Washington State/ British Columbia Border Advance Traveler Information/ Data Management System and FAST

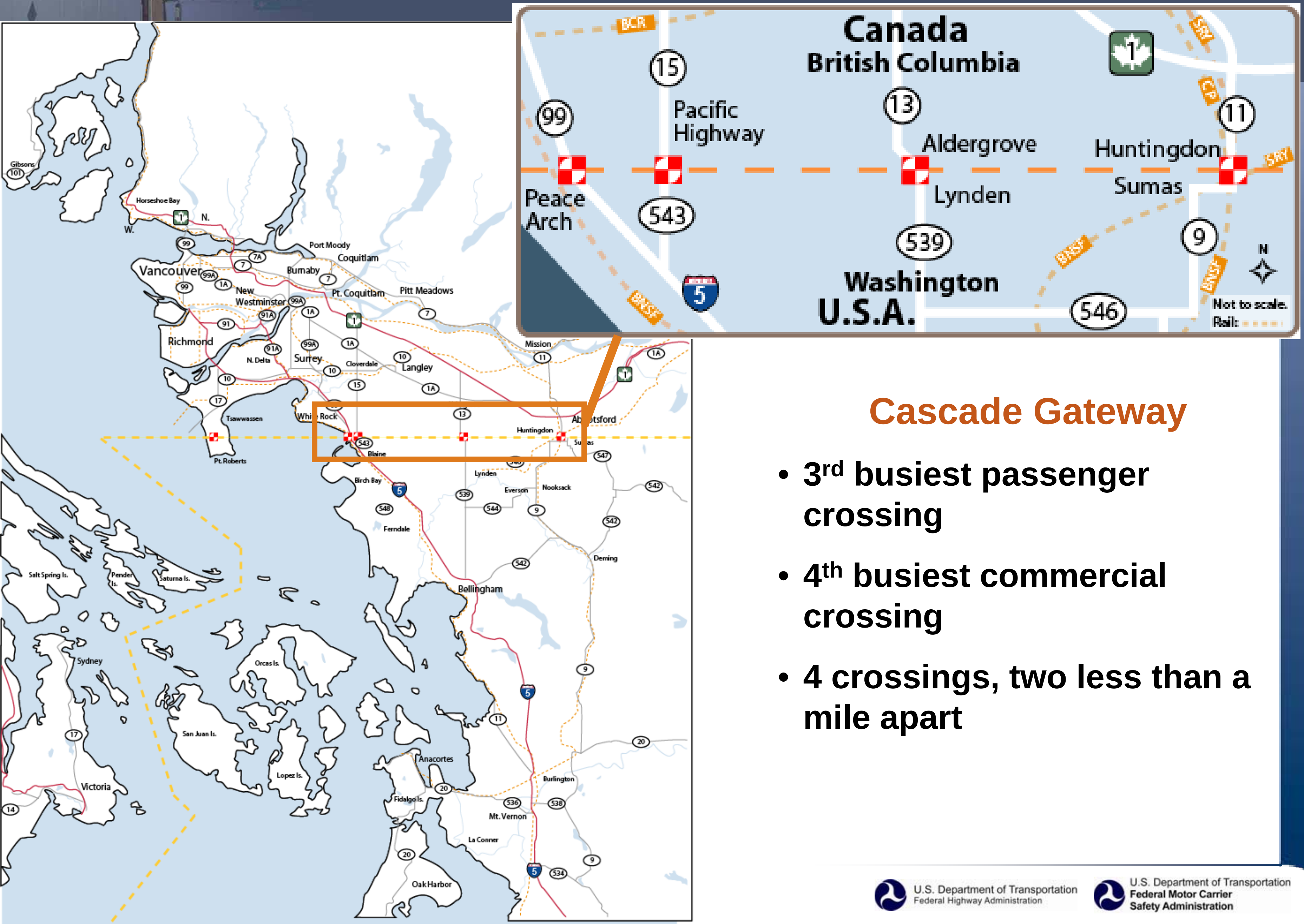
2008 Smart Roadside Workshop

Gordon Rogers
Bellingham, WA, Whatcom Council of Governments, MPO / IMTC

April 29, 2008

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

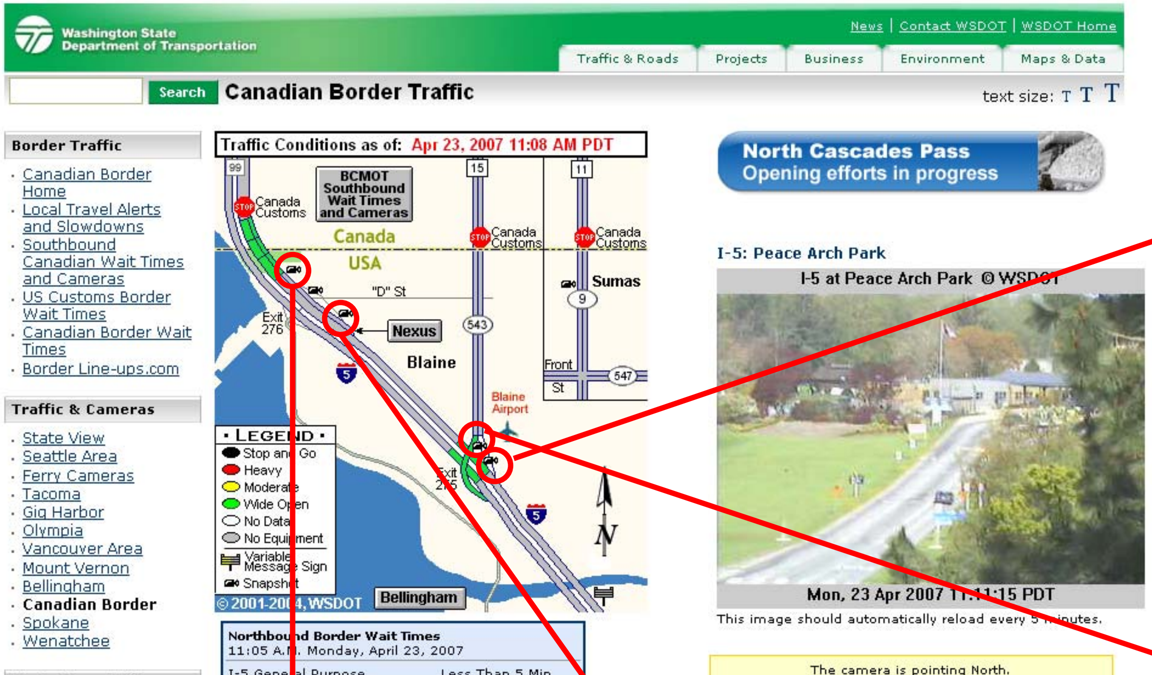
U.S. Department of Transportation
Federal Highway Administration


BCR
Canada
British Columbia
15
99
Pacific Highway
13
1
SRY
CP
11
Aldergrove
Huntingdon
SRY
Peace Arch
Lynden
Sumas
543
539
9
BNSF
N
BNSF
5
Washington
U.S.A.
546
BNSF
Not to scale.
Rail:
Gibsons
101
Horseshoe Bay
N.
W.
Vancouver
Port Moody
Coquitlam
Burnaby
Pt. Coquitlam
Pitt Meadows
New Westminster
Richmond
N. Delta
Surrey
Cloverdale
Langley
Mission
Tsawwassen
White Rock
Huntingdon
Abbotsford
Sumas
Pt. Roberts
Blaine
Birch Bay
Lynden
Everson
Nooksack
Ferndale
Deming
Bellingham
Salt Spring Is.
Pender Is.
Saturna Is.
Sydney
Orcas Is.
San Juan Is.
Lopez Is.
Victoria
Anacortes
Fidalgo Is.
Burlington
Mt. Vernon
La Conner
Oak Harbor

Cascade Gateway

- 3rd busiest passenger crossing
- 4th busiest commercial crossing
- 4 crossings, two less than a mile apart

Northbound ATIS System



Washington State Department of Transportation

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Search **Canadian Border Traffic** text size: T T T

Border Traffic

- Canadian Border Home
- Local Travel Alerts and Slowdowns
- Southbound Canadian Wait Times and Cameras
- US Customs Border Wait Times
- Canadian Border Wait Times
- Border Line-ups.com

Traffic & Cameras

- State View
- Seattle Area
- Ferry Cameras
- Tacoma
- Gig Harbor
- Olympia
- Vancouver Area
- Mount Vernon
- Bellingham
- Canadian Border
- Spokane
- Wenatchee

State Travel Info

Traffic Conditions as of: Apr 23, 2007 11:08 AM PDT

99
15
11
Canada Customs
BCMOT Southbound Wait Times and Cameras
Canada Customs
Canada Customs
Canada
USA
"D" St
Sumas
9
543
Exit 276
Nexus
Blaine
5
Front St
547
Blaine Airport
Exit 275
5
N
Bellingham
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• LEGEND •
- ● Stop and Go
- 🟥 Heavy
- 🟨 Moderate
- 🟩 Wide Open
- ○ No Data
- ○ No Equipment
- Variable Message Sign
- Snapshot

Northbound Border Wait Times
11:05 A.M. Monday, April 23, 2007

I-5 General Purpose	Less Than 5 Min

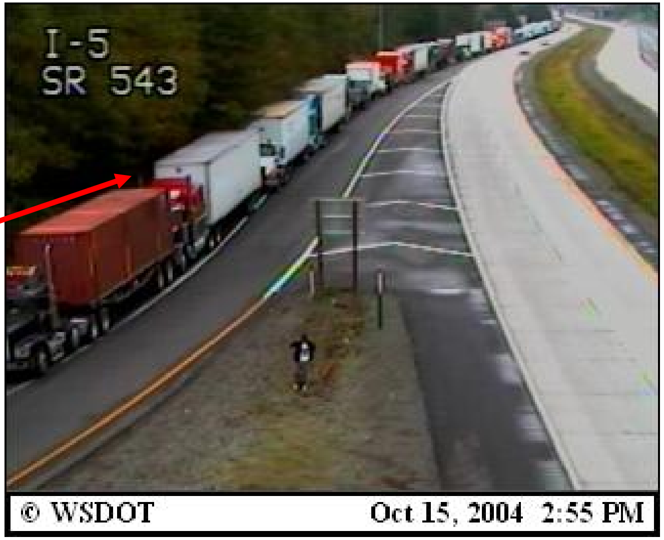
North Cascades Pass
Opening efforts in progress

I-5: Peace Arch Park

I-5 at Peace Arch Park © WSDOT
Mon, 23 Apr 2007 11:11:15 PDT

This image should automatically reload every 5 minutes.

The camera is pointing North.


I-5
SR 543
© WSDOT
Oct 15, 2004 2:55 PM

I-5 at D St (North) © WSDOT
Fri, 04 May 2001 14:06:10 PDT

I-5 at D St © WSDOT
Wed, 12 Sep 2001 14:28:56 PDT

SR 543 at the I-5 Interchange © WSDOT
Tue, 11 Sep 2001 13:05:05 PDT

Southbound ATIS System

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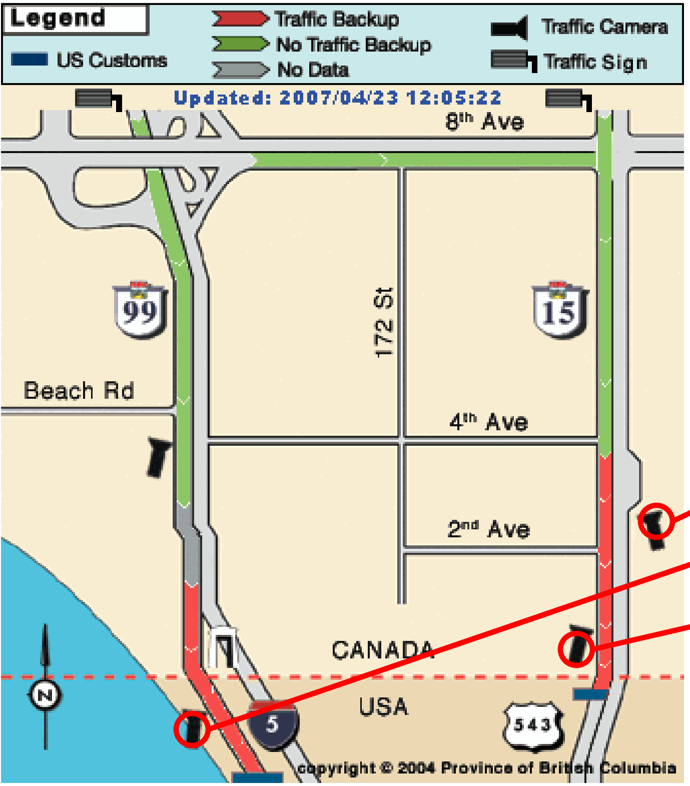
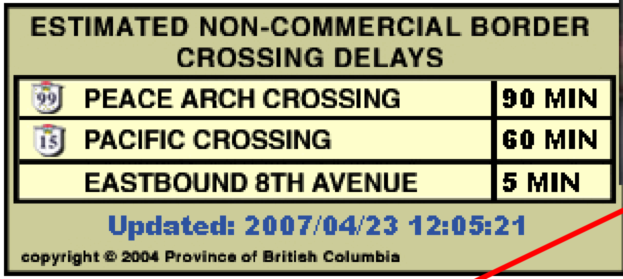

Legend
US Customs
Traffic Backup
No Traffic Backup
No Data
Traffic Camera
Traffic Sign
Updated: 2007/04/23 12:05:22
8th Ave
99
172 St
15
Beach Rd
4th Ave
2nd Ave
CANADA
USA
5
543
N
copyright © 2004 Province of British Columbia



ESTIMATED NON-COMMERCIAL BORDER CROSSING DELAYS

99 PEACE ARCH CROSSING	90 MIN
15 PACIFIC CROSSING	60 MIN
EASTBOUND 8TH AVENUE	5 MIN

Updated: 2007/04/23 12:05:21

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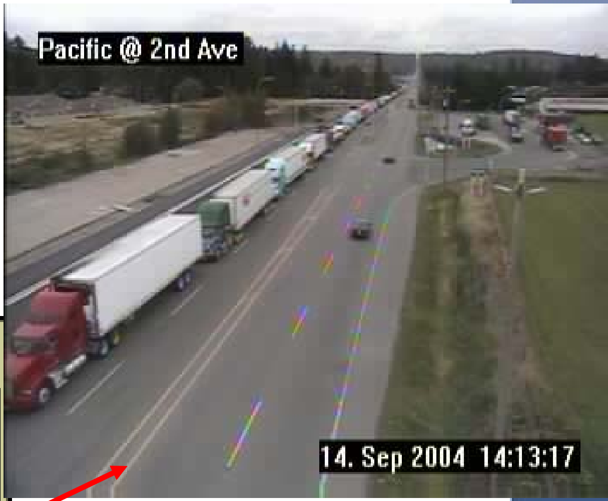
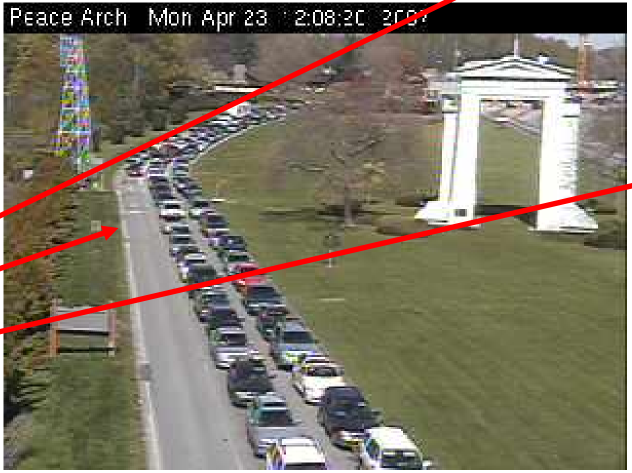
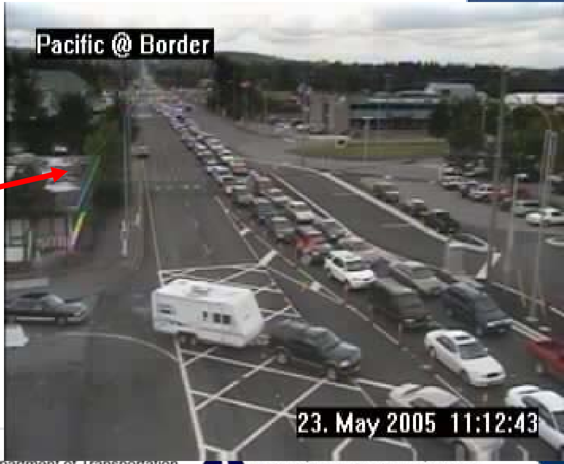
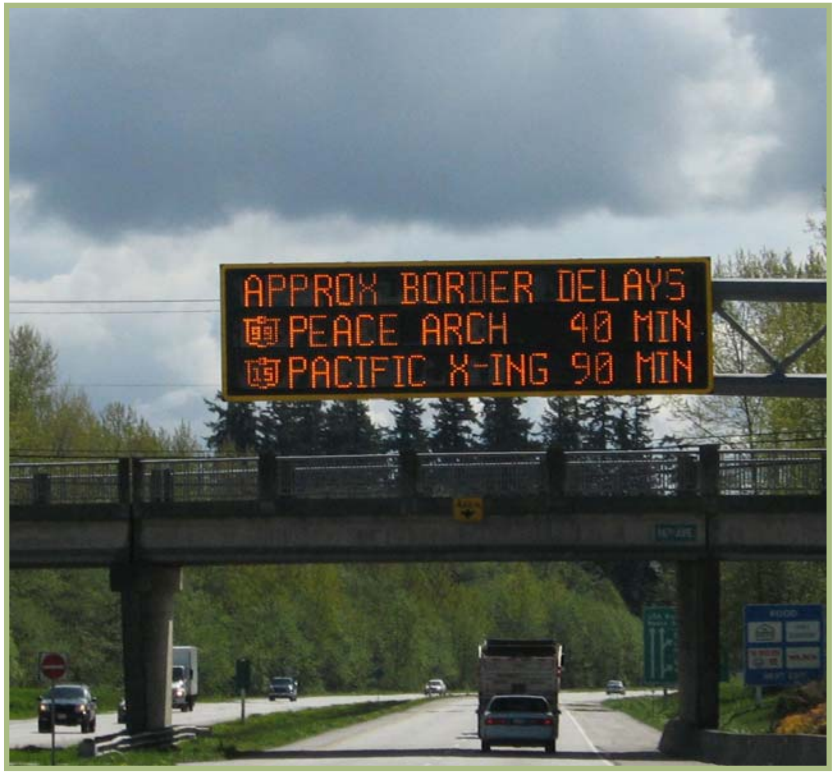

Pacific @ 2nd Ave
14. Sep 2004 14:13:17


Peace Arch Mon Apr 23 12:08:20 2007

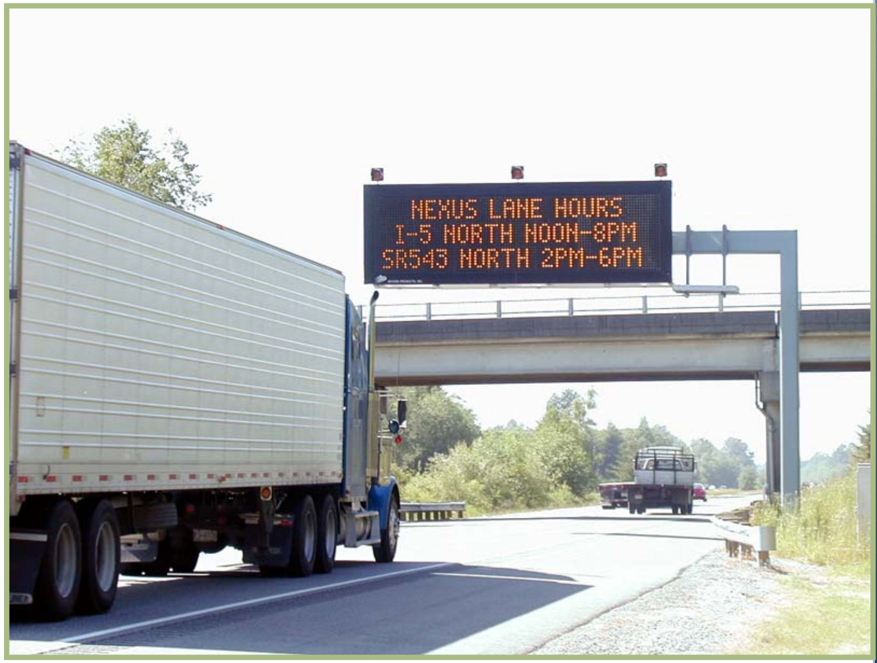
- The camera is looking North.


Pacific @ Border
23. May 2005 11:12:43

Variable Message Signs


APPROX BORDER DELAYS
PEACE ARCH 40 MIN
PACIFIC X-ING 90 MIN

Southbound


NEXUS LANE HOURS
I-5 NORTH NOON-8PM
SR543 NORTH 2PM-6PM

Northbound

Project Development

- Scope developed by:
  - WA State Department of Transportation
  - B.C. Ministry of Transportation
  - Whatcom Council of Governments
- Funded by:
  - Transport Canada (ITS – SHIP Program)
  - B.C. Ministry of Transportation
  - WA State Department of Transportation
  - University of Washington Transportation Center

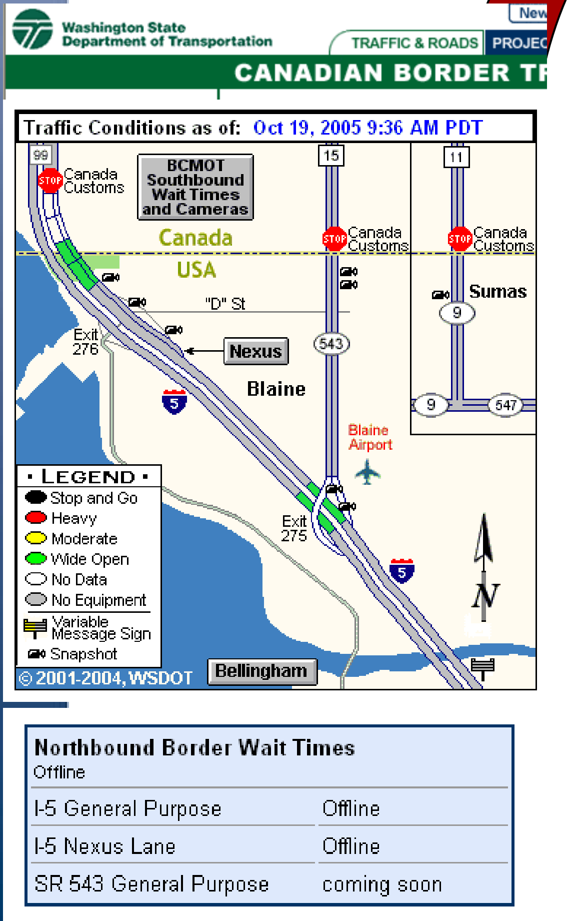
Work Elements

- Evaluate user requirements
  - What data system users want
- Integrate data
  - XML schema developed for U.S. & Canadian systems
- Device inventory
  - GPS used to develop maps and naming translation table for all detectors in systems
- Database development
- Data Acquisition
  - Extract Transform Load (ETL) process used with FTP.
- Website Development
  - Browse tool, custom query, and customized e-mail reports

ATIS Data Preserved

WSDOT Northbound ATIS system

BC MoT Southbound ATIS system


New
Washington State Department of Transportation
TRAFFIC & ROADS
PROJEC
CANADIAN BORDER TR
99
Canada Customs
BCMOT Southbound Wait Times and Cameras
15
11
Canada Customs
Canada Customs
Canada
USA
"D" St
Sumas
9
Exit 276
Nexus
543
Blaine
9
547
5
Blaine Airport
Exit 275
5
N
Bellingham

Traffic Conditions as of: Oct 19, 2005 9:36 AM PDT

• LEGEND •
- ● Stop and Go
- ● Heavy
- ● Moderate
- ● Wide Open
- ○ No Data
- ● No Equipment
- Variable Message Sign
- Snapshot

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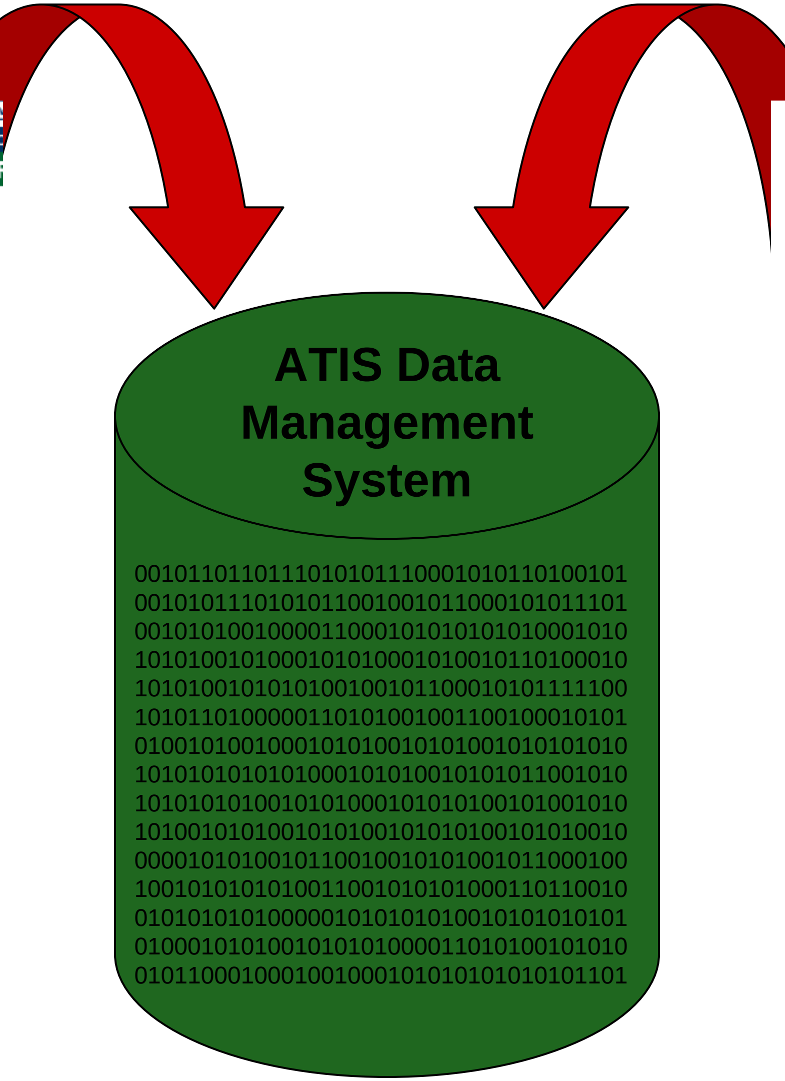
Northbound Border Wait Times Offline	
I-5 General Purpose	Offline
I-5 Nexus Lane	Offline
SR 543 General Purpose	coming soon


ATIS Data Management System
001011011011101010111000101011010010 1
001010111010101100100101100010101110 1
001010100100001100010101010101000101 0
101010010100010101000101001011010001 0
101010010101010010010110001010111110 0
101011010000011010100100110010001010 1
010010100100010101001010100101010101 0
101010101010100010101001010101100101 0
101010101001010100010101010010100101 0
101001010100101010010101010010101001 0
000010101001011001001010100101100010 0
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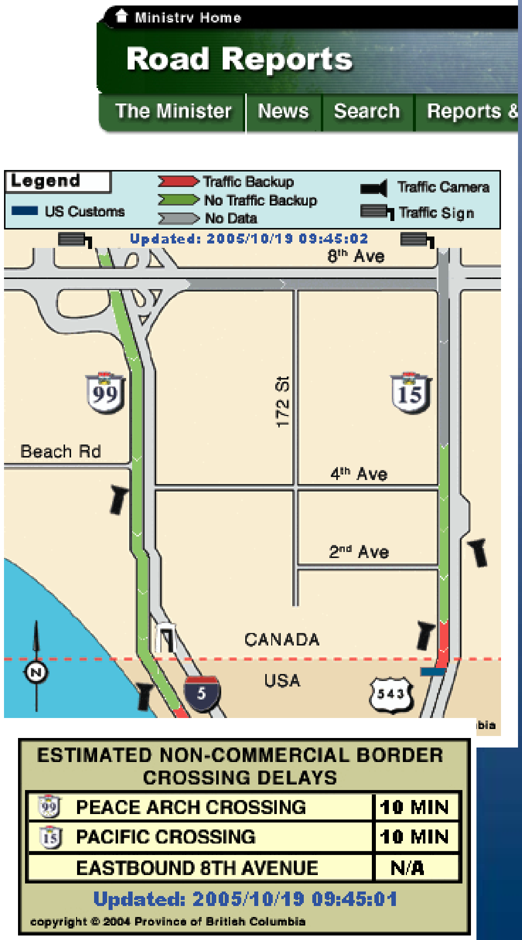
010101010100000101010101001010101010 1
010001010100101010100001101010010101 0
010110001000100100010101010101010110 1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Legend
Traffic Backup
No Traffic Backup
No Data
US Customs
Traffic Camera
Traffic Sign
8th Ave
99
172 St
15
Beach Rd
4th Ave
2nd Ave
CANADA
N
USA
5
543
bia

Updated: 2005/10/19 09:45:02

ESTIMATED NON-COMMERCIAL BORDER CROSSING DELAYS	
99 PEACE ARCH CROSSING	10 MIN
15 PACIFIC CROSSING	10 MIN
EASTBOUND 8TH AVENUE	N/A

Updated: 2005/10/19 09:45:01

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Task List

- User requirements
- Preliminary Maintenance Planning
- Data standardization
- Database & transfer
- Internet report generator
- System testing
- Inspection agency reporting
- Institutional issues
- Final report

Project Status

- IMTC Core Group approved in early 2004
- Funding approved by Transport Canada in December 2004
  - Partners: BC MoT, WSDOT ATB
  - In-kind resources: U.W. Transportation Center (TRAC)
- Project advisory team established
- Work started: late June, 2005
- System completed but border facility construction impedes system

Progress to-date

- User requirements report finished (and online at www.wcog.org
- System purchased and under development at U.W.
- Synergies with the TC-FHWA Border Information Flow Architecture (BIFA)
- Many key agreements on data integration.
- Draft System Requirements document
- Maintenance agreements

Free and Secure Trade - FAST

- FAST qualified shipper
- C-TPAT qualified carrier (Customs - Trade Partnership Against Terrorism)
- FAST qualified driver
- Known low risk trusted traveler / trusted shipper program
- 87,000 enrolled nationally
- In WA 13% (70% empty) SB   5% NB

How’s it going?

- Becoming more difficult to qualify
- Expensive for small operators
- Large fleets primary participants
- Marketing
- Empties

Contact:

Whatcom Council of Governments

And

International Mobility and Trade Corridor Project

www.wcog.org

gordon@wcog.org