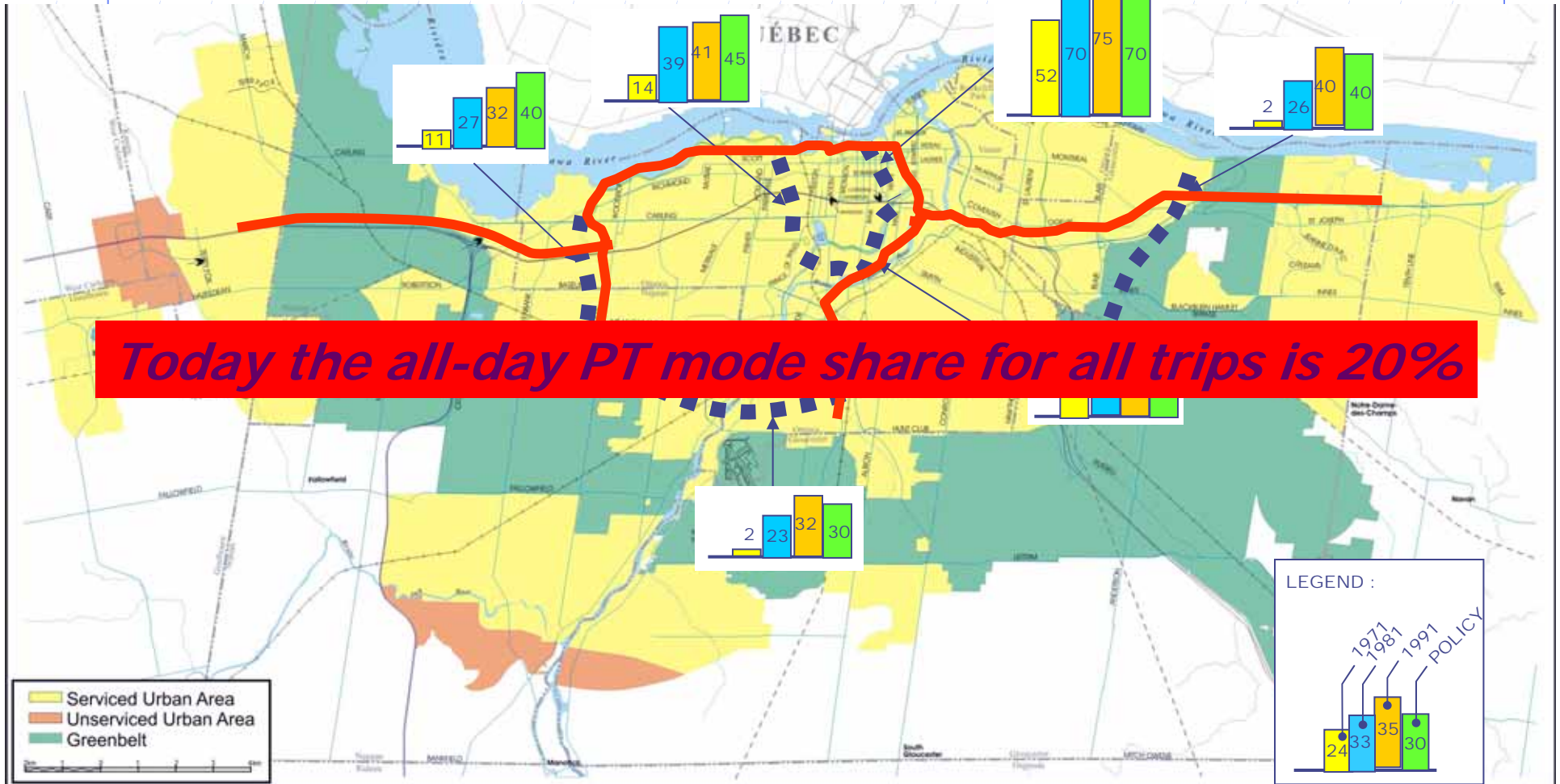
Brisbane 2002 Survey Data

Previous method of travel (same trip):

- ***Car – 31%***
- ***Train – 17%***
- ***Bus – 36%***
- ***Didn't make trip – 16%***

BRT can increase the PT mode share

Ottawa PT target mode share experience



In Ottawa and Brisbane the BRT peak hour peak direction patronage equals or exceeds that on North American LRT



In Brisbane there are 5,000+ passengers per hour per direction



While in Ottawa peak loads exceed 10,000 passengers per hour per direction and daily ridership exceeds 200,000

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Lessons learned

Implementation of BRT can be staged using a variety of different types of running way

BRT stations can be used as tools for land use intensification and regeneration

BRT can achieve high ridership, cost effectively

The initial successes are transferable and BRT can provide a total rapid transit network or be a component in an integrated rail and BRT network

In summary



“Give BRT a chance”



Thank you