

APPENDIX H

Flow Definitions

Flow Name	Flow Description	Flow Kind	Flow Type
accident report	Report of commercial vehicle safety accident. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.	National	Information
air quality information	Aggregated region-wide measured air quality data and possible pollution incident information.	National	Information
alarm acknowledge	Confirmation that alarm was received, instructions and additional information for the alarm initiator, and requests for additional information.	National	Information
alarm notification	Notification of activation of an audible or silent alarm by a traveler in a public area or by a transit vehicle operator using an on-board device.	National	Information
alert notification	Notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The flow identifies the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, and information and instructions necessary for the public to respond to the alert. This flow may also identify specific information that should not be released to the public.	National	Information
alert notification coordination	Coordination of emergency alerts to be distributed to the public. This includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public and status of the public notification.	National	Information
alert status	Information indicating the current status of the emergency alert including identification of the traveler and driver information systems that are being used to provide the alert.	National	Information
alerts and advisories	Assessments (general incident and vulnerability awareness information), advisories (identification of threats or recommendations to increase preparedness levels), and alerts (information on imminent or in-progress emergencies). This flow also provides supporting descriptive detail on incidents, threats, and vulnerabilities to increase preparedness and support effective response to threats against the surface transportation system.	National	Information
alternate mode information	Schedule information for alternate mode transportation providers such as air, ferry, and passenger-carrying heavy rail.	National	Information
archive analysis requests	A user request that initiates data mining, analytical processing, aggregation or summarization, report formulation, or other advanced processing and analysis of archived data. The request also includes information that is used to identify and authenticate the user and support electronic payment requirements, if any.	National	Request
archive analysis results	Processed information products, supporting meta data, and any associated transaction information resulting from data mining, analytical processing, aggregation or summarization, report formulation, or other on-line processing and analysis of archived data.	National	Information
archive coordination	Catalog data, meta data, published data, and other information exchanged between archives to support data synchronization and satisfy user data requests.	National	Information
archive request confirmation	Confirmation that an archive request has been received and processed with information on the disposition of the request.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
archive requests	A request to a data source for information on available data (i.e., "catalog") or a request that defines the data to be archived. The request can be a general subscription intended to initiate a continuous or regular data stream or a specific request intended to initiate a one-time response from the recipient.	National	Request
archive status	Notification that data provided to an archive contains erroneous, missing, or suspicious data or verification that the data provided appears valid. If an error has been detected, the offending data and the nature of the potential problem are identified.	National	Information
archived data product requests	A user-specified request for archived data products (i.e., data, meta data, or data catalogs). The request also includes information that is used to identify and authenticate the user and support electronic payment requirements, if any.	National	Request
archived data products	Raw or processed data, meta data, data catalogs and other data products provided to a user system upon request. The response may also include any associated transaction information.	National	Information
arrival notification	Notification of arrival (and departure) of a motor vehicle at the inspection station.	National	Information
asset archive data	Information describing transportation assets including pavements, bridges, and all other infrastructure included in the transportation network. In addition, information can cover support assets (support equipment and systems, software, etc.). Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
asset damage assessment	Information indicating the damage sustained by transportation assets, derived from aerial surveillance, field reports, inspections, tests, and analyses.	National	Information
asset inventory	Information on pavement, bridges, signs and other assets. This includes asset location, installation information, materials information, vendor/contractor information, current maintenance status, and a variety of other information (e.g., video logs) that define the transportation infrastructure.	National	Information
asset restrictions	Restrictions levied on transportation asset usage based on infrastructure design, surveys, tests, or analyses. This includes standard height, width, and weight restrictions by facility as well as special restrictions such as spring weight restrictions and temporary bridge weight restrictions.	National	Information
asset status update	Changes to status of pavement, bridges, signs and other assets resulting from maintenance or construction activities or infrastructure monitoring. The updates may include changes in installation information, materials information, vendor/contractor information, condition, and current maintenance status. In addition to infrastructure asset updates, the information provided may also include status of the maintenance and construction support assets, including vehicle and equipment utilization and repair records.	National	Information
audit data	Information to support a tax audit.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
automated lane control data	Control commands and operating parameters provided to RSEs that control and monitor automated vehicle operations, including tightly coupled platooned groups of vehicles operating in dedicated or mixed-mode lanes. This flow includes platoon parameters including maximum platoon size, target speeds and gaps, and vehicle restrictions.	National	Information
automated lane status	Current operational status of lanes supporting automated vehicle operations. The flow includes the status of the RSEs, associated field equipment, and vehicles using the facility.	National	Information
barrier system control	Information used to configure and control barrier systems that are represented by gates, barriers and other automated or remotely controlled systems used to manage entry to roadways.	National	Information
barrier system status	Current operating status of barrier systems. Barrier systems represent gates, barriers and other automated or remotely controlled systems used to manage entry to roadways. Status of the systems includes operating condition and current operational state.	National	Information
border card data	Personal identification data from ID cards used by travelers at border crossings.	National	Information
border clearance status	Notification regarding the crossing status of commercial freight shipment scheduled to enter the U.S. Includes portions of border agency and transportation agency clearance results, as they become available.	National	Information
border crossing status information	Port of entry status including current wait-times, lane configuration and status including closures and restrictions, and notification of incidents at the border	National	Information
border information archive data	Border inspection activities data. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
border security input	Information regarding security related events occurring at the border.	National	Information
broadcast advisories	General broadcast advisories that are provided over wide-area wireless communications direct to the vehicle radio. These analog advisory messages may provide similar content to ITS broadcast information flows, but include no digital data component. Existing Highway-Advisory Radio (HAR) advisory messages are a prime example of this flow.	National	Information
broadcast traveler information	General traveler information that contains traffic and road conditions, link travel times, incidents, advisories, restrictions, transit service information, weather information, parking information, and other related traveler information.	National	Information
carrier participation report	Report that summarizes motor carrier participation in CVO programs. Used to identify the level of active participation and to report which enrolled carriers are not participating as expected.	National	Information
center archive data	Information describing center operations and measures that reflect the impact of these operations on the transportation system. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
center fault data	Fault information that can be used to identify centers that require initialization, reconfiguration, or repair. This flow identifies the center, the nature of the fault, and associated error codes and diagnostic data.	National	Information
center status	Represents the interactive monitoring of system operations by the Service Monitor. It includes device housekeeping/heartbeat monitoring and network monitoring information, the status of installed applications, and the configuration of managed devices.	National	Information
citation	Report of commercial vehicle citation. The citation includes references to the statute(s) that was (were) violated. It includes information on the violator and the officer issuing the citation. A citation differs from a violation because it is adjudicated by the courts. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.	National	Information
clearance notification	Notification that cargo has been cleared through customs.	National	Information
client verification information	Information about carriers who have made border credential applications such as commercial drivers license information and carrier safety status.	National	Information
client verification request	Request for information such as commercial drivers license information and carrier safety status.	National	Request
commercial vehicle archive data	Information describing commercial vehicle travel and commodity flow characteristics. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
commercial vehicle incident notification	Information about a Commercial Vehicle or Freight Equipment breach, non-permitted security sensitive hazmat detected at the roadside, route deviation, or Commercial Vehicle Driver / Commercial Vehicle / Freight Equipment assignment mismatches which includes the location of the Commercial Vehicle and appropriate identities.	National	Information
commercial vehicle permit	Australia-specific flow	National	Information
commercial vehicle permit information	Information about commercial vehicle permits for oversize, overweight, or for dangerous goods.	National	Information
commercial vehicle trip information	Information about vehicle trips including load information, location, speed, and routing. The information would be sanitized for distribution outside of the commercial vehicle company.	National	Information
commercial vehicle violation notification	Notification to enforcement agency of a violation. The violation notification flow describes the statute or regulation that was violated and how it was violated (e. g., overweight on specific axle by xxx pounds or which brake was out of adjustment and how far out of adjustment it was). A violation differs from a citation because it is not adjudicated by the courts.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
communications signature	Communications from devices on-board a vehicle, including personal devices that are carried into the vehicle, that can be monitored by ITS field equipment to uniquely identify the vehicle. This flow represents communications from Bluetooth device(s) on-board a vehicle that may be monitored by ITS field equipment or any other passive or active communications from the vehicle that can be used to identify a vehicle to support traffic monitoring. This flow specifically covers passive monitoring of vehicle communications. Other information flows cover active communications between ITS equipment on-board a vehicle and ITS field equipment.	National	Information
compliance review report	Report containing results of carrier compliance review, including concomitant out-of-service notifications, carrier warnings/notifications. The information may be provided as a response to a real-time query of proactively by the source. The query flow is not explicitly shown.	National	Information
consolidated agency response	Electronic manifest data as well as commercial vehicle screening results.	National	Information
credential application	Application for commercial vehicle credentials. Authorization for payment is included.	National	Information
credential fee coordination	Jurisdiction's rates for various credentials (IRP, IFTA, etc.) that are exchanged between agencies.	National	Information
credentials information	Response containing full vehicle fuel tax and registration credentials information. "Response" may be provided in reaction to a real-time query or a standing request for updated information. The query flow is not explicitly shown.	National	Information
credentials status information	Credentials information such as registration, licensing, insurance, check flags, and electronic screening enrollment data. A unique identifier is included. Corresponds to the credentials portion of CVISN "snapshots." The status information may be provided as a response to a real-time query or as a result of a standing request for updated information (subscription). This may also include information about non-U.S. fleets for use by U.S. authorities, and information regarding U.S. fleets made available to Mexican and Canadian authorities. The query flow is not explicitly shown.	National	Information
current infrastructure restrictions	Restrictions levied on transportation asset usage based on infrastructure design, surveys, tests, or analyses. This includes standard facility design height, width, and weight restrictions, special restrictions such as spring weight restrictions, and temporary facility restrictions that are imposed during maintenance and construction.	National	Information
cv driver credential	Driver information (e.g., identity, biometrics, address, date of birth, endorsements, restrictions) stored on a driver's license or other official identification card used to identify a driver of commercial vehicles.	National	Information
cv driver record	Information typically maintained by a state driver licensing agency about a driver of a commercial vehicle including driver identification data, license data, permit data, and driving history details. The query flow is not explicitly shown.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
cv repair status	Information about the completion of a repair to a commercial vehicle.	National	Information
daily site activity data	Record of daily activities at commercial vehicle check stations including summaries of screening events and inspections.	National	Information
data collection and monitoring control	Information used to configure and control data collection and monitoring systems.	National	Information
decision support information	Information provided to support effective and safe incident response, including local traffic, road, and weather conditions, hazardous material information, and the current status of resources (including vehicles, other equipment, supplies) that have been allocated to an incident.	National	Information
demand response passenger and use data	Data collected on board a demand response vehicle relating to the picking up and discharging of passengers.	National	Information
demand responsive transit plan	Plan regarding overall demand responsive transit schedules and deployment.	National	Information
demand responsive transit request	Request for paratransit support.	National	Request
device control request	Request for device control action	National	Information
device data	Data from detectors, environmental sensor stations, roadside equipment, and traffic control devices, including device inventory information.	National	Information
device status	Status information from devices	National	Information
driver input information	Driver input received from the driver-vehicle interface equipment via the vehicle bus. It includes configuration data, settings and preferences, interactive requests, and control commands for the connected vehicle on-board equipment.	National	Information
driver log	A daily log showing hours in service for the current driver. The query flow is not explicitly shown.	National	Information
driver to fleet request	Requests from the driver and vehicle for routing, payment, and enrollment information.	National	Request
driver update information	Information provided to the driver-vehicle interface to inform the driver about current conditions, potential hazards, and the current status of vehicle on-board equipment. The flow includes the information to be presented to the driver and associated metadata that supports processing, prioritization, and presentation by the DVI as visual displays, audible information and warnings, and/or haptic feedback.	National	Information
electronic screening request	Request for identification data to support electronic screening.	National	Request
emergency acknowledge	Acknowledge request for emergency assistance and provide additional details regarding actions and verification requirements.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
emergency archive data	Logged emergency information including information that characterizes identified incidents (routine highway incidents through disasters), corresponding incident response information, evacuation information, surveillance data, threat data, and resource information. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
emergency data request	A request for additional information or a control command issued by the emergency response agency in response to an emergency request for assistance from a traveler.	National	Request
emergency dispatch requests	Emergency vehicle dispatch instructions including incident location and available information concerning the incident.	National	Request
emergency dispatch response	Request for additional emergency dispatch information and provision of en route status.	National	Information
emergency notification	An emergency request for assistance that is automatically initiated by a vehicle or manually initiated by a vehicle occupant. The request includes call-back number, date, time, location, pre-event vehicle heading, vehicle make, model, model year, and fuel type, and crash severity indicators. Crash severity indicators include: airbags deployed, number of impacts, crash delta velocity, principle direction of force, and rollover indication. In addition, seatbelt restraint use, number of occupants, occupant location, and intrusion may be included. For commercial vehicles, this flow may also include freight equipment type (box, flatbed, trailer, container, etc.), type of cargo (refrigerated, non-perishable, liquid, etc.), hazardous material data, quantity of cargo, and cargo permits as applicable (hazmat, special routing permissions).	National	Information
emergency notification relay	The relay of a previously received emergency notification. This relay enables a connected vehicle that is passing within radio range of a vehicle in need of assistance to store the notification and then forward it to a public safety agency when communications is available. Multiple relays may be necessary in remote areas with infrequent traffic and spotty communications coverage. The relay includes all of the information included in the original emergency notification (see 'emergency notification') and relay-specific data that can be used to manage the relay. Relay-specific data may include the date and time of original emergency notification receipt and the number of times the message has been relayed.	National	Information
emergency plan coordination	Information that supports coordination of emergency management plans, continuity of operations plans, emergency response and recovery plans, evacuation plans, and other emergency plans between agencies. This includes general plans that are coordinated prior to an incident and shorter duration tactical plans that are prepared during an incident.	National	Information
emergency route request	Request for access routes for emergency response vehicles and equipment. This may be a request for ingress or egress routes or other emergency routes.	National	Request

Flow Name	Flow Description	Flow Kind	Flow Type
emergency routes	Suggested ingress and egress routes for access to and between the scene and staging areas or other specialized emergency access routes.	National	Information
emergency traffic control information	Status of a special traffic control strategy or system activation implemented in response to an emergency traffic control request, a request for emergency access routes, a request for evacuation, a request to activate closure systems, a request to employ driver information systems to support public safety objectives, or other special requests. Identifies the selected traffic control strategy and system control status.	National	Information
emergency traffic control request	Special request to preempt the current traffic control strategy in effect at one or more signalized intersections or highway segments, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems. For example, this flow can request all signals to red-flash, request a progression of traffic control preemptions along an emergency vehicle route, request a specific evacuation traffic control plan, request activation of a road closure barrier system, or place a public safety or emergency-related message on a dynamic message sign.	National	Request
emergency traffic coordination	Coordination supporting disaster response including evacuation and reentry. Includes coordination of special traffic control strategies that support efficient evacuation and reentry while protecting and optimizing movement of response vehicles and other resources responding to the emergency.	National	Information
emergency transit schedule information	Information on transit schedule and service changes that adapt the service to better meet needs of responders and the general public in an emergency situation, including special service schedules supporting evacuation.	National	Information
emergency transit service request	Request to modify transit service and fare schedules to address emergencies, including requests for transit services to evacuate people from and/or deploy response agency personnel to an emergency scene. The request may poll for resource availability or request pre-staging, staging, or immediate dispatch of transit resources.	National	Request
emergency transit service response	Response indicating changes to transit service, fares, and/or restrictions that will be made and status of transit resources to be deployed to support emergency response and/or evacuation.	National	Information
emergency traveler information	Public notification of an emergency such as a natural or man-made disaster, civil emergency, or child abduction. This flow also includes evacuation information including evacuation instructions, evacuation zones, recommended evacuation times, tailored evacuation routes and destinations, traffic and road conditions along the evacuation routes, traveler services and shelter information, and reentry times and instructions.	National	Information
emergency traveler information request	Request for alerts, evacuation information, and other emergency information provided to the traveling public.	National	Request
emergency vehicle tracking data	The current location and operating status of the emergency vehicle.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
emissions archive data	Air quality and vehicle emissions information that is collected by sensors or derived from models. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
environmental conditions data	Current road conditions (e.g., surface temperature, subsurface temperature, moisture, icing, treatment status) and surface weather conditions (e.g., air temperature, wind speed, precipitation, visibility) as measured and reported by fixed and/or mobile environmental sensors and aggregated by the data collector. Attributes relating to the data collection (and aggregation) are also included.	National	Information
environmental conditions data status	Status of the data quality of environmental conditions data provided by a data contributor. Includes not only status by sensor, but statistical data regarding the quality checking of data provided.	National	Information
environmental monitoring application info	Environmental monitoring application parameters and thresholds that control the filtering, aggregation, and range of measures that are collected, derived, and reported. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.	National	Information
environmental monitoring application status	Environmental monitoring application status reported by the RSE. This includes current operational state and status of the RSE and a record of system operation.	National	Information
environmental sensor data	Current road conditions (e.g., surface temperature, subsurface temperature, moisture, icing, treatment status) and surface weather conditions (e.g., air temperature, wind speed, precipitation, visibility) as measured and reported by fixed and/or mobile environmental sensors. Operational status of the sensors is also included.	National	Information
environmental sensors control	Data used to configure and control environmental sensors.	National	Information
environmental situation data	Aggregated and filtered vehicle environmental data collected from vehicle safety and convenience systems including measured air temperature, exterior light status, wiper status, sun sensor status, rain sensor status, traction control status, anti-lock brake status, and other collected vehicle system status and sensor information. This information flow represents the aggregated and filtered environmental data sets that are provided by the RSE to the back office center. Depending on the RSE configuration and implementation, the data set may also include environmental sensor station data collected by the RSE.	National	Information
equipment control commands	System-level control commands issued to the RSE such as reset and remote diagnostics.	National	Information
equipment maintenance request	Identification of field equipment requiring repair and known information about the associated faults.	National	Information
equipment maintenance status	Current status of field equipment maintenance actions.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
evacuation assistance information	Information on evacuation resources including self-evacuation options, anticipated pickup time and location if a transportation asset is to be deployed, destination shelter, and supporting information on what to bring, estimated reentry date/time.	National	Information
evacuation assistance request	A request for evacuation assistance, which may be registered in advance or issued during an evacuation. It specifies the location, number of people that need to be evacuated, and any special needs/requirements.	National	Request
evacuation coordination	Coordination of information regarding a pending or in-process evacuation. Includes evacuation zones, evacuation times, evacuation routes, forecast network conditions, and reentry times.	National	Information
evacuation information	Evacuation instructions and information including evacuation zones, evacuation times, and reentry times.	National	Information
expedited clearance information	Includes carrier ID, importer ID, broker ID, conveyance ID, driver ID, service options, and associated information that is used to support expedited border clearance.	National	Information
expedited clearance registration	Registration of the importer, carrier, conveyance, and driver, as applicable, for border clearance programs such as FAST, Customs Self Assessment (Canada), C-TPAT (US), PIP (Canada), ACI (Canada), and ACE (US). Includes electronic filing of forms and associated payment.	National	Information
expedited clearance status	Status of expedited clearance registration.	National	Information
external reports	Traffic and incident information that is collected by the media through a variety of mechanisms (e.g., radio station call-in programs, air surveillance).	National	Information
fare and price information	Current transit, parking, and toll fee schedule information.	National	Information
fare collection data	Fare collection information including the summary of fare system data and financial payment transaction data.	National	Information
fare management information	Transit fare information and transaction data used to manage transit fare processing.	National	Information
field equipment commands	System-level control commands issued to field equipment such as reset and remote diagnostics.	National	Information
field equipment configuration settings	Control settings and parameters that are used to configure field equipment.	National	Information
field equipment software install/upgrade	This flow supports installation and update of software residing in ITS roadway equipment. It supports download of the software installation files, including executable code and associated support files.	National	Information
field equipment status	Reports from field equipment (sensors, signals, signs, controllers, etc.) which indicate current operational status.	National	Information
fleet to driver update	Updated instructions to the driver including dispatch, routing, and special instructions, including alerts and other advisories.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
freight equipment information	Container, trailer, or chassis information regarding identity, type, location, brake wear data, mileage, seal #, seal type, door open/close status, chassis bare/covered status, tethered / untethered status, temperature, humidity, power, battery levels, brake wear data, and bill of lading/information regarding the cargo/content.	National	Information
freight transport booking	Booking information for the transport of freight that includes company, contact information, point of origin, pick-up location, drop-off location, and freight equipment identifier.	National	Information
freight transportation status	A time-stamped status of a freight shipment as it passes through the supply chain from manufacturer through arrival at its final destination; including cargo movement logs, routing information, and cargo ID's.	National	Information
freight traveler information preferences	Traveler information preferences from fleet and freight management systems or commercial vehicle drivers including: area covered by fleet/driver, types of freight managed (including special restrictions), preferred routes, other travel preferences pertaining to trip costs or tolls.	National	Information
freight-specific traveler information	Traveler information customized for freight users to indicate truck routes, permit information, truck stops, inspection stations, steep grades, high-profile vehicle advisories, etc. Information provided includes freight-related road and weather conditions, parking information, and route plans.	National	Information
hazmat information	Information about a particular hazmat load including nature of the load and unloading instructions. May also include hazmat vehicle route and route update information.	National	Information
hazmat information request	Request for information about a particular hazmat load.	National	Request
hazmat spill notification	Information provided to emergency response organizations when cargo sensors detect a release of hazardous material. This information will include sensor information, vehicle location and identification, and carrier identification.	National	Information
host transit vehicle status	Information provided to the ITS on-board equipment from other systems on the Transit Vehicle Platform.	National	Information
host vehicle status	Information provided to the ITS on-board equipment from other systems on the vehicle platform. This includes the current status of the powertrain, steering, and braking systems, and status of other safety and convenience systems. In implementations where GPS is not integrated into the Vehicle On-Board Equipment, the host vehicle is also the source for data describing the vehicle's location in three dimensions (latitude, longitude, elevation) and accurate time that can be used for time synchronization across the ITS environment.	National	Information
incident command information coordination	Information that supports local management of an incident. It includes resource deployment status, hazardous material information, traffic, road, and weather conditions, evacuation advice, and other information that enables emergency or maintenance personnel in the field to implement an effective, safe incident response.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
incident information	Notification of existence of incident and expected severity, location, time and nature of incident. As additional information is gathered and the incident evolves, updated incident information is provided. Incidents include any event that impacts transportation system operation ranging from routine incidents (e.g., disabled vehicle at the side of the road) through large-scale natural or human-caused disasters that involve loss of life, injuries, extensive property damage, and multi-jurisdictional response. This also includes special events, closures, and other planned events that may impact the transportation system.	National	Information
incident information for media	Report of current desensitized incident information prepared for public dissemination through the media.	National	Information
incident information for public	Report of current desensitized incident information prepared for public dissemination through the telecommunications system.	National	Information
incident notification	The notification of an incident including its nature, severity, and location.	National	Information
incident notification response	Interactive acknowledgement and verification of the incident information received, requests for additional information, and general information on incident response status.	National	Information
incident report	Report of an identified incident including incident location, type, severity and other information necessary to initiate an appropriate incident response.	National	Information
incident response coordination	Incident response procedures and current incident response status that are shared between allied response agencies to support a coordinated response to incidents. This flow provides current situation information, including a summary of incident status and its impact on the transportation system and other infrastructure, and current and planned response activities. This flow also coordinates a positive hand off of responsibility for all or part of an incident response between agencies.	National	Information
incident response status	Status of the current incident response including a summary of incident status and its impact on the transportation system, traffic management strategies implemented at the site (e.g., closures, diversions, traffic signal control overrides), and current and planned response activities.	National	Information
incident status	Information gathered at the incident site that more completely characterizes the incident and provides current incident response status. This includes notification of medical facility transport and details about the vehicle occupants being transported.	National	Information
information on violators	Information on violators provided by a law enforcement agency. May include information about commercial vehicle violations or other kinds of violations associated with the particular entity. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.	National	Information
inspection results	Report of results of border inspection on a particular load.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
interactive traveler information	Traveler information provided in response to a traveler request. The provided information includes traffic and road conditions, advisories, incidents, payment information, transit services, parking information, weather information, and other travel-related data updates and confirmations.	National	Information
intersection geometry	The physical geometry of an intersection covering the location and width of each approaching lane, egress lane, and valid paths between approaches and egresses. This flow also defines the location of stop lines, cross walks, specific traffic law restrictions for the intersection (e.g., turning movement restrictions), and other elements that support calculation of a safe and legal vehicle path through the intersection.	National	Information
intersection management application info	Intersection and device configuration data and warning parameters and thresholds. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.	National	Information
intersection management application status	Infrastructure application status reported by the RSE. This includes current operational state and status of the RSE and a log of operations.	National	Information
intersection status	Current signal phase and timing information for all lanes at a signalized intersection. This flow identifies active lanes and lanes that are being stopped and specifies the length of time that the current state will persist for each lane. It also identifies signal priority and preemption status and pedestrian crossing status information where applicable.	National	Information
lane management control	Information used to configure and control dynamic lane management systems.	National	Information
lane management information	System status of managed lanes including current operational state, violations, and logged information. This includes lane usage information including both traditional traffic flow measures and special information associated with managed lanes such as measured passenger occupancies. It also includes the operational status of the lane management equipment.	National	Information
lighting system control data	Information used to configure and control roadside lighting systems.	National	Information
lighting system status	Status of roadside lighting controls including operating condition and current operational state.	National	Information
local signal preemption request	Direct control signal or message to a signalized intersection that results in preemption of the current control plan and grants right-of-way to the requesting vehicle.	National	Information
local signal priority request	Request from a vehicle to a signalized intersection for priority at that intersection. This flow also allows the vehicle to cancel a priority request (for example, when the vehicle clears the intersection).	National	Information
local situation data	This general flow represents the traffic, environmental, and emissions situation data that is collected from connected vehicles by an RSE, aggregated, filtered, and provided to a back-office center. It also includes data collected from ITS roadway equipment that provides current intersection and road network status for the area proximate to the RSE.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
location and time	The current geographic location in three dimensions (latitude, longitude, elevation) and the current time.	National	Information
location correction	Information provided to improve positional accuracy. These corrections allow a mobile GPS receiver, such as a GPS system in a connected vehicle, to achieve a greater absolute positional accuracy, compensating for errors that exist in satellite positioning.	National	Information
logged vehicle routes	Anticipated route information for guided vehicles, special vehicles (e.g., oversized vehicles) or groups of vehicles (e.g., governor's motorcade) that may require changes in traffic control strategy.	National	Information
maint and constr archive data	Information describing road construction and maintenance activities identifying the type of activity, the work performed, and work zone information including work zone configuration and safety (e.g., a record of intrusions and vehicle speeds) information. For construction activities, this information also includes a description of the completed infrastructure, including as-built plans as applicable. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
maint and constr dispatch information	Information used to dispatch maintenance and construction vehicles, equipment, and crews and information used to keep work zone crews informed. This information includes routing information, traffic information, road restrictions, incident information, environmental information, decision support information, maintenance schedule data, dispatch instructions, personnel assignments, alert notifications, and corrective actions.	National	Information
maint and constr dispatch status	Current maintenance and construction status including work data, operator status, crew status, and equipment status.	National	Information
maint and constr material information	Information on materials stored on the vehicle including quantity and current application rate.	National	Information
maint and constr resource coordination	Request for road maintenance and construction resources that can be used in the diversion of traffic (cones, portable signs), clearance of a road hazard, repair of ancillary damage, or any other incident response.	National	Information
maint and constr resource request	Request for road maintenance and construction resources that can be used in the diversion of traffic (cones, portable signs), clearance of a road hazard, repair of ancillary damage, or any other incident response. The request may poll for resource availability or request pre-staging, staging, or immediate dispatch of resources.	National	Request
maint and constr resource response	Current status of maintenance and construction resources including availability and deployment status. General resource inventory information covering vehicles, equipment, materials, and people and specific resource deployment status may be included.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
maint and constr vehicle conditions	Vehicle diagnostics information that is collected, filtered, and selectively reported by a maintenance and construction vehicle. The information includes engine temperature, mileage, tire wear, brake wear, belt wear, and any warnings or alarms concerning the operational condition of the vehicle and ancillary equipment.	National	Information
maint and constr vehicle control	Control data sent from on-board ITS systems to control maintenance and construction vehicle equipment, including control of materials dispersion rate and other control functions that will vary with vehicle type and application.	National	Information
maint and constr vehicle location data	The current location and related status (e.g., direction and speed) of the maintenance/construction vehicle.	National	Information
maint and constr vehicle measures	Raw vehicle diagnostics and operating status data reported by the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures. In addition to this general vehicle status, this flow also includes the status of maintenance and construction-specific systems on the vehicle.	National	Information
maint and constr vehicle operational data	Data that describes the maintenance and construction activity performed by the vehicle. Operational data includes materials usage (amount stored and current application rate), operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), vehicle safety status, and other measures associated with the operation of a maintenance, construction, or other special purpose vehicle. Operational data may include basic operational status of the vehicle equipment or a more precise record of the work performed (e.g., application of crack sealant with precise locations and application characteristics).	National	Information
maint and constr vehicle system control	Configure and control data that supports remote control of on-board maintenance and construction vehicle systems and field equipment that is remotely controlled by the vehicle. For example, the data can be used to adjust material application rates and spread patterns.	National	Information
maint and constr work plans	Future construction and maintenance work schedules and activities including anticipated closures with anticipated impact to the roadway, alternate routes, anticipated delays, closure times, and durations.	National	Information
maintenance and repair needs	Recommended strategies and schedules for maintenance of the transportation infrastructure.	National	Information
manifest data	Identifies Port of Entry, date, and information on carrier and goods, origin, etc.	National	Information
manifest receipt confirmation	Confirmation that a shippers manifest has been received.	National	Information
map update notification	Notification of maintenance, construction, and other activities that will result in medium to long term changes to road location and configuration that may impact navigable maps. This flow includes the timing of the changes and precise enumeration of the location and configuration changes.	National	Information
map updates	Map update which could include a new underlying static or real-time map or map layer(s) update.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
mixed use safety warning control	Configuration and control of equipment that monitors and manages mixed use crossings and provides visual displays and warnings to drivers when non-motorized users are occupying a cross walk or other mixed use path crossing.	National	Information
mixed use safety warning status	Current operational status and state of pedestrian crossings and other mixed use path crossing warning systems.	National	Information
OBE status	Monitoring of OBE device status including current mode, operational status, and configuration settings. It includes device housekeeping/heartbeat monitoring and includes network information, the status of installed applications, and the configuration of managed devices.	National	Information
on-board safety data	Safety data measured by on-board sensors. Includes information about the vehicle, vehicle components, cargo, and driver. The query flow is not explicitly shown.	National	Information
on-board vehicle data	Information about the commercial vehicle stored on-board (for maintenance purposes, gate access, cargo status, lock status, etc.). The request flow is not explicitly shown.	National	Information
other data source archive data	Data extracted from other data sources. A wide range of ITS and non-ITS data and associated meta data may be provided.	National	Information
parking facility geometry	Precise spatial description of a parking facility that locates each parking space and the ingress and egress routes that are used to travel to and from the spaces.	National	Information
parking information	General parking information and status, including current parking availability.	National	Information
pass/pull-in	Command to commercial vehicle to pull into or bypass inspection station.	National	Information
passive vehicle monitoring control	Control commands used to control detection systems that rely on infrastructure-based identification of individual vehicles to measure travel times and other related measures by identifying the same vehicle at different points in the network. Related technologies include bluetooth readers and license plate recognition systems.	National	Information
passive vehicle monitoring data	Time stamped identifiers that identify the vehicles that have passed through a detection zone.	National	Information
payment	Payment of some kind (e.g., toll, parking, fare) by traveler which, in most cases, can be related to a credit account.	National	Information
payment device information	The traveler personal information such as name, address, license number, user account information, trip records and profile data.	National	Information
payment device update	Information updated concerning traveler's personal data including name, address, user account information, trip records, and profile data.	National	Information
payment request	Request for payment from financial institution.	National	Request
personal transit information	General and personalized transit information for a particular fixed route, flexible route, or paratransit system.	National	Information
PID status	Monitoring of Personal Information Device status including current mode, operational status, and configuration settings. It includes device housekeeping/heartbeat monitoring and includes network information, the status of installed applications, and the configuration of managed devices.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
pre-arrival notification	Identification of a vehicle or driver that is approaching a border crossing.	National	Information
qualified environmental conditions data	Current road conditions (e.g., surface temperature, subsurface temperature, moisture, icing, treatment status) and surface weather conditions (e.g., air temperature, wind speed, precipitation, visibility) that has had quality checks performed on it and has been formatted and consolidated by the Clarus system. Attributes relating to the data collection (and aggregation) are also included.	National	Information
queue warning information	Information regarding formed or impending queues (location of the end of queue, estimated duration of the queue, and other descriptions of the queue condition) and recommendations for upstream vehicles including speed reduction, lane change, or diversion recommendations.	National	Information
rail crossing control data	Data required for HRI information transmitted at railroad grade crossings and within railroad operations.	National	Information
rail crossing operational status	Status of the highway-rail grade crossing equipment including both the current state or mode of operation and the current equipment condition.	National	Information
rail crossing request	A request for highway-rail intersection status or a specific control request intended to modify HRI operation.	National	Request
rail crossing status	Status of the highway-rail intersection equipment including both the current state or mode of operation and the current equipment condition.	National	Information
regional situation data	This general flow represents the traffic, environmental, and emissions situation data that is collected from connected vehicles and aggregated, filtered, and distributed to other centers as a regional information product for use in operations, performance monitoring, and analysis.	National	Information
registration	Registered owner of vehicle and associated vehicle information.	National	Information
remote surveillance control	The control commands used to remotely operate another center's sensors or surveillance equipment so that roadside surveillance assets can be shared by more than one agency.	National	Information
remote vehicle disable	Signal used to remotely disable a transit vehicle.	National	Information
request for data review	Request that data reported about a motor carrier or driver be reviewed for potential mis-assignment or other error.	National	Information
request for enforcement	Request for traffic enforcement of speed limits, lane controls, etc. on a roadway including in a work zone or other special situations.	National	Information
request for payment	Request to deduct cost of service from user's payment account.	National	Request
request for permit	Request by fleet management for oversize, overweight, or hazmat permit.	National	Information
request tag data	Request for tag information including tag id and associated data.	National	Request
resource coordination	Coordination of resource inventory information, specific resource status information, resource prioritization and reallocation between jurisdictions, and specific requests for resources and responses that service those requests.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
resource deployment status	Status of resource deployment identifying the resources (vehicles, equipment, materials, and personnel) available and their current status. General resource inventory information and specific status of deployed resources may be included.	National	Information
resource request	A request for resources to implement special traffic control measures, assist in clean up, verify an incident, etc. The request may poll for resource availability or request pre-staging, staging, or immediate deployment of resources. Resources may be explicitly requested or a service may be requested and the specific resource deployment may be determined by the responding agency.	National	Request
reversible lane control	Control of automated reversible lane configuration and driver information systems.	National	Information
reversible lane status	Current reversible lane status including traffic sensor and surveillance data and the operational status and mode of the reversible lane control equipment.	National	Information
right-of-way request notification	Notice that a request has occurred for signal prioritization, signal preemption, pedestrian call, multi-modal crossing activation, or other source for right-of-way.	National	Information
road closure application info	Road closure signing application configuration data and messaging parameters. This flow identifies the vehicles that may initiate the road closure. This flow also provides access lists, groups, or classifications where selected vehicles are to be allowed access to the closed area.	National	Information
road closure application status	Road closure application status reported by the RSE. This includes current operational state and status of the RSE, closure status, and a log of closure commands received and issued. For closures that allow entry by selected vehicles, this flow provides an access log identifying vehicles that have requested access with access status.	National	Information
road closure notification	Notification that agency personnel have closed a road due to adverse weather, major incident, or other reason.	National	Information
road network conditions	Current and forecasted traffic information, road and weather conditions, and other road network status. Either raw data, processed data, or some combination of both may be provided by this flow. Information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements) in effect is included.	National	Information
road network environmental situation data	Aggregated environmental situation data collected from vehicles and other sources for the road network. Aggregated information would include measured air temperature, exterior light status, wiper status, sun sensor status, rain sensor status, traction control status, ALB status, and other collected vehicle system status and sensor information for the region.	National	Information
road network status assessment	Assessment of damage sustained by the road network including location and extent of the damage, estimate of remaining capacity, required closures, alternate routes, necessary restrictions, and time frame for repair and recovery.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
road network traffic situation data	Aggregated route usage, travel times, and other aggregated data collected from probe vehicles that can be used to estimate current traffic conditions.	National	Information
road weather advisories	Segment-specific weather and road conditions including real-time advisories of deteriorating road and weather conditions, medium-term advisories for the next 2–12 hours, and long-term advisories more than 12 hours into the future. The advisories may include advisories that are issued by the RSE based on locally collected environmental data (e.g., an ice on bridge advisory).	National	Information
road weather information	Road conditions and weather information that are made available by road maintenance operations to other transportation system operators.	National	Information
roadside archive data	A broad set of data derived from roadside sensors that includes current traffic conditions, environmental conditions, and any other data that can be directly collected by roadside sensors. This data also indicates the status of the sensors and reports of any identified sensor faults.	National	Information
roadside data message	Data set collected by roadside sensors to identify and characterize a vehicle, carrier, and (potentially) driver.	National	Information
roadway dynamic signage data	Information used to initialize, configure, and control roadside systems that provide driver information (e.g., dynamic message signs, highway advisory radio). This flow can provide message content and delivery attributes, local message store maintenance requests, control mode commands, status queries, and all other commands and associated parameters that support remote management of these systems.	National	Information
roadway dynamic signage status	Current operating status of dynamic message signs, highway advisory radios, or other configurable field equipment that provides dynamic information to the driver.	National	Information
roadway equipment coordination	The direct flow of information between field equipment. This includes transfer of information between sensors and driver information systems (e.g., DMS, HAR, variable speed limit signs, dynamic lane signs) or control devices (e.g., traffic signals, ramp meters), direct coordination between adjacent control devices, interfaces between detection and warning or alarm systems, and any other direct communications between field equipment.	National	Information
roadway geometry	The physical geometry of a road segment that specifies the location and width of each lane, including normal lanes as well as special lanes for pedestrians and bicycles, transit vehicles, and trains. This flow also may include the curvature, grade, and superelevation or banking of the road segment.	National	Information
roadway maintenance status	Summary of maintenance fleet operations affecting the road network. This includes the status of winter maintenance (snow plow schedule and current status).	National	Information
roadway treatment system control	Control data for remotely located, automated devices, that treat the road surface (e.g., de-icing applications).	National	Information
roadway treatment system status	Current operational status of automated roadway treatment devices (e.g., anti-icing systems).	National	Information
roadway warning system control	Information used to configure and control roadway warning systems.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
roadway warning system status	Current operating status of roadway warning systems.	National	Information
route restrictions	Information about routes, road segments, and areas that do not allow the transport of security sensitive hazmat cargoes or include other restrictions (such as height or weight limits).	National	Information
RSE application information	RSE application configuration data and parameters that are used to control applications and configure the application for a specific local use. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.	National	Information
RSE application install/upgrade	This flow supports remote installation and update of software applications residing in the RSE. It supports transmission of the secure software installation files, including executable application code and associated support files.	National	Information
RSE application status	Monitoring of RSE application status including current mode, operational status, and configuration settings. It includes the status of installed applications and the application-specific data provided by the RSE.	National	Information
RSE fault data	RSE fault information that can be used to identify RSEs that require initialization, reconfiguration, repair or replacement. This flow identifies the device, the nature of the fault, and associated error codes and diagnostic data.	National	Information
RSE status	Monitoring of RSE device status including current mode, operational status, and configuration settings. It includes device housekeeping/heartbeat monitoring and includes network information, the status of installed applications, the configuration of managed devices, cybersecurity and physical security status of the RSE.	National	Information
safeguard system control	Data that controls safeguard systems (remotely controlled equipment used to mitigate the impact of incidents on transportation infrastructure, such as blast shields, exhaust systems, etc.).	National	Information
safeguard system status	Current operating status of safeguard systems (remotely controlled equipment used to mitigate the impact of incidents on transportation infrastructure, such as blast shields, exhaust systems, etc.). Status of the systems includes operating condition and current operational state.	National	Information
safety inspection record	Record containing results of commercial vehicle safety inspection.	National	Information
safety inspection report	Report containing results of commercial vehicle safety inspection. The information may be provided as a response to a real-time query or proactively by the source. The query flow is not explicitly shown.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
safety status information	Safety information such as safety ratings, security ratings or flags, inspection summaries, and violation summaries. A unique identifier is included. Corresponds to the safety and security portion of CVISN "snapshots." The status information may be provided as a response to a real-time query or as a result of a standing request for updated information (subscription). This may also include information about non-U.S. fleets for use by U.S. authorities, and information regarding U.S. fleets made available to Mexican and Canadian authorities. The query flow is not explicitly shown.	National	Information
screening event record	Results of CVO electronic screening activity.	National	Information
screening results	Results of commercial vehicle screening event at a border crossing - reports clearance event data regarding action taken at border, including acceptance or override of system decision, and date/time stamp.	National	Information
service patrol dispatch request	Service patrol dispatch instructions including incident location and available information concerning the incident.	National	Request
service patrol dispatch response	Request for additional dispatch information and provision of en route status.	National	Information
service patrol incident status	Information gathered at the incident site by a service patrol vehicle that more completely characterizes the incident, the services provided, and clearance status.	National	Information
shelter recommendations	Recommendation identifying the shelter or shelters best suited to the requestor. Hotels/motels may also be included as potential sheltering options. This flow may also include shelter assignments/reservations.	National	Information
shelter request	A request for shelter information, recommendations, or assignment/reservation. Information provided may include name, current location, number of people in the group, additional requirements (e.g., evacuating with pets, needed medical support).	National	Request
signal control commands	Control of traffic signal controllers or field masters including clock synchronization.	National	Request
signal control data	Information used to configure local traffic signal controllers.	National	Information
signal control device configuration	Data used to configure traffic signal control equipment including local controllers and system masters.	National	Information
signal control plans	Traffic signal timing parameters including minimum green time and interval durations for basic operation and cycle length, splits, offset, phase sequence, etc. for coordinated systems.	National	Information
signal control status	Operational and status data of traffic signal control equipment including operating condition and current indications.	National	Information
signal fault data	Faults reported by traffic signal control equipment.	National	Information
signal system configuration	Data used to configure traffic signal systems including configuring control sections and mode of operation (time based or traffic responsive).	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
special vehicle alert	Notification that a vehicle is in the vicinity that requires special attention from drivers. In this context, 'special vehicle' refers to any type of vehicle that uses lights or placards to alert drivers including public safety vehicles, oversized vehicles, slow vehicles, and service vehicles that stop and back up frequently.	National	Information
speed management application information	Current speed targets, advisories, and limits including time of day, week, or season speed limits as necessary, and application parameters and thresholds. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.	National	Information
speed management application status	Speed management application status reported by the RSE. This includes current operational state and status of the RSE and a record of measured vehicle speeds and current speed targets, advisories, and limits.	National	Information
speed monitoring control	Information used to configure and control automated speed monitoring, speed warning, and speed enforcement systems.	National	Information
speed monitoring information	System status including current operational state and logged information including measured speeds, warning messages displayed, and violation records.	National	Information
suggested route	Suggested route for a dispatched emergency or maintenance vehicle that may reflect current network conditions and the additional routing options available to en route emergency or maintenance vehicles that are not available to the general public.	National	Information
support system status	Monitoring of support system device status including current mode, operational status, and configuration settings. It includes device housekeeping/heartbeat monitoring and includes network information, the status of installed applications, and the configuration of managed devices.	National	Information
tag data	Unique tag ID and related vehicle information.	National	Information
targeted list	List of carriers, drivers, and/or vehicles of interest for enforcement purposes.	National	Information
tax filing	Commercial vehicle tax filing data. Authorization for payment is included.	National	Information
threat data for analysis	Data from surveillance or sensor equipment in secure areas provided for further analysis.	National	Information
threat information	Threats regarding transportation infrastructure, facilities, or systems detected by a variety of methods (sensors, surveillance, threat analysis of advisories from outside agencies, etc.	National	Information
threat information coordination	Sensor, surveillance, and threat data including raw and processed data that is collected by sensor and surveillance equipment located in secure areas.	National	Information
threat support data	Information provided to help receiving agency identify possible threats, including biometric image processing support data.	National	Information
time local form	Time local form includes UTC time synchronized with the external source in a format usable by connected vehicle center functions.	National	Information
track status	Current status of the wayside equipment and notification of an arriving train.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
traffic archive data	Information describing the use and vehicle composition on transportation facilities and the traffic control strategies employed. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
traffic control information	Represents the flow of traffic control and status information from a TMC to a third party TIC. This is reporting only, not actual control.	National	Information
traffic detector control	Information used to configure and control traffic detector systems such as inductive loop detectors and machine vision sensors.	National	Information
traffic detector data	Raw and/or processed traffic detector data which allows derivation of traffic flow variables (e.g., speed, volume, and density measures) and associated information (e.g., congestion, potential incidents). This flow includes the traffic data and the operational status of the traffic sensor system.	National	Information
traffic images	High fidelity, real-time traffic images suitable for surveillance monitoring by the operator or for use in machine vision applications. This flow includes the images and meta data that describes the images.	National	Information
traffic information for media	Report of traffic conditions including traffic incident reports for public dissemination through the media. The reports may also include information on diversions and alternate routes, closures, and special traffic restrictions in effect.	National	Information
traffic metering control	Control commands and operating parameters for ramp meters, interchange meters, mainline meters, and other systems equipment associated with roadway metering operations.	National	Information
traffic metering status	Current operational status and operating parameters for ramp meters, interchange meters, mainline meters and other control equipment associated with roadway metering operations.	National	Information
traffic situation data	Current, aggregate traffic data collected from connected vehicles that can be used to supplement or replace information collected by roadside traffic detectors. It includes raw and/or processed reported vehicle speeds, counts, and other derived measures. Raw and/or filtered vehicle control events may also be included to support incident detection.	National	Information
transaction status	Response to transaction request. Normally dealing with a request for payment.	National	Information
transit and fare schedules	Transit service information including routes, schedules, and fare information.	National	Information
transit archive data	Data used to describe and monitor transit demand, fares, operations, and system performance. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
transit emergency data	Initial notification of transit emergency at a transit stop or on transit vehicles and further coordination as additional details become available and the response is coordinated.	National	Information
transit fare coordination	Fare and pricing information shared between local/regional transit organizations.	National	Information
transit fare information	Information provided by transit management that supports fare payment transactions.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
transit fare request	Request for fare information and transit fare payment.	National	Information
transit incident information	Information on transit incidents that impact transit services for public dissemination.	National	Information
transit incidents for media	Report of an incident impacting transit operations for public dissemination through the media.	National	Information
transit information user request	Request for special transit routing, real-time schedule information, and availability information.	National	Request
transit probe data	Aggregate probe data derived from tracking transit vehicles. Data collected could include transit vehicle speeds and travel times for a given link or collection of links.	National	Information
transit schedule adherence information	Dynamic transit schedule adherence and transit vehicle location information.	National	Information
transit schedule information	Current and projected transit schedule information used to initialize the transit vehicle with a vehicle assignment, monitor schedule performance, and develop corrective actions on-board.	National	Information
transit service coordination	Schedule coordination or AVL information shared between local/regional transit organizations. This includes coordination of connections between transit properties.	National	Information
transit service information	Transit service information including routes, schedules, and fare information as well as dynamic transit schedule adherence and transit vehicle location information.	National	Information
transit stop request	Notification that a transit stop has been requested by a transit user at a roadside stop. This flow identifies the route, stop, and the time of the request.	National	Information
transit system status assessment	Assessment of damage sustained by the public transportation system including location and extent of the damage, current operational status including an estimate of remaining capacity and necessary restrictions, and time frame for repair and recovery.	National	Information
transit traveler information	Transit information prepared to support transit users and other travelers. It contains transit schedules, real-time arrival information, fare schedules, alerts and advisories, and general transit service information.	National	Information
transit traveler request	Request by a Transit traveler to summon assistance, request transit information, or request any other transit services.	National	Request
transit vehicle conditions	Operating conditions of transit vehicle (e.g., engine running, oil pressure, fuel level and usage).	National	Information
transit vehicle loading data	Data collected on board the transit vehicle relating to passenger boarding and alighting.	National	Information
transit vehicle location data	Current transit vehicle location and related operational conditions data provided by a transit vehicle.	National	Information
transit vehicle operator authentication information	Information regarding on-board transit operator authentication	National	Information
transit vehicle operator authentication update	Results of authentication process or update of on-board authentication database.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
transit vehicle operator information	Transit service instructions, wide area alerts, traffic information, road conditions, and other information for both transit and paratransit operators.	National	Information
transit vehicle schedule performance	Estimated times of arrival and anticipated schedule deviations reported by a transit vehicle.	National	Information
transportation operational strategies	Operational strategies for each operating agency in a transportation corridor, downtown area, or other travel-impacted area, providing an integrated operations strategy for the freeways, tollways, arterials, transit services, parking facilities, and other transportation-related facilities in the area. These strategies can include dynamic adjustments to transit fares and tolls, parking fees and restrictions, dynamic lane restriction changes, and other active demand management strategies.	National	Information
transportation system status	Current status and condition of transportation infrastructure (e.g., tunnels, bridges, interchanges, TMC offices, maintenance facilities). In case of disaster or major incident, this flow provides an assessment of damage sustained by the surface transportation system including location and extent of the damage, estimate of remaining capacity and necessary restrictions, and time frame for repair and recovery.	National	Information
transportation weather information	Current and forecast road conditions and weather information (e.g., surface condition, flooding, wind advisories, visibility, etc.) associated with the transportation network. This information is of a resolution, timeliness, and accuracy to be useful in transportation decision making.	National	Information
traveler alerts	Traveler information alerts reporting congestion, incidents, adverse road or weather conditions, parking availability, transit service delays or interruptions, and other information that may impact the traveler. Relevant alerts are provided based on traveler-supplied profile information including trip characteristics and preferences.	National	Information
traveler archive data	Data associated with traveler information services including service requests, facility usage, rideshare, routing, and traveler payment transaction data. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information
traveler information for media	General traveler information regarding incidents, unusual traffic conditions, transit issues, or other advisory information that has been desensitized and provided to the media.	National	Information
traveler input	User input from a traveler to summon assistance, request travel information, make a reservation, or request any other traveler service.	National	Information
traveler interface updates	Visual or audio information (e.g., routes, messages, guidance, emergency information) that is provided to the traveler.	National	Information
traveler personal information	This flow includes biometric and other data to allow recognition of travelers.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
traveler request	A request for traveler information including traffic, transit, toll, parking, road weather conditions, event, and passenger rail information. The request identifies the type of information, the area of interest, parameters that are used to prioritize or filter the returned information, and sorting preferences.	National	Request
traveler sourced updates	Traveler posts on traffic and road conditions, transit services, traveler services, shelter information and other real-time crowd-sourced data that may be shared with other travelers.	National	Information
trigger area	A geographic area a commercial motor vehicle crosses into, which initiates a request to compile and transmit a safety data message. May be associated with a time period.	National	Information
trigger area definition	Information that defines the desired trigger area for wireless roadside inspection safety data message submission.	National	Information
trigger area notification	Notification to activate wireless roadside inspection safety data message collection.	National	Information
trigger control	Controls to enable or disable a particular trigger.	National	Information
trip confirmation	Acknowledgement by the driver/traveler of acceptance of a trip plan with associated personal and payment information required to confirm reservations.	National	Information
trip feedback	Information provided at the conclusion of a trip that supports performance monitoring and system optimization. Information provided may include a record of the trip including HOV/HOT lane usage and user provided feedback at the conclusion of the trip.	National	Information
trip identification number	The unique trip load number for a specific cross-border shipment.	National	Information
trip log	Driver's daily log, vehicle location, mileage, and trip activity (includes screening, inspection and border clearance event data as well as fare payments). The request flow is not explicitly shown.	National	Information
trip plan	A travel itinerary identifying a route and associated traveler information and instructions identifying recommended modes and transfer information, ride sharing options, and transit and parking reservation information.	National	Information
trip request	Request for trip planning services that identifies the trip origin, destination(s), timing, preferences, and constraints. The request may also include the requestor's location or a request for transit and parking reservations and ridesharing options associated with the trip.	National	Request
unique identifiers	Unique identifiers for the motor carrier, driver, and vehicle. This flow identifies the driver actually operating the vehicle in multi-driver scenarios.	National	Information
user profile	Information provided to register for a travel service and create a user account. The provided information includes personal identification, traveler preferences (e.g., maximum transfer wait time, maximum walking distance, mode preferences, special needs), device information, a user ID and password, and information to support payment transactions, if applicable.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
variable speed limit control	Information used to configure and control variable speed limit systems including the equipment used to provide current speed limits and other information to drivers and the equipment used to monitor traffic and environmental conditions along the roadway.	National	Information
variable speed limit status	Current operating status of the variable speed limit systems including the state of the equipment.	National	Information
vehicle collision information	The current status of the vehicle systems following a collision including air bag deployment, number of passengers, seat belt usage, sensor data that indicates crash severity (e.g., Delta V speed profile during the crash, vehicle damage, number of impacts), and vehicle type/make/model.	National	Information
vehicle control	Control commands issued to vehicle actuators that control steering, throttle, and braking and other related commands that support safe transition between manual and automated vehicle control. This flow can also deploy restraints and other safety systems when a collision is unavoidable.	National	Information
vehicle control event	Notification that the vehicle has performed an emergency action that could impact the safety of surrounding vehicles. This includes hard braking and activation of traction/stability control systems or other actions that warrant immediate notification of surrounding vehicles. The information flow conveys the vehicle's position, heading, speed, acceleration, transmission, steering wheel angle, braking status, size information, and trajectory.	National	Information
vehicle entries and exits	Information exchanged between an RSE and ITS Roadway Equipment that supports detection of non-equipped vehicles in an automated lane, low emissions zone, or other facility where V2I communications is used to monitor vehicles at entry or exit points. This exchange also supports identification of non-equipped vehicles where an RSE is used for payment collection. This generic exchange can be implemented by any approach that compares vehicle detections with V2I communications by the RSE to identify vehicles that are not equipped or are otherwise unable to communicate with the RSE.	National	Information
vehicle environmental data	Data from vehicle safety and convenience systems that can be used to estimate environmental and infrastructure conditions, including measured air temperature, exterior light status, wiper status, sun sensor status, rain sensor status, traction control status, anti-lock brake status, vertical acceleration and other collected vehicle system status and sensor information. The collected data is reported along with the location, heading, and time that the data was collected. Both current data and snapshots of recent events (e.g., traction control or anti-lock brake system activations) may be reported.	National	Information
vehicle location and motion	Data describing the vehicle's position, heading, speed, acceleration, transmission, steering wheel angle, braking status, size information, and trajectory.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
vehicle location and motion for mapping	Vehicles may provide location and motion data independently using wide-area wireless communications to application/service providers who use the provided data to update their maps and maintain real-time traffic and road conditions information sourced from their client-base.	National	Information
vehicle location and motion for surveillance	Data describing the vehicle's position, heading, speed, acceleration, transmission, steering wheel angle, braking status, size information, and trajectory. This flow represents monitoring of basic safety data ('vehicle location and motion') broadcast by passing connected vehicles for use in vehicle detection and traffic monitoring applications.	National	Information
vehicle location data for mapping	Aggregate vehicle location data collected to support map data creation and refinement.	National	Information
vehicle profile	Information about a vehicle such as vehicle make and model, fuel type, engine type, size and weight, vehicle performance and level of control automation, average emissions, average fuel consumption, passenger occupancy, or other data that can be used to classify vehicle eligibility for access to specific lanes, road segments, or regions or participation in cooperative vehicle control applications.	National	Information
vehicle signage application info	In-vehicle signing application configuration data and messaging parameters. This flow provides a list of regulatory, warning, and information messages to be displayed and parameters that support scheduling and prioritizing messages to be issued to passing vehicles. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.	National	Information
vehicle signage application status	In-vehicle signing application status reported by the RSE. This includes current operational state and status of the RSE and a log of messages sent to passing vehicles.	National	Information
vehicle signage data	In-vehicle signing data that augments regulatory, warning, and informational road signs and signals. The information provided would include static sign information (e.g., stop, curve warning, guide signs, service signs, and directional signs) and dynamic information (e.g., current signal states, grade crossing information, local traffic and road conditions, detours, advisories, and warnings).	National	Information
vehicle signage local data	Information provided by adjacent field equipment to support in-vehicle signing of dynamic information that is currently being displayed to passing drivers. This includes the dynamic information (e.g., current signal states, grade crossing information, local traffic and road conditions, detours, advisories, parking availability, etc.) and control parameters that identify the desired timing, duration, and priority of the signage data.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
vehicle situation data	This flow represents vehicle snapshots that may be provided by the vehicle to support traffic and environmental conditions monitoring. Snapshots are collected by the vehicle for specific events (e.g., when a sensor exceeds a threshold) or periodically and reported based on control parameters when communications is available. Traffic-related data includes snapshots of measured speed and heading and events including starts and stops, speed changes, and other vehicle control events. Environmental data may include measured air temperature, exterior light status, wiper status, sun sensor status, rain sensor status, traction control status, anti-lock brake status, and other collected vehicle system status and sensor information. The collected data is reported along with the location, heading, and time that the data was collected.	National	Information
vehicle situation data parameters	A request for vehicle situation data that includes parameters used to control the data that is reported and the flow of data reported by the vehicle. This flow identifies the type of data/snapshots that are requested and reporting parameters such as snapshot frequency, filtering criteria (data thresholds for reporting), and reporting interval.	National	Information
video surveillance control	Information used to configure and control video surveillance systems.	National	Information
voice-based alert notification	Information to be distributed to the traveling public via voice regarding a major emergency such as a natural or man-made disaster, civil emergency, severe weather or child abduction. The flow may identify the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, and information and instructions necessary for the public to respond to the alert. The content of this architecture flow may be specially formatted for voice-based traveler information.	National	Information
voice-based traveler information	Traveler information sent to the telecommunications systems for traveler information terminator. This flow may represent the bulk transfer of traveler information, including traffic conditions, incident information, transit information and weather and road condition information. It may be specially formatted for voice-based traveler information.	National	Information
voice-based traveler request	The electronic traveler information request from the telecommunications systems for traveler information terminator. It may be specifically formatted for voice-based traveler requests. The request can be a general subscription intended to initiate a continuous or regular data stream or a specific request intended to initiate a one-time response from the recipient.	National	Request
weather archive data	Accumulated forecasted and current weather data (e.g., temperature, pressure, wind speed, wind direction, humidity, precipitation, visibility, light conditions, etc.) as well as qualified environmental sensor data. Content may include a catalog of available information, the actual information to be archived, and associated meta data that describes the archived information.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
weather information	Accumulated forecasted and current weather data (e.g., temperature, pressure, wind speed, wind direction, humidity, precipitation, visibility, light conditions, etc.).	National	Information
weigh-in-motion information	Information from commercial vehicle virtual weigh-in-motion systems including vehicle weight, vehicle dimensions, vehicle identification and driver identification.	National	Information
work plan coordination	Coordination of work plan schedules and activities between maintenance and construction organizations or systems. This information includes the work plan schedules and comments and suggested changes that are exchanged as work plans are coordinated and finalized.	National	Information
work plan feedback	Comments and suggested changes to proposed construction and maintenance work schedules and activities. This information influences work plan schedules so that they minimize impact to other system operations and the overall transportation system.	National	Information
work zone information	Summary of maintenance and construction work zone activities affecting the road network including the nature of the maintenance or construction activity, location, impact to the roadway, expected time(s) and duration of impact, anticipated delays, alternate routes, and suggested speed limits. This information may be augmented with images that provide a visual indication of current work zone status and traffic impacts.	National	Information
work zone safety application info	Work zone safety application configuration data and warning parameters and thresholds. This includes work zone configuration including geofenced crew areas and travel lanes that provide a safety boundary between work zone personnel and passing vehicles. This flow also supports remote control of the application so the application can be taken offline, reset, or restarted.	National	Information
work zone safety application status	Work zone safety application status reported by the RSE. This includes current operational state and status of the RSE and a record of identified work zone safety alerts and warnings issued.	National	Information
work zone status	Current work zone status including current location (and future locations for moving work zones), impact to the roadway, required lane shifts, expected time(s) and duration of impact, anticipated delays, alternate routes, and suggested speed limits.	National	Information
work zone warning device control	Data used to configure and control work zone safety monitoring and warning devices.	National	Information
work zone warning notification	Notification of a work zone emergency or safety issue. This flow identifies that a work zone emergency or safety issue has occurred so that warnings may be generated by more than one system in the work zone.	National	Information
work zone warning status	Status of a work zone safety monitoring and warning devices. This flow documents system activations and includes additional supporting information (e.g., an image) that allows verification of the alarm.	National	Information

Flow Name	Flow Description	Flow Kind	Flow Type
wrong way vehicle detected	Notification that a vehicle has been detected traveling in the wrong direction. This can be a direct report by an equipped vehicle that is being driven in the wrong direction or a report of a non-equipped vehicle that has been detected traveling in the wrong direction. It includes the current location, speed, acceleration, and heading of the wrong way vehicle.	National	Information