Appendix I-80 Winter Operations Coalition Fact Sheet

- TOC/TMC

  -Monitors and controls traffic and the road network
  -Collects and processes freeway system data, combines it with other operational and control data, synthesizes it to produce "information"
  - Distributes information to stakeholders such as the media, other agencies and traveling public Monitors freeway operations and initiates control strategies
  - Agencies also coordinate their responses to traffic conditions and incidents through the TOC/TMC
  - Different hours of operation and staffing shifts
  - Typically the central point for weather data

- Reporting Systems

  - Systems for facilitating real-time electronic reporting of surface transportation incidents and data to a central location
  - Different systems collect different information (i.e. traffic and public safety) and are beneficial to integrate

- Closed Circuit Television (CCTV)

  - Typically distributed along the urban roadways, passes, and state borders to monitor and control traffic
  - They are important traveler information tools for sharing video images with motorists and freight travelers

- Dynamic Message Signs (DMS)

  - Used to display relevant information about the roads for the traveler such as conditions, dynamic travel times, road closures, and special event details
  - Centralized communications (via fiber, wireless, or telephone leased lines) back to an operations center for control/management

- Highway Advisory Radio (HAR)

  - Low-powered radio transmitter licensed for state use in the AM frequency
  - Transmit traveler information in short, pre-recorded messages that alert drivers of severe weather conditions, construction, incidents, or congestion
  - Beneficial for freight community for access to traveler information about road currently traveling

- 511

- Provides route-specific road condition reports and travel forecasts
- Weather information for 511 is provided on a segment-by-segment basis and is focused on the travel impact of weather conditions
- 511 can be provided through a phone service, website, or mobile phone capabilities

- Other Traveler Information Tools

  - These can include, SMS/emails, in-vehicle devices, kiosks, wireless hot spots or media
  - Weather forecast services can be provided

- Maintenance Decision Support System

  - Decision support software tool that provides winter maintenance managers with recommended road treatment strategies
  - Used for strategic planning 12-48 hours in advance of a storm or during a storm in the 0-12 hour timeframe
  - Can provide two-way communication links between maintenance supervisors and trucks using mobile communication and AVL technology
  - Generates treatment quantities, timing, and personnel recommendations based on predicted pavement temperature/condition, weather impacts, frost potential, and blowing snow potential

- Automated Vehicle Location

  - Provides vehicle location to operating agency
  - Can be used to calculate travel times and alert of slowed conditions (although not typically used for maintenance vehicle applications)

  - Typical deployments on public safety vehicles, maintenance vehicles, and fleet vehicles

- Automated Closure Gates

  - Provides automatic closure of roadway from a centralized operations center
  - Also provides remote control and manual options for closing in the event that communications to operations center is hindered

- Automated Anti-Icing / Deicing Systems

  - Anti-icing involves pre-treating a road before the freezing weather or storm arrives

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- Anti-icing can be more effective when coupled with an RWIS station to identify and verify when the system needs to be used

- RWIS and ESS

  - ESS is a roadway location with one or more fixed sensors measuring atmospheric, pavement and/or water level conditions
  - ESS are typically deployed as field components of RWIS
  - Data collected from environmental sensors are stored onsite in a remote processing unit that is connected to a center for data transfer
  - Some RWIS have been equipped with CCTV cameras for visibility verification

- Clarus Initiative Involvement

  - Goal is to create a National surface transportation weather observing and forecasting system through the creation of partnerships between transportation and weather agencies
  - Strives to place all regional/nationwide collection of all state-funded transportation related observations into a single database

- IntelliDriveSM technologies

  - A suite of technologies and applications that use wireless communications to provide connectivity that can deliver transformational safety, mobility, and environmental improvements in surface transportation

  - Provides connectivity with and among vehicles, between vehicles and the roadway infrastructure

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