Weigh-In-Motion System for the Reduction of Commercial Vehicle Traffic Delays at the Borden-Carleton, PEI Weight Inspection Station

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This presentation describes the implementation of the Mainline Weigh-In-Motion (WIM) System at Borden, PEI:

• Issues and Challenges
• Mainline WIM Installation
• Technology Solution
• Benefits
Issues prior to WIM System Deployment

- Bypassing commercial vehicles following high speed wind events on Confederation Bridge
- Unsafe commercial vehicle maneuvers and merging
- Operational inefficiencies due to layout
- Sub-optimized deployment of personnel
- Overweight and over-dimension commercial vehicles on PEI roads
Layout Prior to Egress Redesign
Layout after Egress Redesign
Layout following WIM Installation
Project Challenges

- Multiple party involvement (PEI DTIR & IT, SCDI, and Transport Canada)
- Compressed schedule
- Snow cover during site inspection
- Pavement smoothness
- Traffic safety
Borden Weigh Station
Site Inspection – Snow Cover
Scale Building & Static Scale
Pavement before Resurfacing
Resurfaced Road
Bypass Road during Construction
WIM Scale Vault
Completed WIM Scale Installation
Changeable Message Signs
MAINLINE WIM SOLUTION
Single Load Cell WIM
Single Load Cell WIM
iSINC WIM Electronics
Weigh Station Operations Center

PTZ Camera Monitor

WIM & Camera Monitor (Side View/LPR)

Government License Plate Registration Monitor

Static Scale Control

Static Scale Display

CMS Sign Manual Override
Workstation GUI
Side view and PTZ Cameras
Side-view Camera Image
PTZ Camera Monitor
Changeable Message Signs

TRUCK MUST
REPORT
TO WEIGH SCALE
LE CAMION DOIT
SE RAPPORTER AU
POSTE DE PESÉE
License Plate Reader

- Light Sensor
- Illuminator
- LPR Camera
License Plate Image - Daylight
SYSTEM BENEFITS
Benefits

- Efficient management of commercial vehicle traffic following bridge wind events
- Improved safety with trucks entering and exiting weigh station facility reduced by 70%
- Reduced wear and tear on PEI highways and bridges
- More efficient deployment of personnel
- Commercial vehicle operator time and fuel savings
- Decreased GHG and other emissions
THANK YOU

QUESTIONS?