

TECHNO SIGNZ

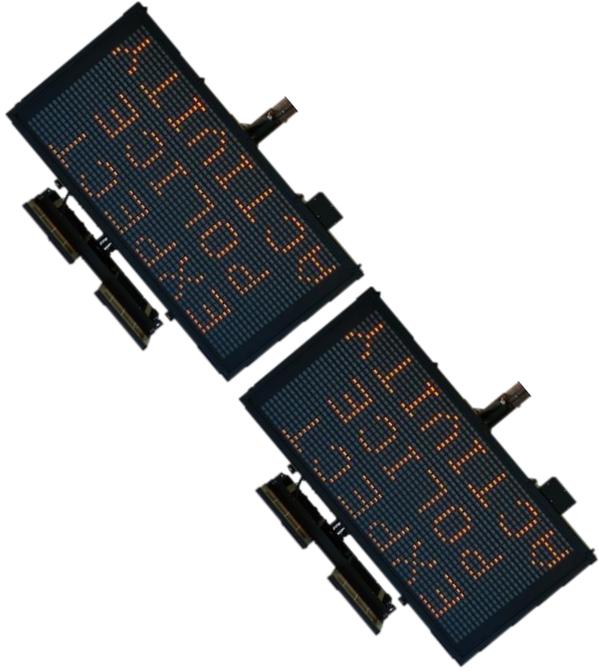


FWMS Sign *INFOSHURE*





PLEASE DRIVE SAFELY



TECHNO SIGNZ

Other vs. Techno

- Requires 24-hour monitoring of cameras
- Time-lag from identification to manual update
- Lack accuracy since detected by alarm in storage tanks
- System only used for flooding, one season



**CRUDE
VULNERABLE
CLOSED SYSTEM**

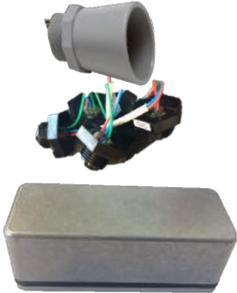
**AUTOMATIC
FAULT TOLERANT
INTEGRATIVE**

- Does not require monitoring, system is automatic
- System & signage are updated in real-time
- Can detect ice & include other detections like speed, weather etc.
- Can be incorporated to a citywide, yearlong system

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How It Works

Semi-conductor sensors and an ultrasonic sensor are placed in enclosures and are used to precisely read water levels underneath the underpass.



Once dangerous water levels occur, the semi-conductor sensors and/or the ultrasound sensors will detect this occurrence and send a signal to the processing unit.

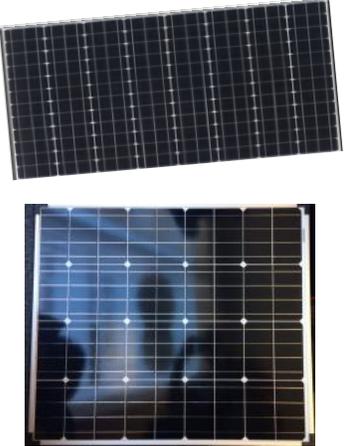


The processing unit then sends the warning message to the message boards. This occurs in real-time through GSM technologies.



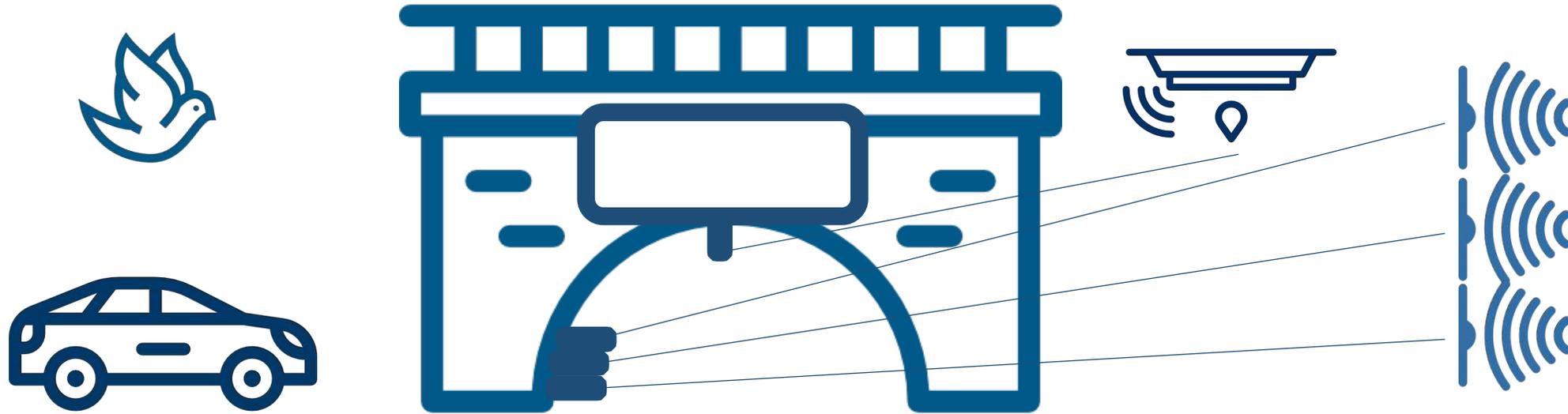
Depending on the level of water detected, the message may warn road users to reduce speed or to take the next turn off immediately.

Sensors, processing unit and message boards are all powered by solar panels to ensure reliability.



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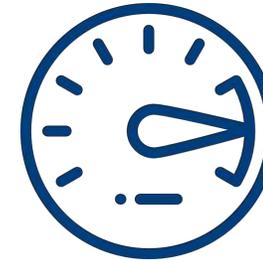
Fault-Tolerance



Whether it's a car or a bird passing under the bridge, the fault-tolerant system will ensure accurate data is being transmitted from the sensors. The processing unit makes decisions based on the majority of sensors' output, therefore significantly decreasing the likelihood of faulty data transmissions.

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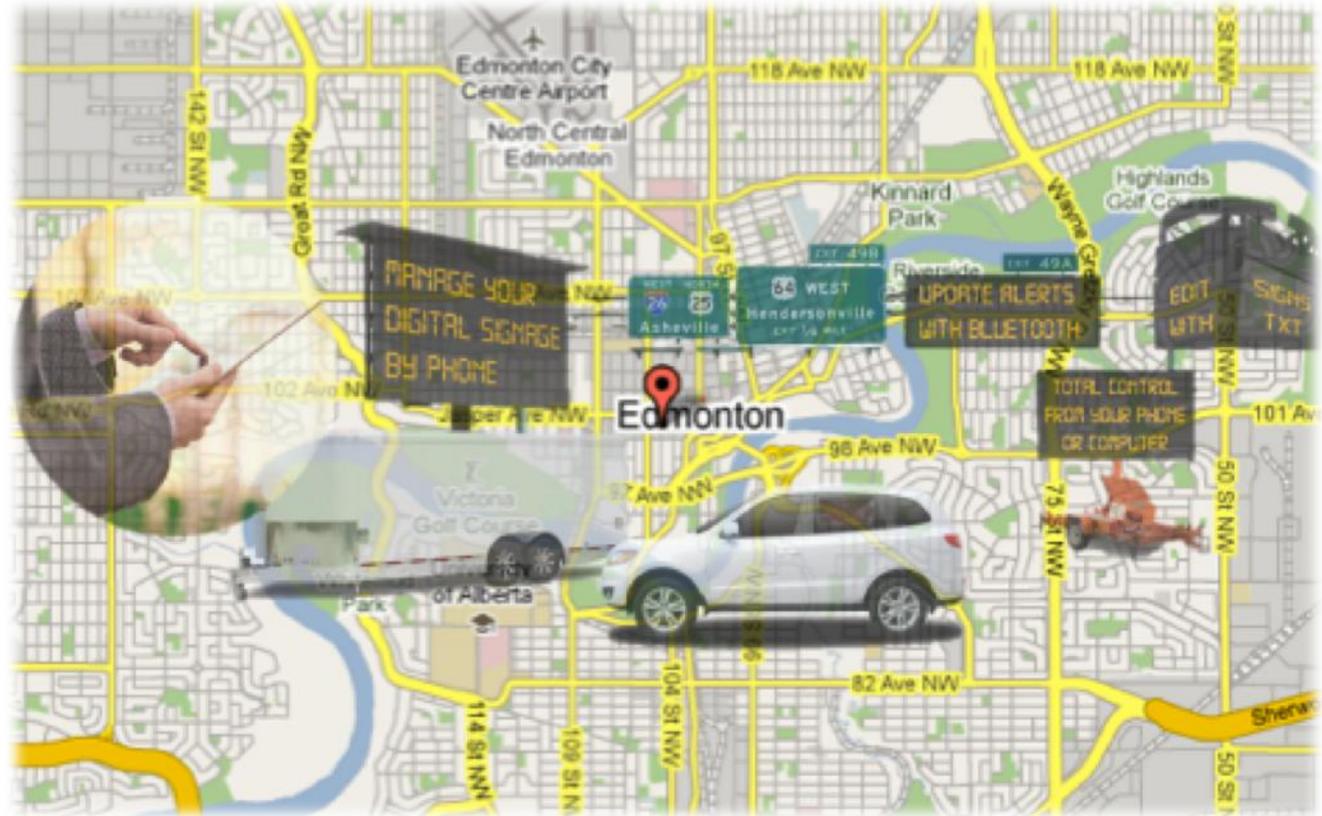
Yearlong Solution



**DISTRACTED
DRIVING KILLS**

In many localities, flooding is only a seasonal occurrence, and even then it occurs sporadically. The FWMS can serve as a yearlong solution by providing warnings for icy conditions, fog, speeding, weather and public service announcements.

FWMS SIGN Citywide Solution



FWMS has the potential to be integrated into a Comprehensive Citywide Messaging System (CCMS). The CCMS would incorporate all city messaging systems to an information center which centralizes the information. This would mean warning messages could be shown on all signs instantaneously and incorporate more functionality.

FWMS SIGN

Additional Info



FWMS

Flood-Warning Messaging System



SIGN

Height: 4'

Length: 8'

Width: 1.5'

Weight: 4x 500lbs

Other: ultra-sonic (Maxsonar-7563) & semi-conductor sensors, processing unit: Snapdragon 410

DISPLAY

Module: P20

Resolution: 112x64pixels

Pixel Pitch: 20mm

Brightness: $\geq 5,500\text{cd/m}^2$

Other: solar-powered, optional auto-dimming

915MHz  **Connected**

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780.686.8604

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Techno Checks

- ✓ **Solar-powered for a greener city**
- ✓ **Can operate in temperatures as low as -40°C**
 - ✓ **Includes self-cleaning sensor apparatus**
 - ✓ **Cost-effective compared to alternatives**
 - ✓ **The beginning of a smarter, safer city**
- ✓ **Temperature sensor used for further accuracy**



TechnoSignz.ca