Okanagan Valley Transportation Symposium

Workshop #2
Active Transportation Overview

Brian Patterson, MCIP
September 16, 2011
Agenda

1. Benefits of Active Transportation
2. Roles & Responsibilities
3. Current State of Active Transportation
4. Challenges and Opportunities
5. Ingredients for Success
6. Case Studies
7. Synthesis
Benefits of Active Transportation

- Environment
- Economic
- Social
- Health
- Safety
Roles & Responsibilities

Local Governments
- Primary Responsibility on Municipal Roads

Provincial Government
- Primary Responsibility on Highways
- BC MOT Cycling Policy
- Cost Sharing Opportunities

Federal Government
- Cost Sharing Opportunities
BC MOT Cycling Policy

1. Provisions for cyclists are made on all new and upgraded provincial highways
2. BC MOT will involve cyclist interests and local governments in highway planning consultations
3. The Ministry will plan, design, and build for the appropriate type of cyclist based on the type of facility
4. Cost will be managed within normal business practices and annual budgets
5. Uniform signing and marking will be provided for cyclists on all provincial highways
6. Cycling Policy will be monitored on a regular basis
Roles & Responsibilities

BC MOT Cycling Policy

To integrate bicycling by providing safe, accessible and convenient bicycle facilities on the Province’s highways and to support and encourage cycling. Cycling supports the Ministry’s mandate to provide British Columbians with an integrated multi-modal transportation system.
Current State of Active Transportation

- Cycling is permitted on all highways in this corridor
- Lack of facilities for pedestrians and cyclists on shoulders and at crossing points on urban highways
- Narrow or no shoulders for pedestrians and cyclists on rural highways
Current State of Active Transportation

Percentage of **trips to work** made by walking or cycling

Source: 2006 Census
# Current State of Active Transportation

Percentage of **all trips** made by walking or cycling

<table>
<thead>
<tr>
<th>Travel Mode</th>
<th>Night 0000-0559</th>
<th>AM Peak 0600-0859</th>
<th>Midday 0900-1459</th>
<th>PM Peak 1500-1759</th>
<th>Evening 1800-2359</th>
<th>Total (%)</th>
<th>Total Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Driver</td>
<td>83.5%</td>
<td>64.9%</td>
<td>74.1%</td>
<td>68.5%</td>
<td>66.8%</td>
<td>69.8%</td>
<td>525,065</td>
</tr>
<tr>
<td>Auto Passenger</td>
<td>8.8%</td>
<td>16.6%</td>
<td>13.6%</td>
<td>19.0%</td>
<td>27.2%</td>
<td>17.6%</td>
<td>132,249</td>
</tr>
<tr>
<td>Commercial Vehicle Driver</td>
<td>2.0%</td>
<td>1.2%</td>
<td>0.9%</td>
<td>0.7%</td>
<td>0.2%</td>
<td>0.9%</td>
<td>6,418</td>
</tr>
<tr>
<td>Transit Bus</td>
<td>0.5%</td>
<td>1.4%</td>
<td>1.1%</td>
<td>1.2%</td>
<td>0.6%</td>
<td>1.2%</td>
<td>8,717</td>
</tr>
<tr>
<td>School Bus</td>
<td>0%</td>
<td>5.2%</td>
<td>1.5%</td>
<td>2.9%</td>
<td>0.2%</td>
<td>2.4%</td>
<td>17,982</td>
</tr>
<tr>
<td><strong>Bicycle</strong></td>
<td><strong>2.2%</strong></td>
<td><strong>2.8%</strong></td>
<td><strong>1.0%</strong></td>
<td><strong>2.0%</strong></td>
<td><strong>1.4%</strong></td>
<td><strong>1.7%</strong></td>
<td><strong>13,098</strong></td>
</tr>
<tr>
<td>Roller blades/skateboard</td>
<td><strong>0%</strong></td>
<td><strong>0.2%</strong></td>
<td><strong>0.1%</strong></td>
<td><strong>0.1%</strong></td>
<td><strong>0%</strong></td>
<td><strong>0.1%</strong></td>
<td><strong>628</strong></td>
</tr>
<tr>
<td><strong>Walk</strong></td>
<td><strong>2.6%</strong></td>
<td><strong>6.6%</strong></td>
<td><strong>6.2%</strong></td>
<td><strong>4.3%</strong></td>
<td><strong>2.6%</strong></td>
<td><strong>5.2%</strong></td>
<td><strong>38,942</strong></td>
</tr>
<tr>
<td>Taxi/airport Shuttle</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0.1%</td>
<td>0%</td>
<td>0%</td>
<td>242</td>
</tr>
<tr>
<td>Others</td>
<td>0.3%</td>
<td>0.6%</td>
<td>1.0%</td>
<td>0.8%</td>
<td>0.5%</td>
<td>0.8%</td>
<td>5,875</td>
</tr>
<tr>
<td>Auto– Combo Driver/Pass</td>
<td>0%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>1,566</td>
</tr>
<tr>
<td>Other combo</td>
<td>0%</td>
<td>0.4%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.3%</td>
<td>2,001</td>
</tr>
</tbody>
</table>

**Trip Totals**

<table>
<thead>
<tr>
<th>Night 0000-0559</th>
<th>AM Peak 0600-0859</th>
<th>Midday 0900-1459</th>
<th>PM Peak 1500-1759</th>
<th>Evening 1800-2359</th>
<th>Total Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,676</td>
<td>148,317</td>
<td>267,057</td>
<td>201,677</td>
<td>114,768</td>
<td>752,720</td>
</tr>
</tbody>
</table>

Source: CORD / RDNO Travel Diary Survey
Types of Active Transportation
Types of Cyclists

- Strong and Fearless
- Interested but Concerned
- Enthused and Confident
- No Way, No How
Challenges and Opportunities

• Improve shoulders
• Develop separated facilities
• Regular maintenance of shoulders and pathways
• Improve pedestrian and cyclist safety at intersections
• Develop parallel alternate routes
• Economic development opportunities
Challenges and Opportunities

Quality Infrastructure
Challenges and Opportunities

Road Network Patterns
Challenges and Opportunities

Land Use Density and Mix
Challenges and Opportunities

Distance

![Graph showing trip distance distribution]

68% of trips
92% of trips

Based on 105,800 bicycle trips, from 2004 Travel Diary Survey, Translink
Challenges and Opportunities

Distance

- **It’s not that far!**
  - Average bicycle trip: 18 minutes = 5-6 km
  - Average walking trip: 15 minutes = 1 km

<table>
<thead>
<tr>
<th>Mode</th>
<th>Night 0000-0559</th>
<th>AM Peak 0600-0859</th>
<th>Midday 0900-1459</th>
<th>PM Peak 1500-1759</th>
<th>Evening 1800-2359</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto Driver</td>
<td>17.8</td>
<td>15.9</td>
<td>14.2</td>
<td>16.5</td>
<td>14.7</td>
<td>15.2</td>
</tr>
<tr>
<td>Auto Passenger</td>
<td>16.3</td>
<td>12.7</td>
<td>14.1</td>
<td>15.1</td>
<td>13.9</td>
<td>14.1</td>
</tr>
<tr>
<td>Transit Bus</td>
<td>20.9</td>
<td>27.4</td>
<td>26.9</td>
<td>31.3</td>
<td>30.5</td>
<td>27.9</td>
</tr>
<tr>
<td>School Bus</td>
<td>0</td>
<td>23.9</td>
<td>21.5</td>
<td>24.8</td>
<td>28.6</td>
<td>23.7</td>
</tr>
<tr>
<td>Bicycle</td>
<td>24.4</td>
<td>17.1</td>
<td>14.9</td>
<td>20.3</td>
<td>19.6</td>
<td>18.0</td>
</tr>
<tr>
<td>Walk</td>
<td>15.6</td>
<td>14.0</td>
<td>14.5</td>
<td>17.2</td>
<td>14.1</td>
<td>15.0</td>
</tr>
<tr>
<td>Others</td>
<td>22.5</td>
<td>21.6</td>
<td>20.8</td>
<td>19.2</td>
<td>18.6</td>
<td>20.4</td>
</tr>
<tr>
<td>Auto–Combo Driver/Pass</td>
<td>0</td>
<td>10.4</td>
<td>22.1</td>
<td>13.0</td>
<td>14.7</td>
<td>16.7</td>
</tr>
<tr>
<td>Other Combo</td>
<td>0</td>
<td>22.7</td>
<td>19.2</td>
<td>20.7</td>
<td>23.9</td>
<td>20.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17.8</strong></td>
<td><strong>15.9</strong></td>
<td><strong>14.8</strong></td>
<td><strong>16.8</strong></td>
<td><strong>14.7</strong></td>
<td><strong>15.5</strong></td>
</tr>
</tbody>
</table>
Challenges and Opportunities

Distance

1 km - 15 minute walk

5 km - 15 minutes by bike
Challenges and Opportunities

Topography
Challenges and Opportunities

Climate
Challenges and Opportunities

Safety

- Perception of lack of safety is a major deterrent to cycling

<table>
<thead>
<tr>
<th>Motivators</th>
<th>Deterrents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separated from vehicle noise and pollution</td>
<td>Ice or snow</td>
</tr>
<tr>
<td>Beautiful scenery</td>
<td>Lots of car, bus &amp; truck traffic</td>
</tr>
<tr>
<td>Separated paths from traffic</td>
<td>Glass or debris</td>
</tr>
<tr>
<td>Route is flat</td>
<td>Vehicles drive faster than 50 km/h</td>
</tr>
<tr>
<td>Faster than other modes</td>
<td>Motorists driving</td>
</tr>
<tr>
<td>Distance less than 5 km</td>
<td>Risk of injury</td>
</tr>
<tr>
<td>Trip in daylight hours</td>
<td>Rain</td>
</tr>
<tr>
<td>Transit integration</td>
<td>Slick surfaces</td>
</tr>
<tr>
<td>Centre line on pathways</td>
<td>Poor lighting</td>
</tr>
<tr>
<td>Secure indoor bike storage</td>
<td>Need to carry bulky or heavy items</td>
</tr>
</tbody>
</table>
Challenges and Opportunities

Safety

• “Safety in Numbers”
• Communities with higher levels of cycling have fewer fatalities
Ingredients for Success - Corridors

- Landscape Boulevards
- Separated Bicycle Lanes
- Off-Street Pathways
- Clear Sidewalks
- Accessible Curb Ramps
- Bicycle Lanes
- Neighbourhood Bikeways
Ingredients for Success - Crossings

- Crosswalks
- Narrower Crossings
- Bike Boxes
- Enhanced Crosswalks
- Accessible Pedestrian Signals
- Bicycle Activated Push Buttons
Ingredients for Success - Amenities

- Street furniture
- Wayfinding
- Building Design
- Signage
- Bicycle Parking
- Showers / Lockers
Regional Case Study: CRD PCMP

**Goal 1** More walking and cycling

**Goal 2** Safer walking and cycling

**Goal 3** More places to walk and cycle
Regional Case Study: CRD PCMP

- Engineering
- Education & Encouragement
- Enforcement
- Evaluation & Planning
Regional Case Study: CRD PCMP

1. Primary Cycling Network
2. Improve Regional Walkability
3. Regional Consistency and Connectivity
Regional Case Study: CRD PCMP

1. Primary Cycling Network
2. Improve Regional Walkability
3. Regional Consistency and Connectivity

- Engineering
- Education & Encouragement
- Enforcement
- Evaluation & Planning
1. Primary Cycling Network
2. **Improve Regional Walkability**
3. Regional Consistency and Connectivity
Regional Case Study: CRD PCMP

Engineering

Education & Encouragement

Enforcement

Evaluation & Planning

1. Primary Cycling Network
2. Improve Regional Walkability
3. Regional Consistency and Connectivity

ROUTE
- Lochside Trail 1.0 km
- Downtown Sidney 1.2 km
- Butchart Gardens 4.6 km

Galloping Goose Trail 1.2km
UVic 1 km
Beacon Hill Park 0.2 km
Provincial Case Study: Route Verte
Provincial Case Study: Route Verte

- Paved Shoulders
- Bicycle Lanes
- Shared Roadways
- Off-Street Pathways
Synthesis

1. Building blocks are in place!
2. Coordinated land use and transportation
3. High quality facilities
4. Multi-modal integration
5. Regional consistency and connectivity
6. Improved crossings