Element Name	Equipment Package Name	Requirement
Accident Reporting System	CV Information Exchange	The center shall exchange safety and credentials data among other commercial vehicle administration centers; includes border clearance status, credentials information, credentials status information, and safety status information.
Accident Reporting System	CV Information Exchange	The center shall provide commercial vehicle accident reports and citations to enforcement agencies.
Accident Reporting System	CV Safety Administration	The center shall notify enforcement agencies of commercial vehicle safety violations by individual commercial vehicles, drivers, or carriers.
BIA Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to control information from the center to allow remote operation of the on-board vehicle systems. These systems include routine maintenance equipment for cutting, repairs, hazard removal, etc.
BIA Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
BIA Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
BIA Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
BIA Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
BIA Maintenance and Construction Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall compute the location of the vehicle based on inputs from a vehicle location determination function.
BIA Maintenance and Construction Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall send the timestamped vehicle location to the controlling center.
BIA Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall collect vehicle diagnostics and operating status data from the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures as well as the status of maintenance and construction-specific systems on the vehicle.
BIA Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall use the diagnostic and status information to support scheduling vehicle maintenance, monitoring safety status, and informing the vehicle operator of the conditions.
BIA Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall the vehicle diagnostic and safety information to an equipment repair facility.
BIA Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to the controlling maintenance center.
BIA Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
BIA Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
BIA Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
BIA Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
BIA Maintenance and Construction Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall monitor, operate, and control work zone devices located at or alongside the roadway. The devices operated on board the vehicle include driver information devices (e.g. dynamic message signs) and work zone intrusion detection and alert devices.
BIA Maintenance and Construction Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall provide an interface for field personnel to input status of their work zone activities.
BIA Maintenance and Construction Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall collect inputs from field personnel and from work zone devices on-board the maintenance and construction vehicle and send them to the controlling center.
BIA Roads	MCM Incident Management	The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction. The information may include the alert originator, the nature of the emergency, the geographic area affected by the emergency, the effective time period, etc.
BIA Roads	MCM Incident Management	The center shall exchange incident and threat information with emergency management centers as well as traffic management centers; including notification of existence of incident and expected severity, location, time and nature of incident.
BIA Roads	MCM Incident Management	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
BIA Roads	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.
BIA Roads	MCM Incident Management	The center shall exchange road network status assessment information with emergency management and traffic management centers including an 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.
BIA Roads	MCM Incident Management	The center shall provide 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.

Element Name	Equipment Package Name	Requirement
BIA Roads	MCM Roadway Maintenance and Construction	The center shall maintain an interface with asset management systems to track the inventory, restrictions, repair needs and status updates of transportation assets (pavement, bridges, signs, etc.) including location, installation and materials information, vendor/contractor, current maintenance status, standard height, width, and weight restrictions.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other roadway maintenance.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall provide emergency management and traffic management centers with information about scheduled maintenance and construction work activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from roadside equipment, such as traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from traffic management centers, including data for traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall remotely control and collect data from infrastructure monitoring sensors located along the roadway infrastructure or on maintenance and construction vehicles.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of roadway maintenance and construction activities.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
BIA Roads	MCM Roadway Maintenance and Construction	The center shall dispatch and route maintenance and construction vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall manage an interface with center personnel to accept vehicle systems control information and remotely control maintenance and construction vehicle on-board equipment.
BIA Roads	MCM Roadway Maintenance and Construction	The center shall track the status of roadway maintenance and construction activities by monitoring collected data from the dispatched vehicles and equipment.
BIA Roads	MCM Vehicle and Equipment Maintenance Management	The center shall collect and analyze vehicle diagnostics information from maintenance and construction vehicles. 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.
BIA Roads	MCM Vehicle and Equipment Maintenance Management	The center shall exchange information with equipment repair facilities including status and history of repairs concerning maintenance and construction vehicles. This information includes vehicle status and diagnostic information, vehicle utilization, and coordination of when vehicles will be available for preventative and corrective maintenance.
BIA Roads	MCM Vehicle and Equipment Maintenance Management	The center shall schedule preventive and corrective vehicle maintenance with the equipment repair facility based on fleet health reports, maintenance records, vehicle utilization and vehicle availability schedules.
BIA Roads	MCM Vehicle Tracking	The center shall monitor the locations of all maintenance and construction vehicles and other equipment under its jurisdiction.
BIA Roads	MCM Vehicle Tracking	The center shall present location data to center personnel for the fleet of maintenance and construction vehicles and other equipment.
BIA Roads	MCM Winter Maintenance Management	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other winter roadway maintenance.
BIA Roads	MCM Winter Maintenance Management	The center shall exchange information with administrative systems to support the planning and scheduling of winter maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
BIA Roads	MCM Winter Maintenance Management	The center shall provide status information about scheduled winter maintenance activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, and the media.
BIA Roads	MCM Winter Maintenance Management	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of winter maintenance activities.
BIA Roads	MCM Winter Maintenance Management	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).

Element Name	Equipment Package Name	Requirement
BIA Roads	MCM Winter Maintenance Management	The center shall dispatch and route winter maintenance vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
BIA Roads	MCM Winter Maintenance Management	The center shall determine the need for roadway treatment based on current and forecasted weather information, current usage of treatments and materials, available resources, requests for action from other agencies, and recommendations from the Maintenance Decision Support system, specifically under winter conditions. This supports winter maintenance such as plowing, treating, anti-icing, etc.
BIA Roads	MCM Winter Maintenance Management	The center shall provide dispatch instructions for vehicle operators based on input parameters from center personnel, specifically for winter conditions. This could include a treatment route, treatment application rates, start and end times, and other treatment instructions.
BIA Roads	MCM Winter Maintenance Management	The center shall assess the current status of all winter maintenance activities, including actual work activities performed, current locations and operational conditions of vehicles, materials and equipment inventories, field equipment status, environmental information, etc.
BIA Roads	MCM Work Activity Coordination	The center shall provide 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.
BIA Roads	MCM Work Activity Coordination	The center shall provide status information about scheduled maintenance and construction activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, multimodal transportation providers, rail operations, and the media.
BIA Roads	MCM Work Activity Coordination	The center shall collect and respond to feedback concerning scheduled maintenance and construction activities with other management centers such as traffic, emergency, transit, and rail operations.
BIA Roads	MCM Work Activity Coordination	The center shall collect and disseminate asset restriction information 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.
BIA Roads	MCM Work Activity Coordination	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance and construction activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
BIA Roads	MCM Work Activity Coordination	The center shall exchange rail schedules and work plans with rail operations centers.
BIA Roads	MCM Work Zone Management	The center shall generate new work zone activity schedules for use by maintenance and construction vehicles, maintenance and construction operators, and for information coordination purposes.
BIA Roads	MCM Work Zone Management	The center shall control the collection of work zone status information including video images from cameras located in or near the work zone.
BIA Roads	MCM Work Zone Management	The center shall disseminate work zone information to other agencies and centers including traffic, transit, emergency management centers, other maintenance centers, traveler information providers, and the media.
BIA Roads	MCM Work Zone Management	The center shall control traffic in work zones by providing remote control of dynamic message signs, highway advisory radio systems, gates, and barriers located in or near the work zone.
BIA Roads	MCM Work Zone Management	The center shall exchange information with administrative systems to support the planning and scheduling of work zone activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
BIA/Tribal Public Safety Dispatch	Emergency Call-Taking	The center shall update the incident information log once the emergency system operator has verified the incident.
BIA/Tribal Public Safety Dispatch	Emergency Commercial Vehicle Response	The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc.

Element Name	Equipment Package Name	Requirement
BIA/Tribal Public Safety Dispatch	Emergency Commercial Vehicle Response	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
BIA/Tribal Public Safety Dispatch	Emergency Data Collection	The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data.
BIA/Tribal Public Safety Dispatch	Emergency Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
BIA/Tribal Public Safety Dispatch	Emergency Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself.
BIA/Tribal Public Safety Dispatch	Emergency Data Collection	The center shall be able to produce sample products of the data available.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall receive traffic images to support dispatch of emergency vehicles.
BIA/Tribal Public Safety Dispatch	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
BIA/Tribal Public Safety Dispatch	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
BIA/Tribal Public Safety Dispatch	Emergency Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to support incident management.
BIA/Tribal Public Safety Dispatch	Emergency Environmental Monitoring	The center shall present the current and forecast road and weather information to the emergency system operator.
BIA/Tribal Public Safety Dispatch	Emergency Evacuation Support	The center shall develop and exchange evacuation plans with allied agencies prior to the occurrence of a disaster.
BIA/Tribal Public Safety Dispatch	Emergency Evacuation Support	The center shall provide an interface to the emergency system operator to enter evacuation plans and procedures and present the operator with other agencies' plans.
BIA/Tribal Public Safety Dispatch	Emergency Evacuation Support	The center shall request resources from transit agencies as needed to support the evacuation.
BIA/Tribal Public Safety Dispatch	Emergency Evacuation Support	The center shall monitor the progress or status of the evacuation once it begins and exchange tactical plans, prepared during the incident, with allied agencies.
BIA/Tribal Public Safety Dispatch	Emergency Evacuation Support	The center shall monitor the progress of the reentry process.
BIA/Tribal Public Safety Dispatch	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
BIA/Tribal Public Safety Dispatch	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
BIA/Tribal Public Safety Dispatch	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
BIA/Tribal Public Safety Dispatch	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
BIA/Tribal Public Safety Dispatch	Emergency Routing	The center shall calculate emergency vehicle routes, under center personnel control, based on information from traffic management and maintenance centers.
BIA/Tribal Public Safety Dispatch	Emergency Routing	The center shall provide the capability to request special traffic control measures, such as signal preemption, from the traffic management center to facilitate emergency vehicle progress along the suggested route.
BIA/Tribal Public Safety Dispatch	Emergency Routing	Once the route is calculated the route shall be provided to the dispatch function.
BIA/Tribal Public Safety Dispatch	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
BIA/Tribal Public Safety Dispatch	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
BIA/Tribal Public Safety Dispatch	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
BIA/Tribal Public Safety Dispatch	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
BIA/Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall send requests to traffic signal control equipment at the roadside to preempt the signal.
BIA/Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
BIA/Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
BIA/Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
BIA/Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
BIA/Tribal Public Safety Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.

Element Name	Equipment Package Name	Requirement
BIA/Tribal Public Safety Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
BIA/Tribal Public Safety Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send requests to traffic signal control equipment at the roadside to preempt the signal.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send patient status information to the care facility along with a request for further information.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall forward care facility status information to emergency vehicle personnel, including the location, specialized services, quality of care, waiting time, number of rooms available, and emergency room status of hospitals or emergency care providers.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
City of Roswell Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
City of Roswell Fire/EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
City of Roswell Fire/EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
City of Roswell Fire/EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from travelers in secure areas (such as transit stops, rest areas, park and ride lots, modal interchange facilities).
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
City of Roswell Fixed Route Transit Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall be capable of establishing emergency fare structures to override all other fares during disasters, states of emergency, or evacuations.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall maintain a list of invalid traveler credit identities, or bad tag lists that can be forwarded to transit vehicles and transit stops or stations.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fare and Load Management	The center shall provide transit fare information to other centers, including traveler information providers upon request.

Element Name	Equipment Package Name	Requirement
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall dispatch fixed route or flexible route transit vehicles
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall collect transit operational data for use in the generation of routes and schedules.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall provide instructions or corrective actions to the transit vehicle operators based upon operational needs.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall manage large deviations of individual transit vehicles, deviations in rural areas, and deviations of large numbers of vehicles.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall generate the necessary corrective actions which may involve more than the vehicles concerned and more far reaching action, such as, the introduction of extra vehicles, wide area signal priority by traffic management, the premature termination of some services, etc.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
City of Roswell Fixed Route Transit Dispatch	Transit Center Fixed-Route Operations	The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services.
City of Roswell Fixed Route Transit Dispatch	Transit Center Information Services	The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems.
City of Roswell Fixed Route Transit Dispatch	Transit Center Information Services	The center shall provide transit service information to traveler information service providers including routes, schedules, schedule adherence, and fare information as well as transit service information during evacuation.
City of Roswell Fixed Route Transit Dispatch	Transit Center Information Services	The center shall broadcast transit advisory data, including alerts and advisories pertaining to major emergencies, or man made disasters.
City of Roswell Fixed Route Transit Dispatch	Transit Center Multi-Modal Coordination	The center shall analyze transit vehicle schedule performance to determine the need for priority along certain routes or at certain intersections.
City of Roswell Fixed Route Transit Dispatch	Transit Center Multi-Modal Coordination	The center shall send requests for priority along routes or at intersections to traffic management.
City of Roswell Fixed Route Transit Dispatch	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.
City of Roswell Fixed Route Transit Dispatch	Transit Center Multi-Modal Coordination	The center shall share transfer cluster and transfer point information with multimodal transportation service providers, other transit agencies, and traveler information service providers. A transfer cluster is a collection of stops, stations, or terminals where transfers can be made conveniently.
City of Roswell Fixed Route Transit Dispatch	Transit Center Security	The center shall monitor transit vehicle operational data to determine if the transit vehicle is off-route and assess whether a security incident is occurring.
City of Roswell Fixed Route Transit Dispatch	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
City of Roswell Fixed Route Transit Dispatch	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
City of Roswell Fixed Route Transit Dispatch	Transit Center Security	The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.
City of Roswell Fixed Route Transit Dispatch	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
City of Roswell Fixed Route Transit Dispatch	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
City of Roswell Fixed Route Transit Dispatch	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
City of Roswell Fixed Route Transit Dispatch	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
City of Roswell Fixed Route Transit Dispatch	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
City of Roswell Fixed Route Transit Dispatch	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
City of Roswell Fixed Route Transit Dispatch	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
City of Roswell Fixed Route Transit Dispatch	Transit Data Collection	The center shall be able to produce sample products of the data available.
City of Roswell Fixed Route Transit Dispatch	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
City of Roswell Fixed Route Transit Dispatch	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.
City of Roswell Fixed Route Transit Dispatch	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
City of Roswell Fixed Route Transit Dispatch	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.

Element Name	Equipment Package Name	Requirement
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
City of Roswell Fixed Route Transit Dispatch	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
City of Roswell Fixed Route Transit Dispatch	Transit Vehicle Operator Scheduling	The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies.
City of Roswell Fixed Route Transit Dispatch	Transit Vehicle Operator Scheduling	The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments.
City of Roswell Fixed Route Transit Dispatch	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
City of Roswell Fixed Route Transit Dispatch	Transit Vehicle Operator Scheduling	The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions.
City of Roswell Fixed Route Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall receive transit route information for its assigned route including transit service instructions, traffic information, road conditions, and other information for the operator.
City of Roswell Fixed Route Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall use the route information and its current location to determine the deviation from the predetermined schedule.
City of Roswell Fixed Route Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall calculate the estimated times of arrival (ETA) at transit stops.
City of Roswell Fixed Route Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall determine scenarios to correct the schedule deviation.
City of Roswell Fixed Route Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall provide the schedule deviations and instructions for schedule corrections to the transit vehicle operator if the deviation is small, or the transit vehicle is operating in an urban area.
City of Roswell Fixed Route Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall send the schedule deviation and estimated arrival time information to the center.
City of Roswell Fixed Route Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
City of Roswell Fixed Route Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
City of Roswell Fixed Route Transit Vehicles	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall have access to the complete range of transit services (routes and schedules) that are available to the traveler.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall include a database on-board the transit vehicle for use in fare processing from which the fares for all possible trips within the transit operational network can be determined.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide passenger loading and fare statistics data to the center.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle's current location.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed sensor information to the center along with the vehicle's current location.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance and sensor equipment status and fault indications.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.

Element Name	Equipment Package Name	Requirement
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Signal Priority	The transit vehicle shall determine the schedule deviation and estimated times of arrival (ETA) at transit stops.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Signal Priority	The transit vehicle shall send priority requests to traffic signal controllers at intersections, pedestrian crossings, and multimodal crossings on the roads (surface streets) and freeway (ramp controls) network that enable a transit vehicle schedule deviation to be corrected.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Signal Priority	The transit vehicle shall send the schedule deviation data and status of priority requests to the transit vehicle operator.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
City of Roswell Fixed Route Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
City of Roswell ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, digitize, and send traffic sensor data (speed, volume, and occupancy) to the center for further analysis and storage, under center control.
City of Roswell ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, and send traffic images to the center for further analysis and distribution.
City of Roswell ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system operational status to the controlling center.
City of Roswell ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system fault data to the controlling center for repair.
City of Roswell ITS Field Equipment	Roadway Signal Controls	The field element shall control traffic signals at intersections and on main highways for urban and rural areas, under center control.
City of Roswell ITS Field Equipment	Roadway Signal Controls	The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner.
City of Roswell ITS Field Equipment	Roadway Signal Controls	The field element shall provide the capability to notify the traffic management center that a pedestrian has requested right-of-way and when the request was or will be granted (request for right-of-way).
City of Roswell ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from the indicator control information.
City of Roswell ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions.
City of Roswell ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller operational status to the controlling center.
City of Roswell ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller fault data to the maintenance center for repair.
City of Roswell ITS Field Equipment	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings.
City of Roswell ITS Field Equipment	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) priority requests from transit vehicles at intersections, pedestrian crossings, and multimodal crossings.
City of Roswell ITS Field Equipment	Roadway Signal Priority	The field element shall notify controlling traffic management center and maintenance center that the signal timing has changed based on a signal preemption/priority request to help those centers determine whether a fault detected at the signal is a true malfunction or due to a signal override.
City of Roswell ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall include dynamic messages signs for dissemination of traffic and other information to drivers, under center control; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close).
City of Roswell ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall include driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers, under center control.
City of Roswell ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall include pedestrian information systems under center control (e.g. warning pedestrians of a potential hazard, or providing mandatory instructions as to the availability of pedestrian access).
City of Roswell ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center.
City of Roswell ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair.
City of Roswell ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall collect, process, and send work zone images to the center for further analysis and distribution, under center control.
City of Roswell ITS Field Equipment	Roadway Work Zone Traffic Control	Under traffic and maintenance center control, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around the work zone through which they are currently passing.
City of Roswell ITS Field Equipment	Roadway Work Zone Traffic Control	Under the control of field personnel within maintenance vehicles, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around a work zone through which they are currently passing.

Element Name	Equipment Package Name	Requirement
City of Roswell ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide operational status for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center.
City of Roswell ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide fault data for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center for repair.
City of Roswell ITS Field Equipment	Standard Rail Crossing	The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI).
City of Roswell ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center.
City of Roswell ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment.
City of Roswell ITS Field Equipment	Standard Rail Crossing	The field element shall receive track status from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and whether a train is approaching.
City of Roswell ITS Field Equipment	Standard Rail Crossing	The field element shall close the highway-rail intersection (HRI) when a train is approaching using gates, lights/signs, barriers, and traffic control signals.
City of Roswell ITS Field Equipment	Standard Rail Crossing	The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection.
City of Roswell ITS Field Equipment	Standard Rail Crossing	The field element shall forward rail traffic advisories received from the Wayside Equipment to the traffic management center.
City of Roswell Police Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
City of Roswell Police Vehicles	On-board EV En Route Support	The emergency vehicle shall send requests to traffic signal control equipment at the roadside to preempt the signal.
City of Roswell Police Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
City of Roswell Police Vehicles	On-board EV En Route Support	The emergency vehicle shall send patient status information to the care facility along with a request for further information.
City of Roswell Police Vehicles	On-board EV En Route Support	The emergency vehicle shall forward care facility status information to emergency vehicle personnel, including the location, specialized services, quality of care, waiting time, number of rooms available, and emergency room status of hospitals or emergency care providers.
City of Roswell Police Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
City of Roswell Police Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
City of Roswell Police Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
City of Roswell Police Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
City of Roswell Police Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
City of Roswell Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
City of Roswell Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
City of Roswell Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
City of Roswell Public Information System	ISP Emergency Traveler Information	The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes.
City of Roswell Public Information System	ISP Emergency Traveler Information	The center shall provide evacuation information to shelter providers.
City of Roswell Public Information System	ISP Emergency Traveler Information	The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
City of Roswell Public Information System	ISP Emergency Traveler Information	The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers.
City of Roswell Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
City of Roswell Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall support the interface to the Emergency Telecommunications System (e.g. 911 or 7-digit call routing) to receive emergency notification information and provide it to the emergency system operator.
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator.

Element Name	Equipment Package Name	Requirement
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator.
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator.
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence.
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident.
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
City of Roswell Public Safety Dispatch	Emergency Call-Taking	The center shall update the incident information log once the emergency system operator has verified the incident.
City of Roswell Public Safety Dispatch	Emergency Commercial Vehicle Response	The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc.
City of Roswell Public Safety Dispatch	Emergency Commercial Vehicle Response	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
City of Roswell Public Safety Dispatch	Emergency Data Collection	The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data.
City of Roswell Public Safety Dispatch	Emergency Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
City of Roswell Public Safety Dispatch	Emergency Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself.
City of Roswell Public Safety Dispatch	Emergency Data Collection	The center shall be able to produce sample products of the data available.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall receive traffic images to support dispatch of emergency vehicles.
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall provide the capability to request remote control of traffic surveillance devices
City of Roswell Public Safety Dispatch	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
City of Roswell Public Safety Dispatch	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
City of Roswell Public Safety Dispatch	Emergency Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to support incident management.
City of Roswell Public Safety Dispatch	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
City of Roswell Public Safety Dispatch	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
City of Roswell Public Safety Dispatch	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
City of Roswell Public Safety Dispatch	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
City of Roswell Public Safety Dispatch	Emergency Response Management	The center shall support remote control of field equipment normally under control of the traffic management center including traffic signals, dynamic message signs, gates, and barriers.
City of Roswell Public Safety Dispatch	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
City of Roswell Public Safety Dispatch	Emergency Routing	The center shall collect current traffic and road condition information from traffic management centers for emergency vehicle route calculation.
City of Roswell Public Safety Dispatch	Emergency Routing	The center shall receive inputs from traffic management and maintenance centers on the location and status of traffic control equipment and work zones along potential emergency routes.
City of Roswell Public Safety Dispatch	Emergency Routing	The center shall receive status information from care facilities to determine the appropriate facility and its location.
City of Roswell Public Safety Dispatch	Emergency Routing	The center shall receive asset restriction information from maintenance centers to support the dispatching of appropriate emergency resources.
City of Roswell Public Safety Dispatch	Emergency Routing	The center shall calculate emergency vehicle routes, under center personnel control, based on information from traffic management and maintenance centers.
City of Roswell Public Safety Dispatch	Emergency Routing	The center shall request and receive ingress and egress routes or other specialized emergency access routes from the traffic management center.

Element Name	Equipment Package Name	Requirement
City of Roswell Public Safety Dispatch	Emergency Routing	The center shall provide the capability to request special traffic control measures, such as signal preemption, from the traffic management center to facilitate emergency vehicle progress along the suggested route.
City of Roswell Public Safety Dispatch	Emergency Routing	Once the route is calculated the route shall be provided to the dispatch function.
City of Roswell Public Safety Dispatch	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
City of Roswell Public Safety Dispatch	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
City of Roswell Public Safety Dispatch	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
City of Roswell Public Safety Dispatch	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
City of Roswell Public Safety Dispatch	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
City of Roswell Public Works Dispatch	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
City of Roswell Public Works Dispatch	MCM Incident Management	The center shall exchange incident and threat information with emergency management centers as well as traffic management centers; including notification of existence of incident and expected severity, location, time and nature of incident.
City of Roswell Public Works Dispatch	MCM Incident Management	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
City of Roswell Public Works Dispatch	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall maintain an interface with asset management systems to track the inventory, restrictions, repair needs and status updates of transportation assets (pavement, bridges, signs, etc.) including location, installation and materials information, vendor/contractor, current maintenance status, standard height, width, and weight restrictions.
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other roadway maintenance.
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall provide emergency management and traffic management centers with information about scheduled maintenance and construction work activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from roadside equipment, such as traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from traffic management centers, including data for traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
City of Roswell Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall dispatch and route maintenance and construction vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
City of Roswell Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall collect and analyze vehicle diagnostics information from maintenance and construction vehicles. 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.
City of Roswell Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall exchange information with equipment repair facilities including status and history of repairs concerning maintenance and construction vehicles. This information includes vehicle status and diagnostic information, vehicle utilization, and coordination of when vehicles will be available for preventative and corrective maintenance.
City of Roswell Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall schedule preventive and corrective vehicle maintenance with the equipment repair facility based on fleet health reports, maintenance records, vehicle utilization and vehicle availability schedules.
City of Roswell Public Works Dispatch	MCM Vehicle Tracking	The center shall monitor the locations of all maintenance and construction vehicles and other equipment under its jurisdiction.
City of Roswell Public Works Dispatch	MCM Vehicle Tracking	The center shall present location data to center personnel for the fleet of maintenance and construction vehicles and other equipment.

Element Name	Equipment Package Name	Requirement
City of Roswell Public Works Dispatch	MCM Vehicle Tracking	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for maintenance and construction vehicle tracking.
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other winter roadway maintenance.
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall exchange information with administrative systems to support the planning and scheduling of winter maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall provide status information about scheduled winter maintenance activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, and the media.
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of winter maintenance activities.
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall dispatch and route winter maintenance vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall determine the need for roadway treatment based on current and forecasted weather information, current usage of treatments and materials, available resources, requests for action from other agencies, and recommendations from the Maintenance Decision Support system, specifically under winter conditions. This supports winter maintenance such as plowing, treating, anti-icing, etc.
City of Roswell Public Works Dispatch	MCM Winter Maintenance Management	The center shall provide dispatch instructions for vehicle operators based on input parameters from center personnel, specifically for winter conditions. This could include a treatment route, treatment application rates, start and end times, and other treatment instructions.
City of Roswell Public Works Dispatch	MCM Work Activity Coordination	The center shall provide 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.
City of Roswell Public Works Dispatch	MCM Work Activity Coordination	The center shall provide status information about scheduled maintenance and construction activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, multimodal transportation providers, rail operations, and the media.
City of Roswell Public Works Dispatch	MCM Work Activity Coordination	The center shall collect and respond to feedback concerning scheduled maintenance and construction activities with other management centers such as traffic, emergency, transit, and rail operations.
City of Roswell Public Works Dispatch	MCM Work Activity Coordination	The center shall collect and disseminate asset restriction information 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.
City of Roswell Public Works Dispatch	MCM Work Zone Management	The center shall generate new work zone activity schedules for use by maintenance and construction vehicles, maintenance and construction operators, and for information coordination purposes.
City of Roswell Public Works Dispatch	MCM Work Zone Management	The center shall control the collection of work zone status information including video images from cameras located in or near the work zone.
City of Roswell Public Works Dispatch	MCM Work Zone Management	The center shall disseminate work zone information to other agencies and centers including traffic, transit, emergency management centers, other maintenance centers, traveler information providers, and the media.
City of Roswell Public Works Dispatch	MCM Work Zone Management	The center shall control traffic in work zones by providing remote control of dynamic message signs, highway advisory radio systems, gates, and barriers located in or near the work zone.
City of Roswell Public Works Dispatch	MCM Work Zone Management	The center shall exchange information with administrative systems to support the planning and scheduling of work zone activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
City of Roswell Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to control information from the center to allow remote operation of the on-board vehicle systems. These systems include routine maintenance equipment for cutting, repairs, hazard removal, etc.
City of Roswell Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
City of Roswell Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
City of Roswell Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
City of Roswell Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.

Element Name	Equipment Package Name	Requirement
City of Roswell Public Works Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall compute the location of the vehicle based on inputs from a vehicle location determination function.
City of Roswell Public Works Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall send the timestamped vehicle location to the controlling center.
City of Roswell Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall collect vehicle diagnostics and operating status data from the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures as well as the status of maintenance and construction-specific systems on the vehicle.
City of Roswell Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall use the diagnostic and status information to support scheduling vehicle maintenance, monitoring safety status, and informing the vehicle operator of the conditions.
City of Roswell Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall the vehicle diagnostic and safety information to an equipment repair facility.
City of Roswell Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to the controlling maintenance center.
City of Roswell Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to control information from the center to allow remote operation of the on-board vehicle systems. These systems include winter maintenance equipment for plowing, treating, and anti-icing.
City of Roswell Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
City of Roswell Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
City of Roswell Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
City of Roswell Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall exchange operational and environmental data with other maintenance and construction vehicles. Operational data includes operational state of the maintenance equipment (e.g., blade up/down, spreader pattern, equipment configuration) and a record of the actual work performed while the environmental data includes environmental sensor data collected on-board a maintenance and construction vehicle, either raw or processed data.
City of Roswell Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
City of Roswell Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall monitor, operate, and control work zone devices located at or alongside the roadway. The devices operated on board the vehicle include driver information devices (e.g. dynamic message signs) and work zone intrusion detection and alert devices.
City of Roswell Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall provide an interface for field personnel to input status of their work zone activities.
City of Roswell Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall collect inputs from field personnel and from work zone devices on-board the maintenance and construction vehicle and send them to the controlling center.
City of Roswell Traffic Operations Center	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
City of Roswell Traffic Operations Center	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
City of Roswell Traffic Operations Center	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
City of Roswell Traffic Operations Center	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
City of Roswell Traffic Operations Center	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
City of Roswell Traffic Operations Center	HRI Traffic Management	The center shall remotely control highway-rail intersection (HRI) equipment located in the field.
City of Roswell Traffic Operations Center	HRI Traffic Management	The center shall accept collect highway-rail intersection (HRI) advisory or alert data from rail operations centers.
City of Roswell Traffic Operations Center	HRI Traffic Management	The center shall collect highway-rail intersection (HRI) equipment operational status and compare against the control information sent by the center.
City of Roswell Traffic Operations Center	HRI Traffic Management	The center shall provide the highway-rail intersection (HRI) equipment operational status to rail operations centers.
City of Roswell Traffic Operations Center	HRI Traffic Management	The center shall collect incident information related to a highway-rail intersection (HRI), such as intersection blockages or crashes or equipment malfunctions.
City of Roswell Traffic Operations Center	HRI Traffic Management	The center shall implement control plans to coordinate signalized intersections around highway-rail intersections (HRI), under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, equipment faults, pedestrian crossings, etc.
City of Roswell Traffic Operations Center	Rail Operations Coordination	The center shall exchange highway-rail intersection (HRI) information with rail operations centers. This information may include event schedules, requests for information from the Rail Operators, incident notification based on rail operations messages, and priority messages like notifications of a HAZMAT spill, equipment failure, or an intersection blockage.
City of Roswell Traffic Operations Center	Rail Operations Coordination	The center shall receive highway-rail intersection (HRI) maintenance schedules, train schedules, and incident notifications from rail operations centers.
City of Roswell Traffic Operations Center	Rail Operations Coordination	The center shall use the rail operations information to develop forecast HRI closure times and durations which may be applied in advanced traffic control strategies or delivered as enhanced traveler information.

Element Name	Equipment Package Name	Requirement
City of Roswell Traffic Operations Center	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
City of Roswell Traffic Operations Center	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
City of Roswell Traffic Operations Center	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
City of Roswell Traffic Operations Center	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
City of Roswell Traffic Operations Center	TMC Incident Detection	The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents.
City of Roswell Traffic Operations Center	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
City of Roswell Traffic Operations Center	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
City of Roswell Traffic Operations Center	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
City of Roswell Traffic Operations Center	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
City of Roswell Traffic Operations Center	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
City of Roswell Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
City of Roswell Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
City of Roswell Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
City of Roswell Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
City of Roswell Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
City of Roswell Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
City of Roswell Traffic Operations Center	TMC Multimodal Coordination	The center shall respond to requests from transit management centers for signal priority at one or more intersections along a particular transit route.
City of Roswell Traffic Operations Center	TMC Multimodal Coordination	The center shall exchange information with transit management centers including details current transit routes, the level of service on each route, and the progress of individual vehicles along their routes.
City of Roswell Traffic Operations Center	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
City of Roswell Traffic Operations Center	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
City of Roswell Traffic Operations Center	TMC Signal Control	The center shall remotely control traffic signal controllers.
City of Roswell Traffic Operations Center	TMC Signal Control	The center shall accept notifications of right-of-way requests from pedestrians.
City of Roswell Traffic Operations Center	TMC Signal Control	The center shall collect traffic signal controller operational status and compare against the control information sent by the center.
City of Roswell Traffic Operations Center	TMC Signal Control	The center shall collect traffic signal controller fault data from the field.
City of Roswell Traffic Operations Center	TMC Signal Control	The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc.
City of Roswell Traffic Operations Center	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
City of Roswell Traffic Operations Center	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
City of Roswell Traffic Operations Center	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
City of Roswell Traffic Operations Center	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
City of Roswell Traffic Operations Center	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
City of Roswell Traffic Operations Center	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.

Element Name	Equipment Package Name	Requirement
City of Roswell Traffic Operations Center	Traffic Data Collection	The center shall be able to produce sample products of the data available.
City of Roswell Traffic Operations Center	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
City of Roswell Traffic Operations Center	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
City of Roswell Traffic Operations Center	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
City of Roswell Traffic Operations Center	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
City of Roswell Traffic Operations Center	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
City of Roswell Transit Kiosks	Remote Basic Information Reception	The public interface for travelers shall receive traffic information from a center and present it to the traveler.
City of Roswell Transit Kiosks	Remote Basic Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler.
City of Roswell Transit Kiosks	Remote Basic Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler.
City of Roswell Transit Kiosks	Remote Basic Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
City of Roswell Transit Kiosks	Remote Basic Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
City of Roswell Transit Kiosks	Remote Basic Information Reception	The public interface for travelers shall be able to store frequently requested data.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive traffic information from a center and present it to the traveler upon request.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler upon request.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler upon request.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall provide an interface through which credit identities and stored credit values may be collected from tags, traveler cards, or payment instruments used by travelers.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
City of Roswell Transit Kiosks	Remote Interactive Information Reception	The public interface for travelers shall be able to store frequently requested data.
City of Roswell Transit Kiosks	Remote Transit Fare Management	The public interface for travelers shall accept and process current transit passenger fare collection information.
City of Roswell Transit Kiosks	Remote Transit Fare Management	The public interface for travelers shall calculate a fare based on the origin and destination provided by the traveler, in conjunction with transit routing, transit fare category, and transit user history.
City of Roswell Transit Kiosks	Remote Transit Fare Management	The public interface for travelers shall provide an interface to a transit user traveler card in support of payment for transit fares, tolls, and/or parking lot charges. The stored credit value data from the card shall be collected and updated based on the fare or other charges, or the credit identity shall be collected.
City of Roswell Transit Kiosks	Remote Transit Fare Management	The public interface for travelers shall provide information to the center for financial authorization and transaction processing.
City of Roswell Transit Kiosks	Remote Transit Fare Management	The public interface for travelers shall determine the routing based on the traveler's destination and the location of the closest transit stop from which a route request is being made.
City of Roswell Transit Kiosks	Remote Transit Fare Management	The public interface for travelers shall create passenger loading and fare statistics data based upon data collected at a transit stop.
City of Roswell Transit Kiosks	Remote Transit Information Services	The public interface for travelers shall collect and provide real-time travel-related information at transit stops, multi-modal transfer points, and other public transportation areas.
City of Roswell Transit Kiosks	Remote Transit Information Services	The public interface for travelers shall collect and present to the transit traveler information on transit routes, schedules, and real-time schedule adherence.
City of Roswell Transit Kiosks	Remote Transit Information Services	The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users.
City of Roswell Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
City of Roswell Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
City of Roswell Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
City of Roswell Website	Basic Information Broadcast	The center shall provide the capability to support requests from the media for traffic and incident data.
City of Roswell Website	Infrastructure Provided Trip Planning	The center shall provide the capability to provide specific pre-trip and enroute directions to travelers (and drivers), including costs, arrival times, and transfer points.
City of Roswell Website	Infrastructure Provided Trip Planning	The center shall support on-line route guidance for travelers using personal devices (such as PDAs).

Element Name	Equipment Package Name	Requirement
City of Roswell Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on current and/or predicted conditions of the road network, scheduled maintenance and construction work activities, and work zone activities.
City of Roswell Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on transit services, including fares, schedules, and requirements for travelers with special needs.
City of Roswell Website	Infrastructure Provided Trip Planning	The center shall generate trips based on the use of more than one mode of transport.
City of Roswell Website	Infrastructure Provided Trip Planning	The center shall use the preferences and constraints specified by the traveler in the trip request to select the most appropriate mode of transport.
City of Roswell Website	Infrastructure Provided Trip Planning	The center shall provide the capability for the traveler to confirm the proposed trip plan.
City of Roswell Website	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
City of Roswell Website	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
City of Roswell Website	ISP Traveler Data Collection	The center shall collect, process, and store transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information.
Commercial Vehicles	On-board CV Electronic Data	The commercial vehicle shall receive pass/pull-in messages from the roadside check facilities and present them to the driver in either audible or visual forms.
Commercial Vehicles	On-board CV Electronic Data	The commercial vehicle shall respond to requests to provide data accumulated on-board the vehicle to roadside check facilities for inspection including driver logs, electronic identifiers, credentials, border clearance data, and other screening data such as cargo status, hazmat identifiers, out of service status, vehicle axle weight, vehicle weight, and time.
Commercial Vehicles	On-board CV Electronic Data	The commercial vehicle shall respond to requests to provide the identity, status and other information from the electronic cargo lock tag, if so equipped, to roadside check facilities, including border crossings.
Commercial Vehicles	On-board CV Electronic Data	The commercial vehicle shall support an interface to a commercial vehicle driver that is also acting in the role of a commercial vehicle fleet manager to set up routes, pay necessary taxes, obtain proper credentials, and write the identifiers to the electronic tag for the driver, vehicle, and carrier.
County Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
County Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send requests to traffic signal control equipment at the roadside to preempt the signal.
County Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
County Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
County Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
County Fire/EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
County Fire/EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
County Fire/EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
County Fire/EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
County ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, digitize, and send traffic sensor data (speed, volume, and occupancy) to the center for further analysis and storage, under center control.
County ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, and send traffic images to the center for further analysis and distribution.
County ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system operational status to the controlling center.
County ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system fault data to the controlling center for repair.
County ITS Field Equipment	Roadway Environmental Monitoring	The field element shall include surface and sub-surface environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
County ITS Field Equipment	Roadway Environmental Monitoring	The field element shall include environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
County ITS Field Equipment	Roadway Environmental Monitoring	The field element's environmental sensors shall be remotely controlled by a maintenance center.
County ITS Field Equipment	Roadway Environmental Monitoring	The field element shall provide environmental sensor equipment fault indication to the controlling center or maintenance vehicle.
County ITS Field Equipment	Roadway Environmental Monitoring	The field element shall remotely aggregate environmental sensor data with environmental data collected from maintenance and construction vehicles.
County ITS Field Equipment	Roadway Environmental Monitoring	The field element shall provide weather and road surface condition data to centers.
County ITS Field Equipment	Roadway Field Device Monitoring	The field element shall monitor the operational status (state of the device, configuration, and fault data) of connected sensors (such as traffic, infrastructure, environmental, security, speed) and devices (such as highway advisory radio, dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals, ramp meters, beacons, security surveillance equipment).
County ITS Field Equipment	Roadway Field Device Monitoring	The field element shall send operational status of connected field equipment to the maintenance center.
County ITS Field Equipment	Roadway Field Device Monitoring	The field element shall send collected fault data to the maintenance center for repair.

Element Name	Equipment Package Name	Requirement
County ITS Field Equipment	Roadway Field Device Monitoring	The field element shall include a local interface that provides operational status and fault data for connected field equipment to field personnel.
County ITS Field Equipment	Roadway Field Device Monitoring	The field element shall include a local interface that allows field personnel to command diagnostic tests on connected field equipment.
County ITS Field Equipment	Roadway Signal Controls	The field element shall control traffic signals at intersections and on main highways for urban and rural areas, under center control.
County ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from the indicator control information.
County ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions.
County ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller operational status to the controlling center.
County ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller fault data to the maintenance center for repair.
County ITS Field Equipment	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings.
County ITS Field Equipment	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) priority requests from transit vehicles at intersections, pedestrian crossings, and multimodal crossings.
County ITS Field Equipment	Roadway Signal Priority	The field element shall notify controlling traffic management center and maintenance center that the signal timing has changed based on a signal preemption/priority request to help those centers determine whether a fault detected at the signal is a true malfunction or due to a signal override.
County ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall include dynamic messages signs for dissemination of traffic and other information to drivers, under center control; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close).
County ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall include pedestrian information systems under center control (e.g. warning pedestrians of a potential hazard, or providing mandatory instructions as to the availability of pedestrian access).
County ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center.
County ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair.
County ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall collect, process, and send work zone images to the center for further analysis and distribution, under center control.
County ITS Field Equipment	Roadway Work Zone Traffic Control	Under traffic and maintenance center control, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around the work zone through which they are currently passing.
County ITS Field Equipment	Roadway Work Zone Traffic Control	Under the control of field personnel within maintenance vehicles, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around a work zone through which they are currently passing.
County ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide operational status for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center.
County ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide fault data for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center for repair.
County ITS Field Equipment	Standard Rail Crossing	The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI).
County ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center.
County ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment.
County ITS Field Equipment	Standard Rail Crossing	The field element shall receive track status from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and whether a train is approaching.
County ITS Field Equipment	Standard Rail Crossing	The field element shall close the highway-rail intersection (HRI) when a train is approaching using gates, lights/signs, barriers, and traffic control signals.
County ITS Field Equipment	Standard Rail Crossing	The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection.
County ITS Field Equipment	Standard Rail Crossing	The field element shall forward rail traffic advisories received from the Wayside Equipment to the traffic management center.
County Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
County Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
County Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
County Public Information System	Basic Information Broadcast	The center shall provide the capability to support requests from the media for traffic and incident data.

Element Name	Equipment Package Name	Requirement
County Public Information System	ISP Emergency Traveler Information	The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes.
County Public Information System	ISP Emergency Traveler Information	The center shall provide evacuation information to shelter providers.
County Public Information System	ISP Emergency Traveler Information	The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
County Public Information System	ISP Emergency Traveler Information	The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers.
County Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
County Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
County Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information.
County Public Works Dispatch	MCM Environmental Information Collection	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
County Public Works Dispatch	MCM Environmental Information Collection	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
County Public Works Dispatch	MCM Environmental Information Collection	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from traffic, emergency, and transit management, traveler information providers, and environmental data collected from sensors deployed on and about the roadway as well as the fleet of maintenance and construction vehicles.
County Public Works Dispatch	MCM Environmental Information Collection	The center shall provide weather and road condition information to weather service providers and center personnel.
County Public Works Dispatch	MCM Environmental Information Collection	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
County Public Works Dispatch	MCM Environmental Information Collection	The center shall collect operational status for the roadside and vehicle-based environmental sensor equipment.
County Public Works Dispatch	MCM Environmental Information Collection	The center shall collect fault data for the roadside and vehicle-based environmental sensor equipment for repair.
County Public Works Dispatch	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
County Public Works Dispatch	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
County Public Works Dispatch	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.
County Public Works Dispatch	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
County Public Works Dispatch	MCM Environmental Information Processing	The center shall provide value-added sector specific meteorological services with information on basic road facility and treatment information that supports forecasts for road conditions.
County Public Works Dispatch	MCM Incident Management	The center shall exchange incident and threat information with emergency management centers as well as traffic management centers; including notification of existence of incident and expected severity, location, time and nature of incident.
County Public Works Dispatch	MCM Incident Management	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
County Public Works Dispatch	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.
County Public Works Dispatch	MCM Incident Management	The center shall provide 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.
County Public Works Dispatch	MCM Maintenance Decision Support	The center shall provide the center personnel with tailored external information, including weather or road condition observations, forecasted weather information or road conditions, current usage of treatments and materials, available resources, equipment and vehicle availability, road network information, and source reliability information.
County Public Works Dispatch	MCM Maintenance Decision Support	The center shall tailor the decision support information to include filtering (selection from a large amount of external information), error reduction ('smoothing' the information), fusion (combination of disparate information to match the decision needs), and analysis (creating the decision).
County Public Works Dispatch	MCM Maintenance Decision Support	The center shall provide an interface to the center personnel to input control parameters for the decision support process and receive decisions or information presentation.
County Public Works Dispatch	MCM Maintenance Decision Support	The center shall provide dispatch information to maintenance and construction vehicles based on the outputs of the decision support system, including recommended roadway treatment actions.

Element Name	Equipment Package Name	Requirement
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall maintain an interface with asset management systems to track the inventory, restrictions, repair needs and status updates of transportation assets (pavement, bridges, signs, etc.) including location, installation and materials information, vendor/contractor, current maintenance status, standard height, width, and weight restrictions.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other roadway maintenance.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall provide emergency management and traffic management centers with information about scheduled maintenance and construction work activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from roadside equipment, such as traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from traffic management centers, including data for traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of roadway maintenance and construction activities.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall dispatch and route maintenance and construction vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
County Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall track the status of roadway maintenance and construction activities by monitoring collected data from the dispatched vehicles and equipment.
County Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall collect and analyze vehicle diagnostics information from maintenance and construction vehicles. 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.
County Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall exchange information with equipment repair facilities including status and history of repairs concerning maintenance and construction vehicles. This information includes vehicle status and diagnostic information, vehicle utilization, and coordination of when vehicles will be available for preventative and corrective maintenance.
County Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall schedule preventive and corrective vehicle maintenance with the equipment repair facility based on fleet health reports, maintenance records, vehicle utilization and vehicle availability schedules.
County Public Works Dispatch	MCM Vehicle Tracking	The center shall monitor the locations of all maintenance and construction vehicles and other equipment under its jurisdiction.
County Public Works Dispatch	MCM Vehicle Tracking	The center shall present location data to center personnel for the fleet of maintenance and construction vehicles and other equipment.
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other winter roadway maintenance.
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall exchange information with administrative systems to support the planning and scheduling of winter maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall provide status information about scheduled winter maintenance activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, and the media.
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of winter maintenance activities.
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall dispatch and route winter maintenance vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.

Element Name	Equipment Package Name	Requirement
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall determine the need for roadway treatment based on current and forecasted weather information, current usage of treatments and materials, available resources, requests for action from other agencies, and recommendations from the Maintenance Decision Support system, specifically under winter conditions. This supports winter maintenance such as plowing, treating, anti-icing, etc.
County Public Works Dispatch	MCM Winter Maintenance Management	The center shall assess the current status of all winter maintenance activities, including actual work activities performed, current locations and operational conditions of vehicles, materials and equipment inventories, field equipment status, environmental information, etc.
County Public Works Dispatch	MCM Work Activity Coordination	The center shall provide 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.
County Public Works Dispatch	MCM Work Activity Coordination	The center shall provide status information about scheduled maintenance and construction activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, multimodal transportation providers, rail operations, and the media.
County Public Works Dispatch	MCM Work Activity Coordination	The center shall collect and respond to feedback concerning scheduled maintenance and construction activities with other management centers such as traffic, emergency, transit, and rail operations.
County Public Works Dispatch	MCM Work Activity Coordination	The center shall collect and disseminate asset restriction information 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.
County Public Works Dispatch	MCM Work Activity Coordination	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance and construction activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
County Public Works Dispatch	MCM Work Zone Management	The center shall generate new work zone activity schedules for use by maintenance and construction vehicles, maintenance and construction operators, and for information coordination purposes.
County Public Works Dispatch	MCM Work Zone Management	The center shall control the collection of work zone status information including video images from cameras located in or near the work zone.
County Public Works Dispatch	MCM Work Zone Management	The center shall disseminate work zone information to other agencies and centers including traffic, transit, emergency management centers, other maintenance centers, traveler information providers, and the media.
County Public Works Dispatch	MCM Work Zone Management	The center shall control traffic in work zones by providing remote control of dynamic message signs, highway advisory radio systems, gates, and barriers located in or near the work zone.
County Public Works Dispatch	MCM Work Zone Management	The center shall exchange information with administrative systems to support the planning and scheduling of work zone activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
County Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
County Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
County Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
County Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
County Public Works Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall compute the location of the vehicle based on inputs from a vehicle location determination function.
County Public Works Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall send the timestamped vehicle location to the controlling center.
County Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall collect vehicle diagnostics and operating status data from the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures as well as the status of maintenance and construction-specific systems on the vehicle.
County Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall use the diagnostic and status information to support scheduling vehicle maintenance, monitoring safety status, and informing the vehicle operator of the conditions.
County Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to the controlling maintenance center.
County Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to an equipment repair facility.
County Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
County Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.

Element Name	Equipment Package Name	Requirement
County Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
County Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
County Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall monitor, operate, and control work zone devices located at or alongside the roadway. The devices operated on board the vehicle include driver information devices (e.g. dynamic message signs) and work zone intrusion detection and alert devices.
County Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall provide an interface for field personnel to input status of their work zone activities.
County Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall collect inputs from field personnel and from work zone devices on-board the maintenance and construction vehicle and send them to the controlling center.
County Sheriffs Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
County Sheriffs Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
County Sheriffs Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
County Sheriffs Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
County Sheriffs Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
County Sheriffs Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
County Sheriffs Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
County Traffic Operations Center	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
County Traffic Operations Center	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
County Traffic Operations Center	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
County Traffic Operations Center	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
County Traffic Operations Center	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
County Traffic Operations Center	HRI Traffic Management	The center shall remotely control highway-rail intersection (HRI) equipment located in the field.
County Traffic Operations Center	HRI Traffic Management	The center shall accept collect highway-rail intersection (HRI) advisory or alert data from rail operations centers.
County Traffic Operations Center	HRI Traffic Management	The center shall collect highway-rail intersection (HRI) equipment operational status and compare against the control information sent by the center.
County Traffic Operations Center	HRI Traffic Management	The center shall provide the highway-rail intersection (HRI) equipment operational status to rail operations centers.
County Traffic Operations Center	HRI Traffic Management	The center shall collect incident information related to a highway-rail intersection (HRI), such as intersection blockages or crashes or equipment malfunctions.
County Traffic Operations Center	HRI Traffic Management	The center shall implement control plans to coordinate signalized intersections around highway-rail intersections (HRI), under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, equipment faults, pedestrian crossings, etc.
County Traffic Operations Center	Rail Operations Coordination	The center shall exchange highway-rail intersection (HRI) information with rail operations centers. This information may include event schedules, requests for information from the Rail Operators, incident notification based on rail operations messages, and priority messages like notifications of a HAZMAT spill, equipment failure, or an intersection blockage.
County Traffic Operations Center	Rail Operations Coordination	The center shall receive highway-rail intersection (HRI) maintenance schedules, train schedules, and incident notifications from rail operations centers.
County Traffic Operations Center	Rail Operations Coordination	The center shall use the rail operations information to develop forecast HRI closure times and durations which may be applied in advanced traffic control strategies or delivered as enhanced traveler information.
County Traffic Operations Center	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
County Traffic Operations Center	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
County Traffic Operations Center	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
County Traffic Operations Center	TMC Environmental Monitoring	The center shall provide weather and road condition information to weather service providers and center personnel.

Element Name	Equipment Package Name	Requirement
County Traffic Operations Center	TMC Environmental Monitoring	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
County Traffic Operations Center	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
County Traffic Operations Center	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
County Traffic Operations Center	TMC Incident Detection	The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents.
County Traffic Operations Center	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
County Traffic Operations Center	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
County Traffic Operations Center	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
County Traffic Operations Center	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
County Traffic Operations Center	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include 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 may also identify specific information that should not be released to the public.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
County Traffic Operations Center	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
County Traffic Operations Center	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
County Traffic Operations Center	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
County Traffic Operations Center	TMC Signal Control	The center shall remotely control traffic signal controllers.
County Traffic Operations Center	TMC Signal Control	The center shall collect traffic signal controller operational status and compare against the control information sent by the center.
County Traffic Operations Center	TMC Signal Control	The center shall collect traffic signal controller fault data from the field.
County Traffic Operations Center	TMC Signal Control	The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc.
County Traffic Operations Center	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
County Traffic Operations Center	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
County Traffic Operations Center	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
County Traffic Operations Center	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.

Element Name	Equipment Package Name	Requirement
County Traffic Operations Center	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
County Traffic Operations Center	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
County Traffic Operations Center	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
County Traffic Operations Center	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
County Traffic Operations Center	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
County Traffic Operations Center	Traffic Data Collection	The center shall be able to produce sample products of the data available.
County Traffic Operations Center	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
County Traffic Operations Center	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
County Traffic Operations Center	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
County Traffic Operations Center	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
County Traffic Operations Center	Traffic Maintenance	The center shall collect environmental sensor operational status.
County Traffic Operations Center	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
County Traffic Operations Center	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
County Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
County Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
County Website	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
County Website	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
County Website	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
DMV Database	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
DMV Database	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
DMV Database	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
DMV Database	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
DMV Database	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
DMV Database	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
DMV Database	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
DMV Database	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
DMV Database	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
DMV Database	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
DMV Database	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
DMV Database	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
DMV Database	ITS Data Repository	The center shall perform quality checks on received data.
DMV Database	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
DMV Database	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
DMV Database	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
DMV Database	Traffic and Roadside Data Archival	The center shall manage the collection of archive data directly from collection equipment located at the roadside.
DMV Database	Traffic and Roadside Data Archival	The center shall collect traffic sensor information from roadside devices.
DMV Database	Traffic and Roadside Data Archival	The center shall collect environmental sensor information that from roadside devices.
DMV Database	Traffic and Roadside Data Archival	The center shall respond to requests from the Archive Data Administer to input the parameters that control the collection process.

Element Name	Equipment Package Name	Requirement
DMV Database	Traffic and Roadside Data Archival	The center shall send the request for data and control parameters to the field equipment where the information is collected and returned.
DMV Database	Traffic and Roadside Data Archival	The center shall record the status about the imported traffic and roadside data.
Drayage Companies	Fleet Administration	The center shall send data concerning enrollment of commercial vehicles for electronic clearance and tax filing to the appropriate commercial vehicle administration center. The data may include driver and vehicle identification, safety inspections/status, carrier credentials, related citations, and accident information.
Drayage Companies	Fleet Administration	The center shall obtain and manage commercial vehicle routes for its fleet of vehicles, taking into account route restrictions, advance payment of tolls, HAZMAT restrictions, and current traffic and road conditions provided by traveler information systems.
Drayage Companies	Fleet Administration	The center shall monitor the locations and progress of commercial vehicles against their planned routes and raise appropriate warnings based on route monitoring parameters.
Drayage Companies	Fleet Administration	The center shall coordinate the response to security incidents and the sharing of security threat information involving commercial vehicles with other agencies including emergency management centers and alerting/advisory systems.
Drayage Companies	Freight Administration and Management	The center shall collect data from the commercial vehicles carrying freight or from the freight equipment itself. Includes container, trailer, or chassis information regarding identity, type, location, brake wear data, mileage, seal number/type, door open/close status, chassis bare/covered status, tethered / untethered status, bill of lading, and sensor status.
Drayage Companies	Freight Administration and Management	The center shall provide the interface with intermodal freight shippers to setup transportation for freight equipment. Inputs to this include information about the shipper, consignee, commodities, pick-up and drop-off locations for freight equipment. Outputs include information about the driver and commercial vehicle that will be transporting the freight.
Drayage Companies	Freight Administration and Management	The center shall coordinate the shipment of cargo using freight equipment with intermodal freight depots. Information to be coordinated includes information regarding a freight transportation booking and the assigned driver and vehicle scheduled to transport the freight along with cargo movement logs, routing information, and cargo ID's.
Drayage Companies	Freight Administration and Management	The center shall track the progress of freight equipment as it moves from source to destination based on inputs from the commercial vehicles, the freight equipment, intermodal freight depots, shippers, and commercial vehicle administration centers that provide border clearance status information.
Drayage Companies	Freight Administration and Management	The center shall collect diagnostic information fro freight equipment to schedule preventative and corrective maintenance.
Drayage Companies	Freight Administration and Management	The center shall notify other security functions within the center of deviations in the movement of freight equipment from its planned route.
Electronic Bypass Stations	Citation and Accident Electronic Recording	The roadside check facility equipment shall record the results of roadside inspections carried using an inspector's hand held terminal interface.
Electronic Bypass Stations	Citation and Accident Electronic Recording	The roadside check facility equipment shall provide an interface for an inspector to add comments to the inspection results.
Electronic Bypass Stations	Citation and Accident Electronic Recording	The roadside check facility equipment shall forward results of the roadside inspections to the commercial vehicle administration center either as needed or on a periodic (e.g. basis). These reports include accident reports, violation notifications, citations, and daily site activity logs.
Electronic Bypass Stations	International Border Crossing	The roadside check facility equipment at a border crossing shall receive the border agency clearance results, transportation border clearance assessments, and trip declaration identifiers from the commercial vehicle administration center to be used to screen the incoming commercial vehicles.
Electronic Bypass Stations	International Border Crossing	The roadside check facility equipment at a border crossing shall request and input the tag data from approaching commercial vehicles to determine the identity of the vehicle along with its carrier, driver, and a trip identity.
Electronic Bypass Stations	International Border Crossing	The roadside check facility equipment at a border crossing shall request and input the border clearance data from approaching commercial vehicles to compare against the data received from the center concerning compliance with import/export and immigration regulations.
Electronic Bypass Stations	International Border Crossing	The roadside check facility equipment at a border crossing shall request and input the electronic cargo lock data from approaching commercial vehicles to compare against the data received from the center.
Electronic Bypass Stations	International Border Crossing	The roadside check facility equipment at a border crossing shall send clearance event data regarding action taken at border to the commercial vehicle administration center and to the commercial vehicle. This may include a date/time stamped acceptance or override of system decisions whether to allow release of the vehicle and its cargo.
Electronic Bypass Stations	Roadside Electronic Screening	The roadside check facility equipment shall detect the presence of commercial vehicles and freight equipment approaching a facility. Sensors can differentiate between different types of vehicles and determine the number of axles, gross vehicle weight, and the identification of the vehicle and its cargo.
Electronic Bypass Stations	Roadside Electronic Screening	The roadside check facility equipment shall receive the credential and credentials status information (e.g. snapshots) from the commercial vehicle administration center to maintain an up to date list of which vehicles have been cleared (enrolled) to potentially pass through without stopping.
Electronic Bypass Stations	Roadside Electronic Screening	The roadside check facility equipment shall receive violation records from appropriate law enforcement agencies pertaining to commercial vehicles.
Electronic Bypass Stations	Roadside Electronic Screening	The roadside check facility equipment shall provide an interface to inspectors in the field to allow them to monitor and if necessary override the pull-in decisions made by the system.
Electronic Bypass Stations	Roadside Electronic Screening	The roadside check facility equipment shall request and input electronic screening data from the commercial vehicle's electronic tag data.
Electronic Bypass Stations	Roadside Electronic Screening	The roadside check facility equipment shall send a pass/pull-in notification to the commercial vehicle and its driver based on the information received from the vehicle, the administration center, enforcement agencies, and the inspector. The message may be sent to the on-board equipment in the commercial vehicle or transmitted to the driver using equipment such as dynamic message signs, red-green lights, flashing signs, etc.

Element Name	Equipment Package Name	Requirement
Electronic Bypass Stations	Roadside Electronic Screening	The roadside check facility equipment shall send a record of daily activities at the facility including summaries of screening events and inspections to the commercial vehicle administration center.
Electronic Bypass Stations	Roadside HAZMAT Detection	The roadside check facility equipment shall detect the presence of commercial vehicles and freight equipment approaching a facility. Sensors can differentiate between different types of vehicles and determine the number of axles, gross vehicle weight, presence of security sensitive hazardous materials, and the identification of the vehicle and its cargo.
Electronic Bypass Stations	Roadside HAZMAT Detection	The roadside check facility equipment shall detect the presence of security sensitive substance, e.g. detection of radiation or ammonia compounds, carried on-boar commercial vehicles and freight equipment approaching a facility. This data is acquired by roadside sensors from the freight equipment electronically, optically, or manually.
Electronic Bypass Stations	Roadside HAZMAT Detection	The roadside check facility equipment shall receive the credential information (e.g. snapshots) from the commercial vehicle administration center to maintain an up to date list of which vehicles with hazardous materials shipments have been cleared (enrolled).
Electronic Bypass Stations	Roadside HAZMAT Detection	The roadside check facility equipment shall send a pass/pull-in notification to the commercial vehicle and its driver based on the hazmat information received from the vehicle, the freight equipment, or the administration center. The message may be sent to the on-board equipment in the commercial vehicle or transmitted to the driver using equipment such as dynamic message signs, red-green lights, flashing signs, etc.
Electronic Bypass Stations	Roadside HAZMAT Detection	The roadside check facility equipment shall raise and forward an alarm to the appropriate emergency management center if the hazmat-carrying commercial vehicle does not stop, or in the case of a positive identification of an unpermitted security sensitive hazmat cargo, to coordinate a traffic stop or some other action with respect to the offending commercial vehicle. The alarm will include information concerning the security sensitive hazmat detected at the roadside including the location, appropriate identifiers, route deviation, or assignment mismatches between the driver, commercial vehicle, or the freight equipment.
Fleet Management Systems	Fleet Administration	The center shall send data concerning enrollment of commercial vehicles for electronic clearance and tax filing to the appropriate commercial vehicle administration center. The data may include driver and vehicle identification, safety inspections/status, carrier credentials, related citations, and accident information.
Fleet Management Systems	Fleet Administration	The center shall obtain and manage commercial vehicle routes for its fleet of vehicles, taking into account route restrictions, advance payment of tolls, HAZMAT restrictions, and current traffic and road conditions provided by traveler information systems.
Fleet Management Systems	Fleet Administration	The center shall monitor the locations and progress of commercial vehicles against their planned routes and raise appropriate warnings based on route monitoring parameters.
Fleet Management Systems	Fleet Administration	The center shall coordinate the response to security incidents and the sharing of security threat information involving commercial vehicles with other agencies including emergency management centers and alerting/advisory systems.
Fleet Management Systems	Fleet Credentials and Taxes Management and Reporting	The center shall send data concerning enrollment and purchase of commercial vehicles credentials and tax filing to the appropriate commercial vehicle administration center.
Fleet Management Systems	Fleet Credentials and Taxes Management and Reporting	The center shall receive compliance review reports from the appropriate commercial vehicle administration centers concerning the operations of the commercial vehicle fleet, including concomitant out-of-service notifications, and carrier warnings/notifications.
Fleet Management Systems	Fleet Credentials and Taxes Management and Reporting	The center shall provide audit data to the appropriate commercial vehicle administration center to support tax audits.
Fleet Management Systems	Fleet Credentials and Taxes Management and Reporting	The center shall support an interface with a commercial vehicle driver that is acting in the role of a commercial vehicle fleet manager for the purposes of obtaining credentials, filing taxes and audit data, and receiving compliance reports and status information.
Fleet Management Systems	Fleet HAZMAT Management	The center shall track the routing and cargo information, including the manifest data plus the chemical characteristics of a hazardous materials (HAZMAT) load being carried by its fleet of commercial vehicles.
Fleet Management Systems	Fleet HAZMAT Management	The center shall provide information concerning commercial vehicles carrying hazardous materials (HAZMAT) upon request from an emergency management center. The information includes the nature of the cargo being carried, identity of the vehicle and unloading instructions.
Fleet Management Systems	Freight Administration and Management	The center shall collect data from the commercial vehicles carrying freight or from the freight equipment itself. Includes container, trailer, or chassis information regarding identity, type, location, brake wear data, mileage, seal number/type, door open/close status, chassis bare/covered status, tethered / untethered status, bill of lading, and sensor status.
Fleet Management Systems	Freight Administration and Management	The center shall provide the interface with intermodal freight shippers to setup transportation for freight equipment. Inputs to this include information about the shipper, consignee, commodities, pick-up and drop-off locations for freight equipment. Outputs include information about the driver and commercial vehicle that will be transporting the freight.
Fleet Management Systems	Freight Administration and Management	The center shall coordinate the shipment of cargo using freight equipment with intermodal freight depots. Information to be coordinated includes information regarding a freight transportation booking and the assigned driver and vehicle scheduled to transport the freight along with cargo movement logs, routing information, and cargo ID's.
Fleet Management Systems	Freight Administration and Management	The center shall track the progress of freight equipment as it moves from source to destination based on inputs from the commercial vehicles, the freight equipment, intermodal freight depots, shippers, and commercial vehicle administration centers that provide border clearance status information.
Fleet Management Systems	Freight Administration and Management	The center shall collect diagnostic information fro freight equipment to schedule preventative and corrective maintenance.
Fleet Management Systems	Freight Administration and Management	The center shall notify other security functions within the center of deviations in the movement of freight equipment from its planned route.
Independent School District Buses	On-board Fixed Route Schedule Management	The transit vehicle shall receive transit route information for its assigned route including transit service instructions, traffic information, road conditions, and other information for the operator.
Independent School District Buses	On-board Fixed Route Schedule Management	The transit vehicle shall use the route information and its current location to determine the deviation from the predetermined schedule.

Element Name	Equipment Package Name	Requirement
Independent School District Buses	On-board Fixed Route Schedule Management	The transit vehicle shall calculate the estimated times of arrival (ETA) at transit stops.
Independent School District Buses	On-board Fixed Route Schedule Management	The transit vehicle shall determine scenarios to correct the schedule deviation.
Independent School District Buses	On-board Fixed Route Schedule Management	The transit vehicle shall provide the schedule deviations and instructions for schedule corrections to the transit vehicle operator if the deviation is small, or the transit vehicle is operating in an urban area.
Independent School District Buses	On-board Fixed Route Schedule Management	The transit vehicle shall send the schedule deviation and estimated arrival time information to the center.
Independent School District Buses	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
Independent School District Buses	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
Independent School District Buses	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.
Independent School District Buses	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
Independent School District Buses	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
Independent School District Buses	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle's current location.
Independent School District Buses	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed sensor information to the center along with the vehicle's current location.
Independent School District Buses	On-board Transit Security	The transit vehicle shall accept sensor control data to allow remote control of the sensors.
Independent School District Buses	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
Independent School District Buses	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
Independent School District Buses	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
Independent School District Buses	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
Independent School District Buses	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
Independent School District Buses	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
Independent School District Buses	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
Independent School District Dispatch	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
Independent School District Dispatch	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
Independent School District Dispatch	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
Independent School District Dispatch	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
Independent School District Dispatch	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
Independent School District Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
Independent School District Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
Independent School District Dispatch	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
Independent School District Dispatch	Center Secure Area Surveillance	The center shall identify potential security threats based on collected security surveillance data.
Independent School District Dispatch	Center Secure Area Surveillance	The center shall verify potential security threats by correlating security surveillance data from multiple sources.
Independent School District Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
Independent School District Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
Independent School District Dispatch	Transit Center Fixed-Route Operations	The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data.
Independent School District Dispatch	Transit Center Fixed-Route Operations	The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes
Independent School District Dispatch	Transit Center Fixed-Route Operations	The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.

Element Name	Equipment Package Name	Requirement
Independent School District Dispatch	Transit Center Fixed-Route Operations	The center shall collect transit operational data for use in the generation of routes and schedules.
Independent School District Dispatch	Transit Center Fixed-Route Operations	The center shall manage large deviations of individual transit vehicles, deviations in rural areas, and deviations of large numbers of vehicles.
Independent School District Dispatch	Transit Center Fixed-Route Operations	The center shall generate the necessary corrective actions which may involve more than the vehicles concerned and more far reaching action, such as, the introduction of extra vehicles, wide area signal priority by traffic management, the premature termination of some services, etc.
Independent School District Dispatch	Transit Center Fixed-Route Operations	The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services.
Independent School District Dispatch	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.
Independent School District Dispatch	Transit Center Security	The center shall monitor transit vehicle operational data to determine if the transit vehicle is off-route and assess whether a security incident is occurring.
Independent School District Dispatch	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
Independent School District Dispatch	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
Independent School District Dispatch	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
Independent School District Dispatch	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
Independent School District Dispatch	Transit Center Vehicle Tracking	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for transit tracking and dispatch.
Independent School District Dispatch	Transit Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers.
Independent School District Dispatch	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
Independent School District Dispatch	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.
Independent School District Dispatch	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
Independent School District Dispatch	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
Independent School District Dispatch	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
Independent School District Dispatch	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
Independent School District Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
Independent School District Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
Independent School District Dispatch	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
Independent School District Dispatch	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
Independent School District Dispatch	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
Independent School District Dispatch	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
Independent School District Dispatch	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
Local Transit Dispatch	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
Local Transit Dispatch	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
Local Transit Dispatch	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
Local Transit Dispatch	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
Local Transit Dispatch	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
Local Transit Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
Local Transit Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
Local Transit Dispatch	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
Local Transit Dispatch	Center Secure Area Surveillance	The center shall identify potential security threats based on collected security surveillance data.

Element Name	Equipment Package Name	Requirement
Local Transit Dispatch	Center Secure Area Surveillance	The center shall verify potential security threats by correlating security surveillance data from multiple sources.
Local Transit Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
Local Transit Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
Local Transit Dispatch	Center Secure Area Surveillance	The center shall respond to control data from center personnel regarding security surveillance data collection, processing, threat detection, and image matching.
Local Transit Dispatch	Transit Center Fare and Load Management	The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations.
Local Transit Dispatch	Transit Center Fare and Load Management	The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information.
Local Transit Dispatch	Transit Center Fare and Load Management	The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution.
Local Transit Dispatch	Transit Center Fare and Load Management	The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments.
Local Transit Dispatch	Transit Center Fare and Load Management	The center shall be capable of establishing emergency fare structures to override all other fares during disasters, states of emergency, or evacuations.
Local Transit Dispatch	Transit Center Fare and Load Management	The center shall maintain a list of invalid traveler credit identities, or bad tag lists that can be forwarded to transit vehicles and transit stops or stations.
Local Transit Dispatch	Transit Center Fare and Load Management	The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall dispatch fixed route or flexible route transit vehicles
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall collect transit operational data for use in the generation of routes and schedules.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall provide instructions or corrective actions to the transit vehicle operators based upon operational needs.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall manage large deviations of individual transit vehicles, deviations in rural areas, and deviations of large numbers of vehicles.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall generate the necessary corrective actions which may involve more than the vehicles concerned and more far reaching action, such as, the introduction of extra vehicles, wide area signal priority by traffic management, the premature termination of some services, etc.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
Local Transit Dispatch	Transit Center Fixed-Route Operations	The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services.
Local Transit Dispatch	Transit Center Information Services	The center shall provide travelers using public transportation with traffic and advisory information upon request. Such information may include transit routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, and special events.
Local Transit Dispatch	Transit Center Information Services	The center shall provide transit information to the media including details of deviations from schedule of regular transit services.
Local Transit Dispatch	Transit Center Information Services	The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems.
Local Transit Dispatch	Transit Center Information Services	The center shall provide transit service information to traveler information service providers including routes, schedules, schedule adherence, and fare information as well as transit service information during evacuation.
Local Transit Dispatch	Transit Center Information Services	The center shall broadcast transit advisory data, including alerts and advisories pertaining to major emergencies, or man made disasters.
Local Transit Dispatch	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.
Local Transit Dispatch	Transit Center Multi-Modal Coordination	The center shall share transfer cluster and transfer point information with multimodal transportation service providers, other transit agencies, and traveler information service providers. A transfer cluster is a collection of stops, stations, or terminals where transfers can be made conveniently.
Local Transit Dispatch	Transit Center Multi-Modal Coordination	The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies.
Local Transit Dispatch	Transit Center Paratransit Operations	The center shall process trip requests for demand responsive transit services, i.e. paratransit. Sources of the requests may include traveler information service providers.
Local Transit Dispatch	Transit Center Paratransit Operations	The center shall monitor the operational status of the demand response vehicles including status of passenger pick-up and drop-off.
Local Transit Dispatch	Transit Center Paratransit Operations	The center shall generate demand response transit (including paratransit) routes and schedules based on such factors as parameters input by the system operator, what other demand responsive transit schedules have been planned, the availability and location of vehicles, the relevance of any fixed transit routes and schedules, and road network information.
Local Transit Dispatch	Transit Center Paratransit Operations	The center shall dispatch demand response (paratransit) transit vehicles.
Local Transit Dispatch	Transit Center Paratransit Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.

Element Name	Equipment Package Name	Requirement
Local Transit Dispatch	Transit Center Paratransit Operations	The center shall disseminate up-to-date schedules and route information to other centers for demand responsive transit services (paratransit).
Local Transit Dispatch	Transit Center Security	The center shall monitor transit vehicle operational data to determine if the transit vehicle is off-route and assess whether a security incident is occurring.
Local Transit Dispatch	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
Local Transit Dispatch	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
Local Transit Dispatch	Transit Center Security	The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.
Local Transit Dispatch	Transit Center Security	The center shall send wide-area alert information to travelers (on-board transit vehicles or at stations/stops) and transit vehicle operators.
Local Transit Dispatch	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
Local Transit Dispatch	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
Local Transit Dispatch	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
Local Transit Dispatch	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
Local Transit Dispatch	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
Local Transit Dispatch	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Local Transit Dispatch	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
Local Transit Dispatch	Transit Data Collection	The center shall be able to produce sample products of the data available.
Local Transit Dispatch	Transit Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to more effectively manage transit operations.
Local Transit Dispatch	Transit Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers.
Local Transit Dispatch	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
Local Transit Dispatch	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.
Local Transit Dispatch	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
Local Transit Dispatch	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
Local Transit Dispatch	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
Local Transit Dispatch	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
Local Transit Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
Local Transit Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
Local Transit Dispatch	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
Local Transit Dispatch	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
Local Transit Dispatch	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
Local Transit Dispatch	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
Local Transit Dispatch	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
Local Transit IVR System and Website	Infrastructure Provided Trip Planning	The center shall provide the capability to provide specific pre-trip and enroute directions to travelers (and drivers), including costs, arrival times, and transfer points.
Local Transit IVR System and Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on transit services, including fares, schedules, and requirements for travelers with special needs.
Local Transit IVR System and Website	ISP Traveler Data Collection	The center shall collect, process, and store transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information.
Local Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall receive transit route information for its assigned route including transit service instructions, traffic information, road conditions, and other information for the operator.
Local Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall use the route information and its current location to determine the deviation from the predetermined schedule.
Local Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall calculate the estimated times of arrival (ETA) at transit stops.
Local Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall determine scenarios to correct the schedule deviation.
Local Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall provide the schedule deviations and instructions for schedule corrections to the transit vehicle operator if the deviation is small, or the transit vehicle is operating in an urban area.

Element Name	Equipment Package Name	Requirement
Local Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall send the schedule deviation and estimated arrival time information to the center.
Local Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
Local Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
Local Transit Vehicles	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.
Local Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall manage data input to sensor(s) on-board a transit vehicle to determine the vehicle's availability for use in demand responsive and flexible-route transit services based on identity, type, and passenger capacity.
Local Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall receive the status of demand responsive or flexible-route transit schedules and passenger loading from the transit vehicle operator.
Local Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall provide the transit vehicle operator instructions about the demand responsive or flexible-route transit schedule that has been confirmed from the center.
Local Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying.
Local Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall determine the traveler's travel routing based on the transit vehicle's current location and the traveler's destination.
Local Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information.
Local Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall have access to the complete range of transit services (routes and schedules) that are available to the traveler.
Local Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall include a database on-board the transit vehicle for use in fare processing from which the fares for all possible trips within the transit operational network can be determined.
Local Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide passenger loading and fare statistics data to the center.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle's current location.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall detect potential threats via object detection sensors (e.g. metal detectors).
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed sensor information to the center along with the vehicle's current location.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall accept sensor control data to allow remote control of the sensors.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance and sensor equipment status and fault indications.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall be capable of receiving an emergency message for broadcast to the travelers or to the transit vehicle operator.
Local Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
Local Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
Local Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
Local Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
Local Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
Local Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
Los Alamos National Lab Operations	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
Los Alamos National Lab Operations	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Los Alamos National Lab Operations	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Los Alamos National Lab Operations	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Los Alamos National Lab Operations	Emergency Response Management	The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations.

Element Name	Equipment Package Name	Requirement
Los Alamos National Lab Operations	Emergency Response Management	The center shall provide information to the media concerning the status of an emergency response.
Los Alamos National Lab Operations	Emergency Response Management	The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations.
Los Alamos National Lab Operations	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
Los Alamos National Lab Operations	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
Los Alamos National Lab Operations	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
Los Alamos National Lab Operations	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
Los Alamos National Lab Operations	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
Mid-Region RTD Operations Center	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from travelers in secure areas (such as transit stops, rest areas, park and ride lots, modal interchange facilities).
Mid-Region RTD Operations Center	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
Mid-Region RTD Operations Center	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
Mid-Region RTD Operations Center	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
Mid-Region RTD Operations Center	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
Mid-Region RTD Operations Center	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
Mid-Region RTD Operations Center	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
Mid-Region RTD Operations Center	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
Mid-Region RTD Operations Center	Center Secure Area Surveillance	The center shall identify potential security threats based on collected security surveillance data.
Mid-Region RTD Operations Center	Center Secure Area Surveillance	The center shall verify potential security threats by correlating security surveillance data from multiple sources.
Mid-Region RTD Operations Center	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
Mid-Region RTD Operations Center	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
Mid-Region RTD Operations Center	Transit Center Fare and Load Management	The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations.
Mid-Region RTD Operations Center	Transit Center Fare and Load Management	The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information.
Mid-Region RTD Operations Center	Transit Center Fare and Load Management	The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution.
Mid-Region RTD Operations Center	Transit Center Fare and Load Management	The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments.
Mid-Region RTD Operations Center	Transit Center Fare and Load Management	The center shall be capable of establishing emergency fare structures to override all other fares during disasters, states of emergency, or evacuations.
Mid-Region RTD Operations Center	Transit Center Fare and Load Management	The center shall maintain a list of invalid traveler credit identities, or bad tag lists that can be forwarded to transit vehicles and transit stops or stations.
Mid-Region RTD Operations Center	Transit Center Fare and Load Management	The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures.
Mid-Region RTD Operations Center	Transit Center Information Services	The center shall provide transit information to the media including details of deviations from schedule of regular transit services.
Mid-Region RTD Operations Center	Transit Center Information Services	The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems.
Mid-Region RTD Operations Center	Transit Center Information Services	The center shall provide transit service information to traveler information service providers including routes, schedules, schedule adherence, and fare information as well as transit service information during evacuation.
Mid-Region RTD Operations Center	Transit Center Information Services	The center shall broadcast transit advisory data, including alerts and advisories pertaining to major emergencies, or man made disasters.
Mid-Region RTD Operations Center	Transit Center Multi-Modal Coordination	The center shall share transfer cluster and transfer point information with multimodal transportation service providers, other transit agencies, and traveler information service providers. A transfer cluster is a collection of stops, stations, or terminals where transfers can be made conveniently.
Mid-Region RTD Operations Center	Transit Center Multi-Modal Coordination	The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies.
Mid-Region RTD Operations Center	Transit Center Paratransit Operations	The center shall process trip requests for demand responsive transit services, i.e. paratransit. Sources of the requests may include traveler information service providers.
Mid-Region RTD Operations Center	Transit Center Paratransit Operations	The center shall monitor the operational status of the demand response vehicles including status of passenger pick-up and drop-off.

Element Name	Equipment Package Name	Requirement
Mid-Region RTD Operations Center	Transit Center Paratransit Operations	The center shall generate demand response transit (including paratransit) routes and schedules based on such factors as parameters input by the system operator, what other demand responsive transit schedules have been planned, the availability and location of vehicles, the relevance of any fixed transit routes and schedules, and road network information.
Mid-Region RTD Operations Center	Transit Center Paratransit Operations	The center shall dispatch demand response (paratransit) transit vehicles.
Mid-Region RTD Operations Center	Transit Center Paratransit Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
Mid-Region RTD Operations Center	Transit Center Paratransit Operations	The center shall disseminate up-to-date schedules and route information to other centers for demand responsive transit services (paratransit).
Mid-Region RTD Operations Center	Transit Center Security	The center shall monitor transit vehicle operational data to determine if the transit vehicle is off-route and assess whether a security incident is occurring.
Mid-Region RTD Operations Center	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
Mid-Region RTD Operations Center	Transit Center Security	The center shall support the back-office portion of functionality to authenticate transit vehicle operators.
Mid-Region RTD Operations Center	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
Mid-Region RTD Operations Center	Transit Center Security	The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.
Mid-Region RTD Operations Center	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
Mid-Region RTD Operations Center	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
Mid-Region RTD Operations Center	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
Mid-Region RTD Operations Center	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
Mid-Region RTD Operations Center	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
Mid-Region RTD Operations Center	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Mid-Region RTD Operations Center	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
Mid-Region RTD Operations Center	Transit Data Collection	The center shall be able to produce sample products of the data available.
Mid-Region RTD Operations Center	Transit Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers.
Mid-Region RTD Operations Center	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
Mid-Region RTD Operations Center	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.
Mid-Region RTD Operations Center	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
Mid-Region RTD Operations Center	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
Mid-Region RTD Operations Center	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
Mid-Region RTD Operations Center	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
Mid-Region RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
Mid-Region RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
Mid-Region RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.

Element Name	Equipment Package Name	Requirement
Mid-Region RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall manage data input to sensor(s) on-board a transit vehicle to determine the vehicle's availability for use in demand responsive and flexible-route transit services based on identity, type, and passenger capacity.
Mid-Region RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall receive the status of demand responsive or flexible-route transit schedules and passenger loading from the transit vehicle operator.
Mid-Region RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall provide the transit vehicle operator instructions about the demand responsive or flexible-route transit schedule that has been confirmed from the center.
Mid-Region RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information.
Mid-Region RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall have access to the complete range of transit services (routes and schedules) that are available to the traveler.
Mid-Region RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities.
Mid-Region RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall include a database on-board the transit vehicle for use in fare processing from which the fares for all possible trips within the transit operational network can be determined.
Mid-Region RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide passenger loading and fare statistics data to the center.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle's current location.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall detect potential threats via sensors for chemical agents, toxic industrial chemicals, biological agents, explosives, and radiation.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed sensor information to the center along with the vehicle's current location.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall accept sensor control data to allow remote control of the sensors.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance and sensor equipment status and fault indications.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall be capable of receiving an emergency message for broadcast to the travelers or to the transit vehicle operator.
Mid-Region RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
Mid-Region RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
Mid-Region RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
Mid-Region RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
Mid-Region RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
Mid-Region RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
Mid-Region RTD Transit Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
Mid-Region RTD Transit Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
Mid-Region RTD Transit Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on transit services, including fares, schedules, and requirements for travelers with special needs.
Mid-Region RTD Transit Website	Infrastructure Provided Trip Planning	The center shall generate trips based on the use of more than one mode of transport.
Mid-Region RTD Transit Website	Infrastructure Provided Trip Planning	The center shall use the preferences and constraints specified by the traveler in the trip request to select the most appropriate mode of transport.
Mid-Region RTD Transit Website	Infrastructure Provided Trip Planning	The center shall provide the capability for the traveler to confirm the proposed trip plan.
Mid-Region RTD Transit Website	ISP Traveler Data Collection	The center shall collect, process, and store transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information.
Military Installation Operations Offices	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Military Installation Operations Offices	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Military Installation Operations Offices	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Military Installation Operations Offices	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.

Element Name	Equipment Package Name	Requirement
Military Installation Operations Offices	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
Military Installation Operations Offices	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
Military Installation Operations Offices	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
Military Installation Operations Offices	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
Mobile Weigh Stations	Roadside WIM	The roadside check facility equipment shall detect the presence of commercial vehicles and freight equipment approaching a facility. Sensors can differentiate between different types of vehicles and determine the number of axles, gross vehicle weight, weight per axle, and the identification of the vehicle and its cargo.
Mobile Weigh Stations	Roadside WIM	The roadside check facility equipment shall request and input electronic screening data from the commercial vehicle's electronic tag data.
Mobile Weigh Stations	Roadside WIM	The roadside check facility equipment shall send a pass/pull-in notification to the commercial vehicle and its driver based on the information received from the vehicle and the measurements taken. The message may be sent to the on-board equipment in the commercial vehicle or transmitted to the driver using equipment such as dynamic message signs, red-green lights, flashing signs, etc.
MPO/RPO Field Sensors	Roadway Data Collection	The field element shall collect traffic, road, and environmental conditions information.
MPO/RPO Field Sensors	Roadway Data Collection	The field element shall include the sensors and supporting roadside devices that sense, collect, and send traffic, road, and environmental conditions information to a center for archival.
MPO/RPO Field Sensors	Roadway Data Collection	The field element shall collect sensor status and sensor faults from roadside equipment and send it along with the recorded data to a center for archival.
MPO/RPO Traffic Database	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
MPO/RPO Traffic Database	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
MPO/RPO Traffic Database	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
MPO/RPO Traffic Database	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
MPO/RPO Traffic Database	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
MPO/RPO Traffic Database	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
MPO/RPO Traffic Database	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
MPO/RPO Traffic Database	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
MPO/RPO Traffic Database	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
MPO/RPO Traffic Database	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
MPO/RPO Traffic Database	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
MPO/RPO Traffic Database	ITS Data Repository	The center shall perform quality checks on received data.
MPO/RPO Traffic Database	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
MPO/RPO Traffic Database	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
MPO/RPO Traffic Database	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
MPO/RPO Traffic Database	Traffic and Roadside Data Archival	The center shall manage the collection of archive data directly from collection equipment located at the roadside.
MPO/RPO Traffic Database	Traffic and Roadside Data Archival	The center shall collect traffic sensor information from roadside devices.
MPO/RPO Traffic Database	Traffic and Roadside Data Archival	The center shall send the request for data and control parameters to the field equipment where the information is collected and returned.
MPO/RPO Traffic Database	Traffic and Roadside Data Archival	The center shall record the status about the imported traffic and roadside data.
MPO/RPO Traffic Database	Traffic and Roadside Data Archival	The center shall use the status information to adjust the collection of traffic and roadside data.
Municipal Fire and EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
Municipal Fire and EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
Municipal Fire and EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
Municipal Fire and EMS Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
Municipal Fire and EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.

Element Name	Equipment Package Name	Requirement
Municipal Fire and EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
Municipal Fire and EMS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
Municipal ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, digitize, and send traffic sensor data (speed, volume, and occupancy) to the center for further analysis and storage, under center control.
Municipal ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, and send traffic images to the center for further analysis and distribution.
Municipal ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system operational status to the controlling center.
Municipal ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system fault data to the controlling center for repair.
Municipal ITS Field Equipment	Roadway Data Collection	The field element shall collect traffic, road, and environmental conditions information.
Municipal ITS Field Equipment	Roadway Data Collection	The field element shall include the sensors and supporting roadside devices that sense, collect, and send traffic, road, and environmental conditions information to a center for archival.
Municipal ITS Field Equipment	Roadway Data Collection	The field element shall collect sensor status and sensor faults from roadside equipment and send it along with the recorded data to a center for archival.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element shall include surface and sub-surface environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element shall include environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element's environmental sensors shall be remotely controlled by a maintenance center.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element's environmental sensors shall be remotely controlled by weather service providers such as the National Weather Service or value-added sector specific meteorological services.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element's environmental sensors shall be remotely controlled by a maintenance and construction vehicle.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element shall remotely aggregate environmental sensor data with environmental data collected from maintenance and construction vehicles.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element shall provide weather and road surface condition data to centers.
Municipal ITS Field Equipment	Roadway Environmental Monitoring	The field element shall provide weather and road surface condition data to maintenance and construction vehicles.
Municipal ITS Field Equipment	Roadway Field Device Monitoring	The field element shall monitor the operational status (state of the device, configuration, and fault data) of connected sensors (such as traffic, infrastructure, environmental, security, speed) and devices (such as highway advisory radio, dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals, ramp meters, beacons, security surveillance equipment).
Municipal ITS Field Equipment	Roadway Field Device Monitoring	The field element shall send operational status of connected field equipment to the maintenance center.
Municipal ITS Field Equipment	Roadway Field Device Monitoring	The field element shall send collected fault data to the maintenance center for repair.
Municipal ITS Field Equipment	Roadway Field Device Monitoring	The field element shall include a local interface that provides operational status and fault data for connected field equipment to field personnel.
Municipal ITS Field Equipment	Roadway Field Device Monitoring	The field element shall include a local interface that allows field personnel to command diagnostic tests on connected field equipment.
Municipal ITS Field Equipment	Roadway Signal Controls	The field element shall control traffic signals at intersections and on main highways for urban and rural areas, under center control.
Municipal ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from the indicator control information.
Municipal ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions.
Municipal ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller operational status to the controlling center.
Municipal ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller fault data to the maintenance center for repair.
Municipal ITS Field Equipment	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings.
Municipal ITS Field Equipment	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) priority requests from transit vehicles at intersections, pedestrian crossings, and multimodal crossings.
Municipal ITS Field Equipment	Roadway Signal Priority	The field element shall notify controlling traffic management center and maintenance center that the signal timing has changed based on a signal preemption/priority request to help those centers determine whether a fault detected at the signal is a true malfunction or due to a signal override.
Municipal ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall include dynamic messages signs for dissemination of traffic and other information to drivers, under center control; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close).
Municipal ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center.
Municipal ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair.
Municipal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall collect, process, and send work zone images to the center for further analysis and distribution, under center control.

Element Name	Equipment Package Name	Requirement
Municipal ITS Field Equipment	Roadway Work Zone Traffic Control	Under traffic and maintenance center control, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around the work zone through which they are currently passing.
Municipal ITS Field Equipment	Roadway Work Zone Traffic Control	Under the control of field personnel within maintenance vehicles, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around a work zone through which they are currently passing.
Municipal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall control access to the work zone using automated gate or barrier systems. This includes automated flagger assistance devices that include automated gate arms and other automated gate/barrier systems.
Municipal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide operational status for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center.
Municipal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide fault data for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center for repair.
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI).
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center.
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment.
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall receive track status from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and whether a train is approaching.
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner.
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall close the highway-rail intersection (HRI) when a train is approaching using gates, lights/signs, barriers, and traffic control signals.
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection.
Municipal ITS Field Equipment	Standard Rail Crossing	The field element shall forward rail traffic advisories received from the Wayside Equipment to the traffic management center.
Municipal Police Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
Municipal Police Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
Municipal Police Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
Municipal Police Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
Municipal Police Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
Municipal Police Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
Municipal Police Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
Municipal Police Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
Municipal Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
Municipal Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
Municipal Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
Municipal Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
Municipal Public Information System	ISP Emergency Traveler Information	The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes.
Municipal Public Information System	ISP Emergency Traveler Information	The center shall provide evacuation information to shelter providers.
Municipal Public Information System	ISP Emergency Traveler Information	The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
Municipal Public Information System	ISP Emergency Traveler Information	The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers.

Element Name	Equipment Package Name	Requirement
Municipal Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
Municipal Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
Municipal Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information.
Municipal Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store event information.
Municipal Public Safety Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
Municipal Public Safety Dispatch	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
Municipal Public Safety Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall support the interface to the Emergency Telecommunications System (e.g. 911 or 7-digit call routing) to receive emergency notification information and provide it to the emergency system operator.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
Municipal Public Safety Dispatch	Emergency Call-Taking	The center shall update the incident information log once the emergency system operator has verified the incident.
Municipal Public Safety Dispatch	Emergency Data Collection	The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data.
Municipal Public Safety Dispatch	Emergency Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Municipal Public Safety Dispatch	Emergency Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself.
Municipal Public Safety Dispatch	Emergency Data Collection	The center shall be able to produce sample products of the data available.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall receive traffic images to support dispatch of emergency vehicles.
Municipal Public Safety Dispatch	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
Municipal Public Safety Dispatch	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
Municipal Public Safety Dispatch	Emergency Environmental Monitoring	The center shall collect current road and weather information from roadway maintenance operations.
Municipal Public Safety Dispatch	Emergency Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to support incident management.
Municipal Public Safety Dispatch	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
Municipal Public Safety Dispatch	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Municipal Public Safety Dispatch	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Municipal Public Safety Dispatch	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Municipal Public Safety Dispatch	Emergency Response Management	The center shall support remote control of field equipment normally under control of the traffic management center including traffic signals, dynamic message signs, gates, and barriers.

Element Name	Equipment Package Name	Requirement
Municipal Public Safety Dispatch	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
Municipal Public Safety Dispatch	Emergency Response Management	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Municipal Public Safety Dispatch	Emergency Routing	The center shall collect current traffic and road condition information from traffic management centers for emergency vehicle route calculation.
Municipal Public Safety Dispatch	Emergency Routing	The center shall receive inputs from traffic management and maintenance centers on the location and status of traffic control equipment and work zones along potential emergency routes.
Municipal Public Safety Dispatch	Emergency Routing	The center shall receive asset restriction information from maintenance centers to support the dispatching of appropriate emergency resources.
Municipal Public Safety Dispatch	Emergency Routing	The center shall calculate emergency vehicle routes, under center personnel control, based on information from traffic management and maintenance centers.
Municipal Public Safety Dispatch	Emergency Routing	The center shall provide the capability to request special traffic control measures, such as signal preemption, from the traffic management center to facilitate emergency vehicle progress along the suggested route.
Municipal Public Safety Dispatch	Emergency Routing	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Municipal Public Safety Dispatch	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
Municipal Public Safety Dispatch	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
Municipal Public Safety Dispatch	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
Municipal Public Safety Dispatch	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
Municipal Public Safety Dispatch	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
Municipal Public Works Dispatch	MCM Environmental Information Collection	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
Municipal Public Works Dispatch	MCM Environmental Information Collection	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
Municipal Public Works Dispatch	MCM Environmental Information Collection	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from traffic, emergency, and transit management, traveler information providers, and environmental data collected from sensors deployed on and about the roadway as well as the fleet of maintenance and construction vehicles.
Municipal Public Works Dispatch	MCM Environmental Information Collection	The center shall provide weather and road condition information to weather service providers and center personnel.
Municipal Public Works Dispatch	MCM Environmental Information Collection	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
Municipal Public Works Dispatch	MCM Environmental Information Collection	The center shall collect operational status for the roadside and vehicle-based environmental sensor equipment.
Municipal Public Works Dispatch	MCM Environmental Information Collection	The center shall collect fault data for the roadside and vehicle-based environmental sensor equipment for repair.
Municipal Public Works Dispatch	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
Municipal Public Works Dispatch	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
Municipal Public Works Dispatch	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.
Municipal Public Works Dispatch	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
Municipal Public Works Dispatch	MCM Environmental Information Processing	The center shall provide value-added sector specific meteorological services with information on basic road facility and treatment information that supports forecasts for road conditions.
Municipal Public Works Dispatch	MCM Incident Management	The center shall exchange incident and threat information with emergency management centers as well as traffic management centers; including notification of existence of incident and expected severity, location, time and nature of incident.
Municipal Public Works Dispatch	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.
Municipal Public Works Dispatch	MCM Incident Management	The center shall exchange road network status assessment information with emergency management and traffic management centers including an 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.
Municipal Public Works Dispatch	MCM Maintenance Decision Support	The center shall provide the center personnel with tailored external information, including weather or road condition observations, forecasted weather information or road conditions, current usage of treatments and materials, available resources, equipment and vehicle availability, road network information, and source reliability information.

Element Name	Equipment Package Name	Requirement
Municipal Public Works Dispatch	MCM Maintenance Decision Support	The center shall tailor the decision support information to include filtering (selection from a large amount of external information), error reduction ('smoothing' the information), fusion (combination of disparate information to match the decision needs), and analysis (creating the decision).
Municipal Public Works Dispatch	MCM Maintenance Decision Support	The center shall provide an interface to the center personnel to input control parameters for the decision support process and receive decisions or information presentation.
Municipal Public Works Dispatch	MCM Maintenance Decision Support	The center shall provide dispatch information to maintenance and construction vehicles based on the outputs of the decision support system, including recommended roadway treatment actions.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall maintain an interface with asset management systems to track the inventory, restrictions, repair needs and status updates of transportation assets (pavement, bridges, signs, etc.) including location, installation and materials information, vendor/contractor, current maintenance status, standard height, width, and weight restrictions.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other roadway maintenance.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall provide emergency management and traffic management centers with information about scheduled maintenance and construction work activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from roadside equipment, such as traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from traffic management centers, including data for traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall remotely control and collect data from infrastructure monitoring sensors located along the roadway infrastructure or on maintenance and construction vehicles.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of roadway maintenance and construction activities.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for the scheduling of roadway maintenance and construction activities.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall dispatch and route maintenance and construction vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
Municipal Public Works Dispatch	MCM Roadway Maintenance and Construction	The center shall manage an interface with center personnel to accept vehicle systems control information and remotely control maintenance and construction vehicle on-board equipment.
Municipal Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall collect and analyze vehicle diagnostics information from maintenance and construction vehicles. 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.
Municipal Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall exchange information with equipment repair facilities including status and history of repairs concerning maintenance and construction vehicles. This information includes vehicle status and diagnostic information, vehicle utilization, and coordination of when vehicles will be available for preventative and corrective maintenance.
Municipal Public Works Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall schedule preventive and corrective vehicle maintenance with the equipment repair facility based on fleet health reports, maintenance records, vehicle utilization and vehicle availability schedules.
Municipal Public Works Dispatch	MCM Vehicle Tracking	The center shall monitor the locations of all maintenance and construction vehicles and other equipment under its jurisdiction.
Municipal Public Works Dispatch	MCM Vehicle Tracking	The center shall present location data to center personnel for the fleet of maintenance and construction vehicles and other equipment.
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other winter roadway maintenance.
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall exchange information with administrative systems to support the planning and scheduling of winter maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.

Element Name	Equipment Package Name	Requirement
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall provide status information about scheduled winter maintenance activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, and the media.
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall dispatch and route winter maintenance vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall determine the need for roadway treatment based on current and forecasted weather information, current usage of treatments and materials, available resources, requests for action from other agencies, and recommendations from the Maintenance Decision Support system, specifically under winter conditions. This supports winter maintenance such as plowing, treating, anti-icing, etc.
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall provide dispatch instructions for vehicle operators based on input parameters from center personnel, specifically for winter conditions. This could include a treatment route, treatment application rates, start and end times, and other treatment instructions.
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall support remote control of on-board maintenance and construction vehicle systems and field equipment that is remotely controlled by the vehicle such as adjusting material application rates and spread patterns.
Municipal Public Works Dispatch	MCM Winter Maintenance Management	The center shall assess the current status of all winter maintenance activities, including actual work activities performed, current locations and operational conditions of vehicles, materials and equipment inventories, field equipment status, environmental information, etc.
Municipal Public Works Dispatch	MCM Work Activity Coordination	The center shall provide 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.
Municipal Public Works Dispatch	MCM Work Activity Coordination	The center shall provide status information about scheduled maintenance and construction activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, multimodal transportation providers, rail operations, and the media.
Municipal Public Works Dispatch	MCM Work Activity Coordination	The center shall collect and respond to feedback concerning scheduled maintenance and construction activities with other management centers such as traffic, emergency, transit, and rail operations.
Municipal Public Works Dispatch	MCM Work Activity Coordination	The center shall collect and disseminate asset restriction information 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.
Municipal Public Works Dispatch	MCM Work Activity Coordination	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance and construction activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
Municipal Public Works Dispatch	MCM Work Zone Management	The center shall generate new work zone activity schedules for use by maintenance and construction vehicles, maintenance and construction operators, and for information coordination purposes.
Municipal Public Works Dispatch	MCM Work Zone Management	The center shall control the collection of work zone status information including video images from cameras located in or near the work zone.
Municipal Public Works Dispatch	MCM Work Zone Management	The center shall disseminate work zone information to other agencies and centers including traffic, transit, emergency management centers, other maintenance centers, traveler information providers, and the media.
Municipal Public Works Dispatch	MCM Work Zone Management	The center shall control traffic in work zones by providing remote control of dynamic message signs, highway advisory radio systems, gates, and barriers located in or near the work zone.
Municipal Public Works Dispatch	MCM Work Zone Management	The center shall exchange information with administrative systems to support the planning and scheduling of work zone activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
Municipal Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to control information from the center to allow remote operation of the on-board vehicle systems. These systems include routine maintenance equipment for cutting, repairs, hazard removal, etc.
Municipal Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
Municipal Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
Municipal Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
Municipal Public Works Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.

Element Name	Equipment Package Name	Requirement
Municipal Public Works Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall compute the location of the vehicle based on inputs from a vehicle location determination function.
Municipal Public Works Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall send the timestamped vehicle location to the controlling center.
Municipal Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall collect vehicle diagnostics and operating status data from the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures as well as the status of maintenance and construction-specific systems on the vehicle.
Municipal Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall use the diagnostic and status information to support scheduling vehicle maintenance, monitoring safety status, and informing the vehicle operator of the conditions.
Municipal Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to the controlling maintenance center.
Municipal Public Works Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to an equipment repair facility.
Municipal Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall track the location and status of safety systems on-board the vehicle.
Municipal Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to control information from the center to allow remote operation of the on-board vehicle systems. These systems include winter maintenance equipment for plowing, treating, and anti-icing.
Municipal Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
Municipal Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
Municipal Public Works Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
Municipal Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall monitor, operate, and control work zone devices located at or alongside the roadway. The devices operated on board the vehicle include driver information devices (e.g. dynamic message signs) and work zone intrusion detection and alert devices.
Municipal Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall provide an interface for field personnel to input status of their work zone activities.
Municipal Public Works Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall collect inputs from field personnel and from work zone devices on-board the maintenance and construction vehicle and send them to the controlling center.
Municipal Traffic Operations Center-Statewide	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
Municipal Traffic Operations Center-Statewide	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
Municipal Traffic Operations Center-Statewide	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
Municipal Traffic Operations Center-Statewide	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
Municipal Traffic Operations Center-Statewide	HRI Traffic Management	The center shall remotely control highway-rail intersection (HRI) equipment located in the field.
Municipal Traffic Operations Center-Statewide	HRI Traffic Management	The center shall accept collect highway-rail intersection (HRI) advisory or alert data from rail operations centers.
Municipal Traffic Operations Center-Statewide	HRI Traffic Management	The center shall collect highway-rail intersection (HRI) equipment operational status and compare against the control information sent by the center.
Municipal Traffic Operations Center-Statewide	HRI Traffic Management	The center shall provide the highway-rail intersection (HRI) equipment operational status to rail operations centers.
Municipal Traffic Operations Center-Statewide	HRI Traffic Management	The center shall collect incident information related to a highway-rail intersection (HRI), such as intersection blockages or crashes or equipment malfunctions.
Municipal Traffic Operations Center-Statewide	HRI Traffic Management	The center shall implement control plans to coordinate signalized intersections around highway-rail intersections (HRI), under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, equipment faults, pedestrian crossings, etc.
Municipal Traffic Operations Center-Statewide	Rail Operations Coordination	The center shall exchange highway-rail intersection (HRI) information with rail operations centers. This information may include event schedules, requests for information from the Rail Operators, incident notification based on rail operations messages, and priority messages like notifications of a HAZMAT spill, equipment failure, or an intersection blockage.
Municipal Traffic Operations Center-Statewide	Rail Operations Coordination	The center shall receive highway-rail intersection (HRI) maintenance schedules, train schedules, and incident notifications from rail operations centers.
Municipal Traffic Operations Center-Statewide	Rail Operations Coordination	The center shall use the rail operations information to develop forecast HRI closure times and durations which may be applied in advanced traffic control strategies or delivered as enhanced traveler information.
Municipal Traffic Operations Center-Statewide	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
Municipal Traffic Operations Center-Statewide	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.

Element Name	Equipment Package Name	Requirement
Municipal Traffic Operations Center-Statewide	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
Municipal Traffic Operations Center-Statewide	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
Municipal Traffic Operations Center-Statewide	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
Municipal Traffic Operations Center-Statewide	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
Municipal Traffic Operations Center-Statewide	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
Municipal Traffic Operations Center-Statewide	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
Municipal Traffic Operations Center-Statewide	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
Municipal Traffic Operations Center-Statewide	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include 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 may also identify specific information that should not be released to the public.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
Municipal Traffic Operations Center-Statewide	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
Municipal Traffic Operations Center-Statewide	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
Municipal Traffic Operations Center-Statewide	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
Municipal Traffic Operations Center-Statewide	TMC Signal Control	The center shall remotely control traffic signal controllers.
Municipal Traffic Operations Center-Statewide	TMC Signal Control	The center shall accept notifications of right-of-way requests from pedestrians.
Municipal Traffic Operations Center-Statewide	TMC Signal Control	The center shall collect traffic signal controller operational status and compare against the control information sent by the center.
Municipal Traffic Operations Center-Statewide	TMC Signal Control	The center shall collect traffic signal controller fault data from the field.
Municipal Traffic Operations Center-Statewide	TMC Signal Control	The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc.
Municipal Traffic Operations Center-Statewide	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
Municipal Traffic Operations Center-Statewide	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
Municipal Traffic Operations Center-Statewide	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
Municipal Traffic Operations Center-Statewide	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.

Element Name	Equipment Package Name	Requirement
Municipal Traffic Operations Center-Statewide	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
Municipal Traffic Operations Center-Statewide	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
Municipal Traffic Operations Center-Statewide	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
Municipal Traffic Operations Center-Statewide	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
Municipal Traffic Operations Center-Statewide	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Municipal Traffic Operations Center-Statewide	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
Municipal Traffic Operations Center-Statewide	Traffic Data Collection	The center shall be able to produce sample products of the data available.
Municipal Traffic Operations Center-Statewide	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
Municipal Traffic Operations Center-Statewide	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
Municipal Traffic Operations Center-Statewide	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
Municipal Traffic Operations Center-Statewide	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
Municipal Traffic Operations Center-Statewide	Traffic Maintenance	The center shall collect environmental sensor operational status.
Municipal Traffic Operations Center-Statewide	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
Municipal Traffic Operations Center-Statewide	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
Municipal Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
Municipal Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
Municipal Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
New Mexico CVIEW System	Credentials and Taxes Administration	The center shall manage electronic credentials filing and processing for commercial vehicles.
New Mexico CVIEW System	Credentials and Taxes Administration	The center shall manage the filing of appropriate taxes for the operation of commercial vehicles.
New Mexico CVIEW System	Credentials and Taxes Administration	The center shall exchange credentials and tax information with other commercial vehicle administration centers - either in other states or the federal government.
New Mexico CVIEW System	CV Information Exchange	The center shall exchange information with roadside check facilities, including credentials and credentials status information, safety status information, daily site activity data, and citations.
New Mexico CVIEW System	CV Information Exchange	The center shall exchange safety and credentials data among other commercial vehicle administration centers; includes border clearance status, credentials information, credentials status information, and safety status information.
New Mexico CVIEW System	CV Information Exchange	The center shall package data concerning commercial vehicle safety and credentials into snapshots (top-level summary and critical status information).
New Mexico CVIEW System	CV Information Exchange	The center shall package data concerning commercial vehicle safety and credentials into profiles (detailed and historical data).
New Mexico CVIEW System	CV Information Exchange	The center shall provide commercial vehicle accident reports and citations to enforcement agencies.
New Mexico CVIEW System	CV Information Exchange	The center shall provide commercial vehicle credentials and safety status information to authorized requestors such as insurance agencies.
New Mexico CVIEW System	CV Information Exchange	The center shall provide reports to the commercial vehicle fleet manager regarding fleet activity through roadside facilities including accident reports, citations, credentials status information, and safety status information.
New Mexico CVIEW System	CV Safety Administration	The center shall provide commercial vehicle safety data to roadside check facilities.
New Mexico CVIEW System	CV Safety Administration	The center shall collect and review safety inspection reports and violations from the roadside check facilities and pass on appropriate portions to other commercial vehicle administrative centers and commercial vehicle fleet operators.
New Mexico CVIEW System	CV Safety Administration	The center shall notify enforcement agencies of commercial vehicle safety violations by individual commercial vehicles, drivers, or carriers.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Commercial Vehicle Response	The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Commercial Vehicle Response	The center shall receive details of the cargo being carried by commercial vehicles from their commercial fleet manager for incidents involving potential hazardous materials.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Commercial Vehicle Response	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Commercial Vehicle Response	The center shall provide the capability to request Fleet and Freight Management to disable a specific vehicle in their fleet.

Element Name	Equipment Package Name	Requirement
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Data Collection	The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Data Collection	The center shall be able to produce sample products of the data available.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to traffic management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to transit management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to traveler information service providers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to maintenance centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to other emergency management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall process status information from each of the centers that have been sent the wide-area alert.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall coordinate the broadcast of wide-area alerts and advisories with other emergency management centers.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall receive incident information from other transportation management centers to support the early warning system.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall present the alert and advisory information and the status of the actions taken in response to the alert by the other centers to the emergency system operator as received from other system inputs.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall support the entry of alert and advisory information directly from the emergency system operator.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall collect current road and weather information from roadway maintenance operations.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to support incident management.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall present the current and forecast road and weather information to the emergency system operator.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall manage inter-agency coordination of evacuation operations, from initial planning through the evacuation process and reentry.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall develop and exchange evacuation plans with allied agencies prior to the occurrence of a disaster.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall provide an interface to the emergency system operator to enter evacuation plans and procedures and present the operator with other agencies' plans.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall coordinate evacuation destinations and shelter needs with shelter providers (e.g., the American Red Cross) in the region.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall provide evacuation information to traffic, transit, maintenance and construction, rail operations, and other emergency management centers as needed.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall request resources from transit agencies as needed to support the evacuation.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall request traffic management agencies to implement special traffic control strategies and to control evacuation traffic, including traffic on local streets and arterials as well as the major evacuation routes.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall provide traveler information systems with evacuation guidance including basic information to assist potential evacuees in determining whether evacuation is necessary and when it is safe to return.

Element Name	Equipment Package Name	Requirement
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall monitor the progress or status of the evacuation once it begins and exchange tactical plans, prepared during the incident, with allied agencies.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall monitor the progress of the reentry process.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall submit evacuation information to toll administration centers along with requests for changes in the toll services or fee collection during an evacuation.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide strategic emergency response capabilities such as that of an Emergency Operations Center for large-scale incidents and disasters.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall support remote control of field equipment normally under control of the traffic management center including traffic signals, dynamic message signs, gates, and barriers.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
New Mexico Statewide Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations.
New Mexico Statewide Emergency Operations Center (EOC)	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
New Mexico Statewide Emergency Operations Center (EOC)	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
New Mexico Statewide Emergency Operations Center (EOC)	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
New Mexico Statewide Emergency Operations Center (EOC)	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
New Mexico Statewide Emergency Operations Center (EOC)	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
New Mexico Travel and Tourism Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
New Mexico Travel and Tourism Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
New Mexico Travel and Tourism Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
New Mexico Travel and Tourism Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
New Mexico Travel and Tourism Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes upon request.
New Mexico Travel and Tourism Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities upon request.
New Mexico Travel and Tourism Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request.
New Mexico Travel and Tourism Website	Interactive Infrastructure Information	The center shall provide all traveler information based on the traveler's current location or a specific location identified by the traveler, and filter or customize the provided information accordingly.
New Mexico Travel and Tourism Website	Interactive Infrastructure Information	The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier.
New Mexico Travel and Tourism Website	Interactive Infrastructure Information	The center shall manage updates of digitized map data and provide updates to traveler interface systems upon request.

Element Name	Equipment Package Name	Requirement
New Mexico Travel and Tourism Website	Interactive Infrastructure Information	The center shall provide the capability for a system operator to control the type and update frequency of traveler information.
NM CVO Electronic Permitting System	Credentials and Taxes Administration	The center shall manage electronic permits filing and processing for commercial vehicles.
NM CVO Electronic Permitting System	CV Information Exchange	The center shall exchange permit data with other commercial vehicle administration centers; includes border clearance status, credentials information, credentials status information, and safety status information.
NM DPS District Dispatch Center	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall support the interface to the Emergency Telecommunications System (e.g. 911 or 7-digit call routing) to receive emergency notification information and provide it to the emergency system operator.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall update the incident information log once the emergency system operator has verified the incident.
NM DPS District Dispatch Center	Emergency Call-Taking	The center shall provide the capability for digitized map data to act as the background to the emergency information presented to the emergency system operator.
NM DPS District Dispatch Center	Emergency Commercial Vehicle Response	The center shall receive emergency notification information from commercial vehicles, commercial vehicle check stations, or commercial fleet operators and present the possible incident information to the emergency system operator. This may include detection of non-permitted transport of security sensitive hazmat, hazardous cargo spills, etc.
NM DPS District Dispatch Center	Emergency Commercial Vehicle Response	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
NM DPS District Dispatch Center	Emergency Data Collection	The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data.
NM DPS District Dispatch Center	Emergency Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NM DPS District Dispatch Center	Emergency Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself.
NM DPS District Dispatch Center	Emergency Data Collection	The center shall be able to produce sample products of the data available.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall receive traffic images to support dispatch of emergency vehicles.
NM DPS District Dispatch Center	Emergency Dispatch	The center shall provide the capability to request remote control of traffic surveillance devices
NM DPS District Dispatch Center	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to traffic management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to transit management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to traveler information service providers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to maintenance centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to other emergency management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.

Element Name	Equipment Package Name	Requirement
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall process status information from each of the centers that have been sent the wide-area alert.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall coordinate the broadcast of wide-area alerts and advisories with other emergency management centers.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall receive incident information from other transportation management centers to support the early warning system.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall present the alert and advisory information and the status of the actions taken in response to the alert by the other centers to the emergency system operator as received from other system inputs.
NM DPS District Dispatch Center	Emergency Early Warning System	The center shall support the entry of alert and advisory information directly from the emergency system operator.
NM DPS District Dispatch Center	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
NM DPS District Dispatch Center	Emergency Environmental Monitoring	The center shall collect current road and weather information from roadway maintenance operations.
NM DPS District Dispatch Center	Emergency Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to support incident management.
NM DPS District Dispatch Center	Emergency Environmental Monitoring	The center shall present the current and forecast road and weather information to the emergency system operator.
NM DPS District Dispatch Center	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
NM DPS District Dispatch Center	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
NM DPS District Dispatch Center	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
NM DPS District Dispatch Center	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
NM DPS District Dispatch Center	Emergency Response Management	The center shall support remote control of field equipment normally under control of the traffic management center including traffic signals, dynamic message signs, gates, and barriers.
NM DPS District Dispatch Center	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
NM DPS District Dispatch Center	Emergency Response Management	The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations.
NM DPS District Dispatch Center	Emergency Response Management	The center shall provide information to the media concerning the status of an emergency response.
NM DPS District Dispatch Center	Emergency Response Management	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
NM DPS District Dispatch Center	Emergency Response Management	The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations.
NM DPS District Dispatch Center	Emergency Routing	The center shall collect current traffic and road condition information from traffic management centers for emergency vehicle route calculation.
NM DPS District Dispatch Center	Emergency Routing	The center shall receive inputs from traffic management and maintenance centers on the location and status of traffic control equipment and work zones along potential emergency routes.
NM DPS District Dispatch Center	Emergency Routing	The center shall receive status information from care facilities to determine the appropriate facility and its location.
NM DPS District Dispatch Center	Emergency Routing	The center shall receive asset restriction information from maintenance centers to support the dispatching of appropriate emergency resources.
NM DPS District Dispatch Center	Emergency Routing	The center shall calculate emergency vehicle routes, under center personnel control, based on information from traffic management and maintenance centers.
NM DPS District Dispatch Center	Emergency Routing	The center shall request and receive ingress and egress routes or other specialized emergency access routes from the traffic management center.
NM DPS District Dispatch Center	Emergency Routing	Once the route is calculated the route shall be provided to the dispatch function.
NM DPS District Dispatch Center	Emergency Routing	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
NM DPS District Dispatch Center	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
NM DPS District Dispatch Center	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
NM DPS District Dispatch Center	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
NM DPS District Dispatch Center	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
NM DPS District Dispatch Center	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
NM DPS Mobile Command Center	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
NM DPS Mobile Command Center	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
NM DPS Mobile Command Center	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
NM DPS Mobile Command Center	Emergency Response Management	The center shall support remote control of field equipment normally under control of the traffic management center including traffic signals, dynamic message signs, gates, and barriers.

Element Name	Equipment Package Name	Requirement
NM DPS Mobile Command Center	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
NM DPS Mobile Command Center	Emergency Response Management	The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations.
NM DPS Mobile Command Center	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
NM DPS Mobile Command Center	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
NM DPS Mobile Command Center	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
NM DPS Mobile Command Center	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
NM DPS Mobile Command Center	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
NM DPS Mobile Command Center	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
NM DPS Mobile Command Center	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
NM DPS Mobile Command Center	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
NM DPS Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
NM DPS Vehicles	On-board EV En Route Support	The emergency vehicle shall send patient status information to the care facility along with a request for further information.
NM DPS Vehicles	On-board EV En Route Support	The emergency vehicle shall forward care facility status information to emergency vehicle personnel, including the location, specialized services, quality of care, waiting time, number of rooms available, and emergency room status of hospitals or emergency care providers.
NM DPS Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
NM DPS Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
NM DPS Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
NM DPS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
NM DPS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
NM DPS Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
NM Livestock Inspection Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
NM Livestock Inspection Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
NM Livestock Inspection Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
NM Livestock Inspection Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
NM Livestock Inspection Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
NM Livestock Inspection Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
NM Motor Transport Division (MTD) District Offices	CV Data Collection	The center shall receive operational data from the roadside check systems as well as administration and credentials data.
NM Motor Transport Division (MTD) District Offices	CV Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NM Motor Transport Division (MTD) District Offices	CV Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the commercial vehicle operations data or for the data itself.
NM Motor Transport Division (MTD) District Offices	CV Data Collection	The center shall be able to produce sample products of the data available.
NM Motor Transport Division (MTD) District Offices	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
NM Motor Transport Division (MTD) District Offices	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.

Element Name	Equipment Package Name	Requirement
NM Motor Transport Division (MTD) District Offices	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
NM Motor Transport Division (MTD) District Offices	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
NM Motor Transport Division (MTD) District Offices	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
NM Motor Transport Division (MTD) District Offices	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
NM Motor Transport Division (MTD) District Offices	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
NM Motor Transport Division (MTD) District Offices	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
NM Motor Transport Division (MTD) District Offices	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
NM Motor Transport Division Response Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
NM Motor Transport Division Response Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
NM Motor Transport Division Response Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
NM Motor Transport Division Response Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
NM Motor Transport Division Response Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
NM Motor Transport Division Response Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
NM Motor Transport Division Response Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
NM MTD Fixed Weigh Stations	Roadside WIM	The roadside check facility equipment shall detect the presence of commercial vehicles and freight equipment approaching a facility. Sensors can differentiate between different types of vehicles and determine the number of axles, gross vehicle weight, weight per axle, and the identification of the vehicle and its cargo.
NM MTD Fixed Weigh Stations	Roadside WIM	The roadside check facility equipment shall request and input electronic screening data from the commercial vehicle's electronic tag data.
NM MTD Fixed Weigh Stations	Roadside WIM	The roadside check facility equipment shall send a pass/pull-in notification to the commercial vehicle and its driver based on the information received from the vehicle and the measurements taken. The message may be sent to the on-board equipment in the commercial vehicle or transmitted to the driver using equipment such as dynamic message signs, red-green lights, flashing signs, etc.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall manage electronic credentials filing and processing for commercial vehicles.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall manage the filing of appropriate taxes for the operation of commercial vehicles.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall process requests for payments of electronic credentials and tax filing and maintain an interface to a Financial Institution.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall exchange credentials and tax information with other commercial vehicle administration centers - either in other states or the federal government.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall provide route restrictions information, including hazmat restrictions, to other centers and agencies for distribution to commercial vehicle operators. These centers and agencies may include commercial fleet and freight management operators, traveler information centers, digital map update providers, and other commercial vehicle administration centers.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall use information on asset restrictions received from maintenance centers to develop the commercial vehicle route restrictions and process credentials applications.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall provide an interface with commercial vehicle fleet and freight management centers to exchange audit and compliance review reports.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall provide credentials information about commercial vehicle operators and carriers to authorized requestors such as insurance agencies.
NM TRD CVO Credentials Interface	Credentials and Taxes Administration	The center shall receive and store information on commercial vehicle violations from enforcement agencies as part of the processing of credentials applications.
NM TRD CVO Credentials Interface	CV Information Exchange	The center shall exchange safety and credentials data among other commercial vehicle administration centers; includes border clearance status, credentials information, credentials status information, and safety status information.
NM TRD CVO Credentials Interface	CV Information Exchange	The center shall package data concerning commercial vehicle safety and credentials into snapshots (top-level summary and critical status information).
NM TRD CVO Credentials Interface	CV Information Exchange	The center shall package data concerning commercial vehicle safety and credentials into profiles (detailed and historical data).
NM TRD CVO Credentials Interface	CV Information Exchange	The center shall provide reports to the commercial vehicle fleet manager regarding fleet activity through roadside facilities including accident reports, citations, credentials status information, and safety status information.
NMDOT Advanced Traveler Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.

Element Name	Equipment Package Name	Requirement
NMDOT Advanced Traveler Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
NMDOT Advanced Traveler Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
NMDOT Advanced Traveler Information System	Basic Information Broadcast	The center shall provide the capability to support requests from the media for traffic and incident data.
NMDOT Advanced Traveler Information System	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
NMDOT Advanced Traveler Information System	Infrastructure Provided Trip Planning	The center shall provide the capability to provide specific pre-trip and enroute directions to travelers (and drivers), including costs, arrival times, and transfer points.
NMDOT Advanced Traveler Information System	Infrastructure Provided Trip Planning	The center shall generate route plans based on current and/or predicted conditions of the road network, scheduled maintenance and construction work activities, and work zone activities.
NMDOT Advanced Traveler Information System	Infrastructure Provided Trip Planning	The center shall generate route plans based on current asset restrictions, such as height and weight restrictions on tunnels or bridges.
NMDOT Advanced Traveler Information System	Infrastructure Provided Trip Planning	The center shall generate route plans based on current or forecasted weather.
NMDOT Advanced Traveler Information System	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes upon request.
NMDOT Advanced Traveler Information System	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities upon request.
NMDOT Advanced Traveler Information System	Interactive Infrastructure Information	The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier.
NMDOT Advanced Traveler Information System	Interactive Infrastructure Information	The center shall provide the capability for a system operator to control the type and update frequency of traveler information.
NMDOT Advanced Traveler Information System	ISP Emergency Traveler Information	The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes.
NMDOT Advanced Traveler Information System	ISP Emergency Traveler Information	The center shall provide evacuation information to shelter providers.
NMDOT Advanced Traveler Information System	ISP Emergency Traveler Information	The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
NMDOT Advanced Traveler Information System	ISP Emergency Traveler Information	The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers.
NMDOT Advanced Traveler Information System	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT Advanced Traveler Information System	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
NMDOT Advanced Traveler Information System	ISP Traveler Data Collection	The center shall collect, process, and store event information.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall provide the capability to process voice-formatted requests for traveler information from a traveler telephone information system, and return the information in the requested format.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall provide the capability to process dual-tone multifrequency (DTMF)-based requests (touch-tone) for traveler information from a traveler telephone information system.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall provide the capability to process traveler information requests from a traveler telephone information system.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall collect and provide information on traffic conditions in the requested voice format and for the requested location.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall collect and provide work zone and roadway maintenance information in the requested voice format and for the requested location.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall collect and provide roadway environment conditions information in the requested voice format and for the requested location.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall collect and provide weather and event information in the requested voice format and for the requested location.
NMDOT Advanced Traveler Information System	Traveler Telephone Information	The center shall receive and forward region-specific wide-area alert and advisory information to the traveler telephone information system, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
NMDOT CCTV	Roadway Basic Surveillance	The field element shall collect, process, and send traffic images to the center for further analysis and distribution.
NMDOT CCTV	Roadway Basic Surveillance	The field element shall return CCTV system operational status to the controlling center.
NMDOT CCTV	Roadway Basic Surveillance	The field element shall return CCTV system fault data to the controlling center for repair.
NMDOT CCTV	Roadway Work Zone Traffic Control	The field element shall collect, process, and send work zone images to the center for further analysis and distribution, under center control.
NMDOT CCTV	Roadway Work Zone Traffic Control	The field element shall provide operational status for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center.
NMDOT CCTV	Roadway Work Zone Traffic Control	The field element shall provide fault data for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center for repair.
NMDOT Consolidated Highway Database (CHDB)	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.

Element Name	Equipment Package Name	Requirement
NMDOT Consolidated Highway Database (CHDB)	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
NMDOT Consolidated Highway Database (CHDB)	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
NMDOT Consolidated Highway Database (CHDB)	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
NMDOT Consolidated Highway Database (CHDB)	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT Consolidated Highway Database (CHDB)	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT Consolidated Highway Database (CHDB)	On-Line Analysis and Mining	The center shall support the interface with Archive Data User Systems for requests for analysis of the archive data.
NMDOT Consolidated Highway Database (CHDB)	On-Line Analysis and Mining	The center shall provide the capability to perform activities such as data mining, data fusion, summarizations, aggregations, and recreation from archive data. This may include multidimensional analysis, selective summarization and expansion of data details, and many other advanced analysis services.
NMDOT Consolidated Highway Database (CHDB)	On-Line Analysis and Mining	The center shall receive the user's systems requests and develop the request to retrieve the data from the archive.
NMDOT Consolidated Highway Database (CHDB)	On-Line Analysis and Mining	The center shall respond to users systems requests for a catalog of the archived data analysis products available.
NMDOT Consolidated Highway Database (CHDB)	Traffic and Roadside Data Archival	The center shall manage the collection of archive data directly from collection equipment located at the roadside.
NMDOT Consolidated Highway Database (CHDB)	Traffic and Roadside Data Archival	The center shall collect traffic sensor information from roadside devices.
NMDOT Consolidated Highway Database (CHDB)	Traffic and Roadside Data Archival	The center shall send the request for data and control parameters to the field equipment where the information is collected and returned.
NMDOT Consolidated Highway Database (CHDB)	Traffic and Roadside Data Archival	The center shall record the status about the imported traffic and roadside data.
NMDOT Consolidated Highway Database (CHDB)	Traffic and Roadside Data Archival	The center shall use the status information to adjust the collection of traffic and roadside data.
NMDOT Consolidated Highway Database (CHDB)	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT Consolidated Highway Database (CHDB)	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT Consolidated Highway Database (CHDB)	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT Consolidated Highway Database (CHDB)	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT Consolidated Highway Database (CHDB)	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT Consolidated Highway Database (CHDB)	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT Data Warehouse	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
NMDOT Data Warehouse	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
NMDOT Data Warehouse	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
NMDOT Data Warehouse	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.

Element Name	Equipment Package Name	Requirement
NMDOT Data Warehouse	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT Data Warehouse	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT Data Warehouse	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT Data Warehouse	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT Data Warehouse	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT Data Warehouse	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT Data Warehouse	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT Data Warehouse	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT Data Warehouse	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT Data Warehouse	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT Data Warehouse	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT Data Warehouse	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT Data Warehouse	On-Line Analysis and Mining	The center shall support the interface with Archive Data User Systems for requests for analysis of the archive data.
NMDOT Data Warehouse	On-Line Analysis and Mining	The center shall provide the capability to perform activities such as data mining, data fusion, summarizations, aggregations, and recreation from archive data. This may include multidimensional analysis, selective summarization and expansion of data details, and many other advanced analysis services.
NMDOT Data Warehouse	On-Line Analysis and Mining	The center shall receive the user's systems requests and develop the request to retrieve the data from the archive.
NMDOT Data Warehouse	On-Line Analysis and Mining	The center shall respond to users systems requests for a catalog of the archived data analysis products available.
NMDOT Data Warehouse	On-Line Analysis and Mining	For archive analysis and data mining products requiring financial payment the center shall process the financial requests and manage an interface to a Financial Institution.
NMDOT Data Warehouse	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT Data Warehouse	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT Data Warehouse	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT Data Warehouse	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT Data Warehouse	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT Data Warehouse	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT District 1 TOC	Barrier System Management	The center shall remotely control barrier systems for transportation facilities and infrastructure. Barrier systems include automated or remotely controlled gates, barriers and other systems that manage entry to roadways.
NMDOT District 1 TOC	Barrier System Management	The center shall collect barrier system operational status.
NMDOT District 1 TOC	Barrier System Management	The center shall collect barrier system fault data and send to the maintenance center for repair.
NMDOT District 1 TOC	Barrier System Management	The center shall accept requests for barrier system activation from other centers and from center personnel to support emergency response and detours.
NMDOT District 1 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT District 1 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT District 1 TOC	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT District 1 TOC	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT District 1 TOC	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT District 1 TOC	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 1 TOC	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
NMDOT District 1 TOC	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.

Element Name	Equipment Package Name	Requirement
NMDOT District 1 TOC	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
NMDOT District 1 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT District 1 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT District 1 TOC	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
NMDOT District 1 TOC	TMC Environmental Monitoring	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 1 TOC	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
NMDOT District 1 TOC	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
NMDOT District 1 TOC	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 1 TOC	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
NMDOT District 1 TOC	TMC Freeway Management	The center shall remotely control video surveillance equipment to monitor freeway operations.
NMDOT District 1 TOC	TMC Freeway Management	The center shall receive video images to support management of freeway operations.
NMDOT District 1 TOC	TMC Freeway Management	The center shall operate and control road closure gates to restrict traffic flow under adverse conditions.
NMDOT District 1 TOC	TMC Incident Detection	The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents.
NMDOT District 1 TOC	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
NMDOT District 1 TOC	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 1 TOC	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
NMDOT District 1 TOC	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
NMDOT District 1 TOC	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 1 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
NMDOT District 1 TOC	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
NMDOT District 1 TOC	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.

Element Name	Equipment Package Name	Requirement
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
NMDOT District 1 TOC	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
NMDOT District 1 TOC	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
NMDOT District 1 TOC	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District 1 TOC	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
NMDOT District 1 TOC	Traffic Data Collection	The center shall be able to produce sample products of the data available.
NMDOT District 1 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT District 1 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
NMDOT District 1 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT District 1 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
NMDOT District 1 TOC	Traffic Maintenance	The center shall collect environmental sensor operational status.
NMDOT District 1 TOC	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
NMDOT District 1 TOC	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT District 2 TOC	Barrier System Management	The center shall remotely control barrier systems for transportation facilities and infrastructure. Barrier systems include automated or remotely controlled gates, barriers and other systems that manage entry to roadways.
NMDOT District 2 TOC	Barrier System Management	The center shall collect barrier system operational status.
NMDOT District 2 TOC	Barrier System Management	The center shall collect barrier system fault data and send to the maintenance center for repair.
NMDOT District 2 TOC	Barrier System Management	The center shall accept requests for barrier system activation from other centers and from center personnel to support emergency response and detours.
NMDOT District 2 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT District 2 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT District 2 TOC	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT District 2 TOC	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT District 2 TOC	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT District 2 TOC	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 2 TOC	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
NMDOT District 2 TOC	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.
NMDOT District 2 TOC	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
NMDOT District 2 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT District 2 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT District 2 TOC	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.

Element Name	Equipment Package Name	Requirement
NMDOT District 2 TOC	TMC Environmental Monitoring	The center shall provide weather and road condition information to weather service providers and center personnel.
NMDOT District 2 TOC	TMC Environmental Monitoring	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 2 TOC	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
NMDOT District 2 TOC	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
NMDOT District 2 TOC	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 2 TOC	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
NMDOT District 2 TOC	TMC Freeway Management	The center shall remotely control video surveillance equipment to monitor freeway operations.
NMDOT District 2 TOC	TMC Freeway Management	The center shall receive video images to support management of freeway operations.
NMDOT District 2 TOC	TMC Freeway Management	The center shall operate and control road closure gates to restrict traffic flow under adverse conditions.
NMDOT District 2 TOC	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
NMDOT District 2 TOC	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 2 TOC	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
NMDOT District 2 TOC	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
NMDOT District 2 TOC	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 2 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
NMDOT District 2 TOC	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
NMDOT District 2 TOC	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.

Element Name	Equipment Package Name	Requirement
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
NMDOT District 2 TOC	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
NMDOT District 2 TOC	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
NMDOT District 2 TOC	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District 2 TOC	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
NMDOT District 2 TOC	Traffic Data Collection	The center shall be able to produce sample products of the data available.
NMDOT District 2 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT District 2 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
NMDOT District 2 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT District 2 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
NMDOT District 2 TOC	Traffic Maintenance	The center shall collect environmental sensor operational status.
NMDOT District 2 TOC	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
NMDOT District 2 TOC	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT District 3 TOC	Barrier System Management	The center shall remotely control barrier systems for transportation facilities and infrastructure. Barrier systems include automated or remotely controlled gates, barriers and other systems that manage entry to roadways.
NMDOT District 3 TOC	Barrier System Management	The center shall collect barrier system operational status.
NMDOT District 3 TOC	Barrier System Management	The center shall collect barrier system fault data and send to the maintenance center for repair.
NMDOT District 3 TOC	Barrier System Management	The center shall accept requests for barrier system activation from other centers and from center personnel to support emergency response and detours.
NMDOT District 3 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT District 3 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT District 3 TOC	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT District 3 TOC	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT District 3 TOC	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT District 3 TOC	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 3 TOC	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
NMDOT District 3 TOC	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.
NMDOT District 3 TOC	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
NMDOT District 3 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT District 3 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT District 3 TOC	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
NMDOT District 3 TOC	TMC Environmental Monitoring	The center shall provide weather and road condition information to weather service providers and center personnel.
NMDOT District 3 TOC	TMC Environmental Monitoring	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 3 TOC	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
NMDOT District 3 TOC	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
NMDOT District 3 TOC	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.

Element Name	Equipment Package Name	Requirement
NMDOT District 3 TOC	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
NMDOT District 3 TOC	TMC Freeway Management	The center shall remotely control video surveillance equipment to monitor freeway operations.
NMDOT District 3 TOC	TMC Freeway Management	The center shall receive video images to support management of freeway operations.
NMDOT District 3 TOC	TMC Freeway Management	The center shall operate and control road closure gates to restrict traffic flow under adverse conditions.
NMDOT District 3 TOC	TMC Incident Detection	The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents.
NMDOT District 3 TOC	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
NMDOT District 3 TOC	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 3 TOC	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
NMDOT District 3 TOC	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
NMDOT District 3 TOC	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 3 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
NMDOT District 3 TOC	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
NMDOT District 3 TOC	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
NMDOT District 3 TOC	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
NMDOT District 3 TOC	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
NMDOT District 3 TOC	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District 3 TOC	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
NMDOT District 3 TOC	Traffic Data Collection	The center shall be able to produce sample products of the data available.

Element Name	Equipment Package Name	Requirement
NMDOT District 3 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT District 3 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
NMDOT District 3 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT District 3 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
NMDOT District 3 TOC	Traffic Maintenance	The center shall collect environmental sensor operational status.
NMDOT District 3 TOC	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
NMDOT District 3 TOC	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT District 4 TOC	Barrier System Management	The center shall remotely control barrier systems for transportation facilities and infrastructure. Barrier systems include automated or remotely controlled gates, barriers and other systems that manage entry to roadways.
NMDOT District 4 TOC	Barrier System Management	The center shall collect barrier system operational status.
NMDOT District 4 TOC	Barrier System Management	The center shall collect barrier system fault data and send to the maintenance center for repair.
NMDOT District 4 TOC	Barrier System Management	The center shall accept requests for barrier system activation from other centers and from center personnel to support emergency response and detours.
NMDOT District 4 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT District 4 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT District 4 TOC	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT District 4 TOC	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT District 4 TOC	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT District 4 TOC	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 4 TOC	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
NMDOT District 4 TOC	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.
NMDOT District 4 TOC	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
NMDOT District 4 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT District 4 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT District 4 TOC	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
NMDOT District 4 TOC	TMC Environmental Monitoring	The center shall provide weather and road condition information to weather service providers and center personnel.
NMDOT District 4 TOC	TMC Environmental Monitoring	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 4 TOC	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
NMDOT District 4 TOC	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
NMDOT District 4 TOC	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 4 TOC	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
NMDOT District 4 TOC	TMC Freeway Management	The center shall remotely control video surveillance equipment to monitor freeway operations.
NMDOT District 4 TOC	TMC Freeway Management	The center shall receive video images to support management of freeway operations.
NMDOT District 4 TOC	TMC Freeway Management	The center shall operate and control road closure gates to restrict traffic flow under adverse conditions.
NMDOT District 4 TOC	TMC Incident Detection	The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents.
NMDOT District 4 TOC	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.

Element Name	Equipment Package Name	Requirement
NMDOT District 4 TOC	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 4 TOC	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
NMDOT District 4 TOC	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
NMDOT District 4 TOC	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 4 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
NMDOT District 4 TOC	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
NMDOT District 4 TOC	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
NMDOT District 4 TOC	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
NMDOT District 4 TOC	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
NMDOT District 4 TOC	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District 4 TOC	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
NMDOT District 4 TOC	Traffic Data Collection	The center shall be able to produce sample products of the data available.
NMDOT District 4 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT District 4 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
NMDOT District 4 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT District 4 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
NMDOT District 4 TOC	Traffic Maintenance	The center shall collect environmental sensor operational status.
NMDOT District 4 TOC	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.

Element Name	Equipment Package Name	Requirement
NMDOT District 4 TOC	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT District 5 TOC	Barrier System Management	The center shall remotely control barrier systems for transportation facilities and infrastructure. Barrier systems include automated or remotely controlled gates, barriers and other systems that manage entry to roadways.
NMDOT District 5 TOC	Barrier System Management	The center shall collect barrier system operational status.
NMDOT District 5 TOC	Barrier System Management	The center shall collect barrier system fault data and send to the maintenance center for repair.
NMDOT District 5 TOC	Barrier System Management	The center shall accept requests for barrier system activation from other centers and from center personnel to support emergency response and detours.
NMDOT District 5 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT District 5 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT District 5 TOC	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT District 5 TOC	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT District 5 TOC	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT District 5 TOC	Collect Traffic Surveillance	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for traffic data.
NMDOT District 5 TOC	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 5 TOC	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
NMDOT District 5 TOC	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.
NMDOT District 5 TOC	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
NMDOT District 5 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT District 5 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT District 5 TOC	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
NMDOT District 5 TOC	TMC Environmental Monitoring	The center shall provide weather and road condition information to weather service providers and center personnel.
NMDOT District 5 TOC	TMC Environmental Monitoring	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT District 5 TOC	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
NMDOT District 5 TOC	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
NMDOT District 5 TOC	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 5 TOC	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
NMDOT District 5 TOC	TMC Freeway Management	The center shall remotely control video surveillance equipment to monitor freeway operations.
NMDOT District 5 TOC	TMC Freeway Management	The center shall receive video images to support management of freeway operations.
NMDOT District 5 TOC	TMC Freeway Management	The center shall operate and control road closure gates to restrict traffic flow under adverse conditions.
NMDOT District 5 TOC	TMC Incident Detection	The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents.
NMDOT District 5 TOC	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
NMDOT District 5 TOC	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 5 TOC	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
NMDOT District 5 TOC	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.

Element Name	Equipment Package Name	Requirement
NMDOT District 5 TOC	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 5 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
NMDOT District 5 TOC	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
NMDOT District 5 TOC	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
NMDOT District 5 TOC	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
NMDOT District 5 TOC	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
NMDOT District 5 TOC	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District 5 TOC	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
NMDOT District 5 TOC	Traffic Data Collection	The center shall be able to produce sample products of the data available.
NMDOT District 5 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT District 5 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
NMDOT District 5 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT District 5 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
NMDOT District 5 TOC	Traffic Maintenance	The center shall collect environmental sensor operational status.
NMDOT District 5 TOC	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
NMDOT District 5 TOC	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT District 5 TOC	Traffic Maintenance	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for traffic maintenance data.
NMDOT District 6 TOC	Barrier System Management	The center shall remotely control barrier systems for transportation facilities and infrastructure. Barrier systems include automated or remotely controlled gates, barriers and other systems that manage entry to roadways.
NMDOT District 6 TOC	Barrier System Management	The center shall collect barrier system operational status.

Element Name	Equipment Package Name	Requirement
NMDOT District 6 TOC	Barrier System Management	The center shall collect barrier system fault data and send to the maintenance center for repair.
NMDOT District 6 TOC	Barrier System Management	The center shall accept requests for barrier system activation from other centers and from center personnel to support emergency response and detours.
NMDOT District 6 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT District 6 TOC	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT District 6 TOC	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT District 6 TOC	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT District 6 TOC	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT District 6 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT District 6 TOC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT District 6 TOC	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
NMDOT District 6 TOC	TMC Environmental Monitoring	The center shall provide weather and road condition information to weather service providers and center personnel.
NMDOT District 6 TOC	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
NMDOT District 6 TOC	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
NMDOT District 6 TOC	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
NMDOT District 6 TOC	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
NMDOT District 6 TOC	TMC Freeway Management	The center shall remotely control video surveillance equipment to monitor freeway operations.
NMDOT District 6 TOC	TMC Freeway Management	The center shall receive video images to support management of freeway operations.
NMDOT District 6 TOC	TMC Freeway Management	The center shall operate and control road closure gates to restrict traffic flow under adverse conditions.
NMDOT District 6 TOC	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
NMDOT District 6 TOC	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 6 TOC	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
NMDOT District 6 TOC	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
NMDOT District 6 TOC	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.

Element Name	Equipment Package Name	Requirement
NMDOT District 6 TOC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
NMDOT District 6 TOC	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
NMDOT District 6 TOC	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
NMDOT District 6 TOC	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
NMDOT District 6 TOC	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
NMDOT District 6 TOC	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District 6 TOC	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
NMDOT District 6 TOC	Traffic Data Collection	The center shall be able to produce sample products of the data available.
NMDOT District 6 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT District 6 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
NMDOT District 6 TOC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT District 6 TOC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
NMDOT District 6 TOC	Traffic Maintenance	The center shall collect environmental sensor operational status.
NMDOT District 6 TOC	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
NMDOT District 6 TOC	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT District HELP Courtesy Patrol Dispatch	Service Patrol Management	The center shall dispatch roadway service patrol vehicles to identified incident locations.
NMDOT District HELP Courtesy Patrol Dispatch	Service Patrol Management	The center shall store the current status of all service patrol vehicles available for dispatch and those that have been dispatched.
NMDOT District HELP Courtesy Patrol Dispatch	Service Patrol Management	The center shall share incident information collected by the service patrol with traffic, maintenance and construction, and traveler information centers for incident management, incident notification to travelers, and incident cleanup.
NMDOT District HELP Courtesy Patrol Dispatch	Service Patrol Management	The center shall track the location and status of service patrol vehicles.
NMDOT District HELP Courtesy Patrol Vehicles	On-board EV En Route Support	The emergency vehicle, including roadway service patrols, shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
NMDOT District HELP Courtesy Patrol Vehicles	On-board EV En Route Support	The emergency vehicle, including roadway service patrols, shall send the vehicle's location and operational data to the center for emergency management and dispatch.
NMDOT District HELP Courtesy Patrol Vehicles	On-board EV En Route Support	The emergency vehicle, including roadway service patrols, shall receive incident details and a suggested route when dispatched to a scene.
NMDOT District HELP Courtesy Patrol Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
NMDOT District HELP Courtesy Patrol Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
NMDOT District HELP Courtesy Patrol Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
NMDOT District Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
NMDOT District Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.

Element Name	Equipment Package Name	Requirement
NMDOT District Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
NMDOT District Maintenance and Construction Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall compute the location of the vehicle based on inputs from a vehicle location determination function.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall send the timestamped vehicle location to the controlling center.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle Safety Monitoring	The maintenance and construction vehicle shall detect that a vehicle has intruded upon the boundary of a work zone. The boundary of the work zone represents an area around the maintenance and construction vehicle, which may be stationary or moving.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle Safety Monitoring	The maintenance and construction vehicle shall receive work zone warnings from the field equipment at the roadside, other maintenance and construction vehicles.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle Safety Monitoring	The maintenance and construction vehicle shall present work zone warnings to the field personnel using direct warning signals or in-vehicle signage functions.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle Safety Monitoring	The maintenance and construction vehicle shall monitor the crew movements to identify when a crew member is crossing the boundary between a work zone and vehicle traffic and issue an alert to the crew member.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle Safety Monitoring	The maintenance and construction vehicle shall provide status of the work zone warning systems to the center.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall collect vehicle diagnostics and operating status data from the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures as well as the status of maintenance and construction-specific systems on the vehicle.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall use the diagnostic and status information to support scheduling vehicle maintenance, monitoring safety status, and informing the vehicle operator of the conditions.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to the controlling maintenance center.
NMDOT District Maintenance and Construction Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to an equipment repair facility.
NMDOT District Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
NMDOT District Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
NMDOT District Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall exchange operational and environmental data with other maintenance and construction vehicles. Operational data includes operational state of the maintenance equipment (e.g., blade up/down, spreader pattern, equipment configuration) and a record of the actual work performed while the environmental data includes environmental sensor data collected on-board a maintenance and construction vehicle, either raw or processed data.
NMDOT District Maintenance and Construction Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
NMDOT District Maintenance and Construction Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall monitor, operate, and control work zone devices located at or alongside the roadway. The devices operated on board the vehicle include driver information devices (e.g. dynamic message signs) and work zone intrusion detection and alert devices.
NMDOT District Maintenance and Construction Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall provide an interface for field personnel to input status of their work zone activities.
NMDOT District Maintenance and Construction Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall collect inputs from field personnel and from work zone devices on-board the maintenance and construction vehicle and send them to the controlling center.
NMDOT District Maintenance Office	MCM Data Collection	The center shall collect maintenance and construction data (such as field equipment status, infrastructure status, maintenance and construction activity data) gathered from roadway, traffic, and other maintenance and construction sources.
NMDOT District Maintenance Office	MCM Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District Maintenance Office	MCM Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the maintenance and construction data or for the data itself.
NMDOT District Maintenance Office	MCM Data Collection	The center shall be able to produce sample products of the data available.
NMDOT District Maintenance Office	MCM Data Collection	The center shall provide data to Asset Management to be used in updating the status of assets in the inventory.
NMDOT District Maintenance Office	MCM Incident Management	The center shall exchange incident and threat information with emergency management centers as well as traffic management centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District Maintenance Office	MCM Incident Management	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
NMDOT District Maintenance Office	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.

Element Name	Equipment Package Name	Requirement
NMDOT District Maintenance Office	MCM Incident Management	The center shall exchange road network status assessment information with emergency management and traffic management centers including an 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.
NMDOT District Maintenance Office	MCM Incident Management	The center shall provide 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.
NMDOT District Maintenance Office	MCM Maintenance Decision Support	The center shall provide the center personnel with tailored external information, including weather or road condition observations, forecasted weather information or road conditions, current usage of treatments and materials, available resources, equipment and vehicle availability, road network information, and source reliability information.
NMDOT District Maintenance Office	MCM Maintenance Decision Support	The center shall tailor the decision support information to include filtering (selection from a large amount of external information), error reduction ('smoothing' the information), fusion (combination of disparate information to match the decision needs), and analysis (creating the decision).
NMDOT District Maintenance Office	MCM Maintenance Decision Support	The center shall provide an interface to the center personnel to input control parameters for the decision support process and receive decisions or information presentation.
NMDOT District Maintenance Office	MCM Maintenance Decision Support	The center shall provide dispatch information to maintenance and construction vehicles based on the outputs of the decision support system, including recommended roadway treatment actions.
NMDOT District Maintenance Office	MCM Roadway Maintenance and Construction	The center shall maintain an interface with asset management systems to track the inventory, restrictions, repair needs and status updates of transportation assets (pavement, bridges, signs, etc.) including location, installation and materials information, vendor/contractor, current maintenance status, standard height, width, and weight restrictions.
NMDOT District Maintenance Office	MCM Roadway Maintenance and Construction	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other roadway maintenance.
NMDOT District Maintenance Office	MCM Roadway Maintenance and Construction	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Office	MCM Roadway Maintenance and Construction	The center shall provide emergency management and traffic management centers with information about scheduled maintenance and construction work activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
NMDOT District Maintenance Office	MCM Roadway Maintenance and Construction	The center shall track the status of roadway maintenance and construction activities by monitoring collected data from the dispatched vehicles and equipment.
NMDOT District Maintenance Office	MCM Vehicle Tracking	The center shall monitor the locations of all maintenance and construction vehicles and other equipment under its jurisdiction.
NMDOT District Maintenance Office	MCM Vehicle Tracking	The center shall present location data to center personnel for the fleet of maintenance and construction vehicles and other equipment.
NMDOT District Maintenance Office	MCM Vehicle Tracking	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for maintenance and construction vehicle tracking.
NMDOT District Maintenance Office	MCM Winter Maintenance Management	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other winter roadway maintenance.
NMDOT District Maintenance Office	MCM Winter Maintenance Management	The center shall exchange information with administrative systems to support the planning and scheduling of winter maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Office	MCM Winter Maintenance Management	The center shall provide status information about scheduled winter maintenance activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, and the media.
NMDOT District Maintenance Office	MCM Winter Maintenance Management	The center shall determine the need for roadway treatment based on current and forecasted weather information, current usage of treatments and materials, available resources, requests for action from other agencies, and recommendations from the Maintenance Decision Support system, specifically under winter conditions. This supports winter maintenance such as plowing, treating, anti-icing, etc.
NMDOT District Maintenance Office	MCM Winter Maintenance Management	The center shall assess the current status of all winter maintenance activities, including actual work activities performed, current locations and operational conditions of vehicles, materials and equipment inventories, field equipment status, environmental information, etc.
NMDOT District Maintenance Office	MCM Work Activity Coordination	The center shall provide 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.

Element Name	Equipment Package Name	Requirement
NMDOT District Maintenance Office	MCM Work Activity Coordination	The center shall provide status information about scheduled maintenance and construction activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, multimodal transportation providers, rail operations, and the media.
NMDOT District Maintenance Office	MCM Work Activity Coordination	The center shall collect and respond to feedback concerning scheduled maintenance and construction activities with other management centers such as traffic, emergency, transit, and rail operations.
NMDOT District Maintenance Office	MCM Work Activity Coordination	The center shall collect and disseminate asset restriction information 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.
NMDOT District Maintenance Office	MCM Work Activity Coordination	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance and construction activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Office	MCM Work Zone Management	The center shall generate new work zone activity schedules for use by maintenance and construction vehicles, maintenance and construction operators, and for information coordination purposes.
NMDOT District Maintenance Office	MCM Work Zone Management	The center shall control the collection of work zone status information including video images from cameras located in or near the work zone.
NMDOT District Maintenance Office	MCM Work Zone Management	The center shall disseminate work zone information to other agencies and centers including traffic, transit, emergency management centers, other maintenance centers, traveler information providers, and the media.
NMDOT District Maintenance Office	MCM Work Zone Management	The center shall control traffic in work zones by providing remote control of dynamic message signs, highway advisory radio systems, gates, and barriers located in or near the work zone.
NMDOT District Maintenance Office	MCM Work Zone Management	The center shall exchange information with administrative systems to support the planning and scheduling of work zone activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Units Dispatch	MCM Automated Treatment System Control	The center shall remotely control automated roadway treatment systems. Treatments can be in the form of fog dispersion, anti-icing chemicals, etc.
NMDOT District Maintenance Units Dispatch	MCM Automated Treatment System Control	The center shall remotely control the environmental sensors that upon detecting changes in environmental or atmospheric conditions, automatically activate roadway treatment systems.
NMDOT District Maintenance Units Dispatch	MCM Automated Treatment System Control	The center shall collect automated roadway treatment system and associated environmental sensor operational status.
NMDOT District Maintenance Units Dispatch	MCM Automated Treatment System Control	The center shall collect automated roadway treatment system and associated environmental sensor fault data and request repair.
NMDOT District Maintenance Units Dispatch	MCM Automated Treatment System Control	The center shall accept requests for automated roadway treatment system activation from center personnel.
NMDOT District Maintenance Units Dispatch	MCM Data Collection	The center shall collect maintenance and construction data (such as field equipment status, infrastructure status, maintenance and construction activity data) gathered from roadway, traffic, and other maintenance and construction sources.
NMDOT District Maintenance Units Dispatch	MCM Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT District Maintenance Units Dispatch	MCM Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the maintenance and construction data or for the data itself.
NMDOT District Maintenance Units Dispatch	MCM Data Collection	The center shall be able to produce sample products of the data available.
NMDOT District Maintenance Units Dispatch	MCM Data Collection	The center shall provide data to Asset Management to be used in updating the status of assets in the inventory.
NMDOT District Maintenance Units Dispatch	MCM Incident Management	The center shall exchange incident and threat information with emergency management centers as well as traffic management centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT District Maintenance Units Dispatch	MCM Incident Management	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
NMDOT District Maintenance Units Dispatch	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.
NMDOT District Maintenance Units Dispatch	MCM Incident Management	The center shall exchange road network status assessment information with emergency management and traffic management centers including an 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.
NMDOT District Maintenance Units Dispatch	MCM Incident Management	The center shall provide 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.
NMDOT District Maintenance Units Dispatch	MCM Incident Management	The center shall receive information indicating the damage sustained by transportation assets, derived from aerial surveillance, field reports, inspections, tests, and analyses to support incident management.

Element Name	Equipment Package Name	Requirement
NMDOT District Maintenance Units Dispatch	MCM Maintenance Decision Support	The center shall provide the center personnel with tailored external information, including weather or road condition observations, forecasted weather information or road conditions, current usage of treatments and materials, available resources, equipment and vehicle availability, road network information, and source reliability information.
NMDOT District Maintenance Units Dispatch	MCM Maintenance Decision Support	The center shall tailor the decision support information to include filtering (selection from a large amount of external information), error reduction ('smoothing' the information), fusion (combination of disparate information to match the decision needs), and analysis (creating the decision).
NMDOT District Maintenance Units Dispatch	MCM Maintenance Decision Support	The center shall provide an interface to the center personnel to input control parameters for the decision support process and receive decisions or information presentation.
NMDOT District Maintenance Units Dispatch	MCM Maintenance Decision Support	The center shall provide dispatch information to maintenance and construction vehicles based on the outputs of the decision support system, including recommended roadway treatment actions.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall maintain an interface with asset management systems to track the inventory, restrictions, repair needs and status updates of transportation assets (pavement, bridges, signs, etc.) including location, installation and materials information, vendor/contractor, current maintenance status, standard height, width, and weight restrictions.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other roadway maintenance.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall provide emergency management and traffic management centers with information about scheduled maintenance and construction work activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from roadside equipment, such as traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from traffic management centers, including data for traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall remotely control and collect data from infrastructure monitoring sensors located along the roadway infrastructure or on maintenance and construction vehicles.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of roadway maintenance and construction activities.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall dispatch and route maintenance and construction vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall manage an interface with center personnel to accept vehicle systems control information and remotely control maintenance and construction vehicle on-board equipment.
NMDOT District Maintenance Units Dispatch	MCM Roadway Maintenance and Construction	The center shall track the status of roadway maintenance and construction activities by monitoring collected data from the dispatched vehicles and equipment.
NMDOT District Maintenance Units Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall collect and analyze vehicle diagnostics information from maintenance and construction vehicles. 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.
NMDOT District Maintenance Units Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall exchange information with equipment repair facilities including status and history of repairs concerning maintenance and construction vehicles. This information includes vehicle status and diagnostic information, vehicle utilization, and coordination of when vehicles will be available for preventative and corrective maintenance.
NMDOT District Maintenance Units Dispatch	MCM Vehicle and Equipment Maintenance Management	The center shall schedule preventive and corrective vehicle maintenance with the equipment repair facility based on fleet health reports, maintenance records, vehicle utilization and vehicle availability schedules.
NMDOT District Maintenance Units Dispatch	MCM Vehicle Tracking	The center shall monitor the locations of all maintenance and construction vehicles and other equipment under its jurisdiction.
NMDOT District Maintenance Units Dispatch	MCM Vehicle Tracking	The center shall present location data to center personnel for the fleet of maintenance and construction vehicles and other equipment.
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other winter roadway maintenance.

Element Name	Equipment Package Name	Requirement
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall exchange information with administrative systems to support the planning and scheduling of winter maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall provide status information about scheduled winter maintenance activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, and the media.
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of winter maintenance activities.
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall dispatch and route winter maintenance vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall determine the need for roadway treatment based on current and forecasted weather information, current usage of treatments and materials, available resources, requests for action from other agencies, and recommendations from the Maintenance Decision Support system, specifically under winter conditions. This supports winter maintenance such as plowing, treating, anti-icing, etc.
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall provide dispatch instructions for vehicle operators based on input parameters from center personnel, specifically for winter conditions. This could include a treatment route, treatment application rates, start and end times, and other treatment instructions.
NMDOT District Maintenance Units Dispatch	MCM Winter Maintenance Management	The center shall assess the current status of all winter maintenance activities, including actual work activities performed, current locations and operational conditions of vehicles, materials and equipment inventories, field equipment status, environmental information, etc.
NMDOT District Maintenance Units Dispatch	MCM Work Activity Coordination	The center shall provide 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.
NMDOT District Maintenance Units Dispatch	MCM Work Activity Coordination	The center shall provide status information about scheduled maintenance and construction activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, multimodal transportation providers, rail operations, and the media.
NMDOT District Maintenance Units Dispatch	MCM Work Activity Coordination	The center shall collect and respond to feedback concerning scheduled maintenance and construction activities with other management centers such as traffic, emergency, transit, and rail operations.
NMDOT District Maintenance Units Dispatch	MCM Work Activity Coordination	The center shall collect and disseminate asset restriction information 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.
NMDOT District Maintenance Units Dispatch	MCM Work Activity Coordination	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance and construction activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Units Dispatch	MCM Work Activity Coordination	The center shall exchange rail schedules and work plans with rail operations centers.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Management	The center shall generate new work zone activity schedules for use by maintenance and construction vehicles, maintenance and construction operators, and for information coordination purposes.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Management	The center shall control the collection of work zone status information including video images from cameras located in or near the work zone.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Management	The center shall disseminate work zone information to other agencies and centers including traffic, transit, emergency management centers, other maintenance centers, traveler information providers, and the media.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Management	The center shall control traffic in work zones by providing remote control of dynamic message signs, highway advisory radio systems, gates, and barriers located in or near the work zone.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Management	The center shall exchange information with administrative systems to support the planning and scheduling of work zone activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Safety Management	The center shall provide remote monitoring and control of work zone safety devices - including intrusion detection devices that have been installed in work zones or maintenance areas.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Safety Management	The center shall provide remote monitoring and control of intrusion alert devices that have been installed in work zones or maintenance areas.
NMDOT District Maintenance Units Dispatch	MCM Work Zone Safety Management	The center shall collect status information of work zone safety device status from field equipment or the maintenance and construction vehicles.

Element Name	Equipment Package Name	Requirement
NMDOT District Maintenance Units Dispatch	MCM Work Zone Safety Management	The center shall collect and store work zone data collected from work zone monitoring devices (such as intrusion detection or alert devices and speed monitoring devices) on-board the vehicle and at the roadside.
NMDOT District Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT District Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
NMDOT District Public Information System	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
NMDOT District Public Information System	ISP Emergency Traveler Information	The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes.
NMDOT District Public Information System	ISP Emergency Traveler Information	The center shall provide evacuation information to shelter providers.
NMDOT District Public Information System	ISP Emergency Traveler Information	The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
NMDOT District Public Information System	ISP Emergency Traveler Information	The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers.
NMDOT District Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT District Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
NMDOT District Public Information System	ISP Traveler Data Collection	The center shall collect, process, and store event information.
NMDOT District Weather Detection Stations	Roadway Environmental Monitoring	The field element shall include surface and sub-surface environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT District Weather Detection Stations	Roadway Environmental Monitoring	The field element shall include environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT District Weather Detection Stations	Roadway Environmental Monitoring	The field element's environmental sensors shall be remotely controlled by a traffic management center.
NMDOT District Weather Detection Stations	Roadway Environmental Monitoring	The field element shall provide environmental sensor equipment operational status to the controlling center or maintenance vehicle.
NMDOT District Weather Detection Stations	Roadway Environmental Monitoring	The field element shall provide environmental sensor equipment fault indication to the controlling center or maintenance vehicle.
NMDOT District Weather Detection Stations	Roadway Environmental Monitoring	The field element shall provide weather and road surface condition data to centers.
NMDOT District Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT District Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
NMDOT District Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
NMDOT District Website	Basic Information Broadcast	The center shall provide the capability to support requests from the media for traffic and incident data.
NMDOT District Website	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT District Website	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
NMDOT District Website	ISP Traveler Data Collection	The center shall collect, process, and store event information.
NMDOT DMS	Roadway Traffic Information Dissemination	The field element shall include dynamic messages signs for dissemination of traffic and other information to drivers, under center control; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close).
NMDOT DMS	Roadway Traffic Information Dissemination	The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center.
NMDOT DMS	Roadway Traffic Information Dissemination	The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair.
NMDOT DMS	Roadway Work Zone Traffic Control	Under traffic and maintenance center control, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around the work zone through which they are currently passing.
NMDOT DMS	Roadway Work Zone Traffic Control	Under the control of field personnel within maintenance vehicles, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around a work zone through which they are currently passing.
NMDOT DMS	Roadway Work Zone Traffic Control	The field element shall provide operational status for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center.
NMDOT DMS	Roadway Work Zone Traffic Control	The field element shall provide fault data for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center for repair.
NMDOT Field Sensors	Roadway Basic Surveillance	The field element shall collect, process, digitize, and send traffic sensor data (speed, volume, and occupancy) to the center for further analysis and storage, under center control.

Element Name	Equipment Package Name	Requirement
NMDOT Field Sensors	Roadway Basic Surveillance	The field element shall return sensor and CCTV system fault data to the controlling center for repair.
NMDOT Field Sensors	Roadway Data Collection	The field element shall collect traffic, road, and environmental conditions information.
NMDOT Field Sensors	Roadway Data Collection	The field element shall include the sensors and supporting roadside devices that sense, collect, and send traffic, road, and environmental conditions information to a center for archival.
NMDOT Field Sensors	Roadway Data Collection	The field element shall collect sensor status and sensor faults from roadside equipment and send it along with the recorded data to a center for archival.
NMDOT Highway Advisory Radio System (HAR)	Roadway Traffic Information Dissemination	The field element shall include driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers, under center control.
NMDOT Highway Advisory Radio System (HAR)	Roadway Traffic Information Dissemination	The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center.
NMDOT Highway Advisory Radio System (HAR)	Roadway Traffic Information Dissemination	The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair.
NMDOT Highway Maintenance Management System (HMMS)	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
NMDOT Highway Maintenance Management System (HMMS)	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
NMDOT Highway Maintenance Management System (HMMS)	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
NMDOT Highway Maintenance Management System (HMMS)	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
NMDOT Highway Maintenance Management System (HMMS)	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT Highway Maintenance Management System (HMMS)	ITS Data Repository	For archive data requiring financial payment, the center shall process the financial requests and manage an interface to a Financial Institution.
NMDOT Highway Maintenance Management System (HMMS)	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT Highway Maintenance Management System (HMMS)	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT Highway Maintenance Management System (HMMS)	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT Highway Maintenance Management System (HMMS)	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT Highway Maintenance Management System (HMMS)	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT Highway Maintenance Management System (HMMS)	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT Lane Controls	Roadway Freeway Control	The field element shall include ramp metering controllers, mainline meters, and lane controls for use on freeways, under center control.
NMDOT Lane Controls	Roadway Freeway Control	The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from the indicator control information.
NMDOT Lane Controls	Roadway Freeway Control	The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions.
NMDOT Lane Controls	Roadway Freeway Control	The field element shall return ramp metering controller, mainline meters, and lane control operational status to the controlling center.

Element Name	Equipment Package Name	Requirement
NMDOT Lane Controls	Roadway Freeway Control	The field element shall return ramp metering controller, mainline meters, and lane control fault data to the maintenance center for repair.
NMDOT Non-Reversible Lane Controls	Roadway Freeway Control	The field element shall return ramp metering controller, mainline meters, and lane control operational status to the controlling center.
NMDOT Non-Reversible Lane Controls	Roadway Freeway Control	The field element shall return ramp metering controller, mainline meters, and lane control fault data to the maintenance center for repair.
NMDOT Non-Reversible Lane Controls	Roadway Freeway Control	The field element shall provide indications to the driver that a freeway ramp or a lane is available for use, with possible usage data for the freeway lanes they are entering.
NMDOT Park and Ride Dispatch	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from travelers in secure areas (such as transit stops, rest areas, park and ride lots, modal interchange facilities).
NMDOT Park and Ride Dispatch	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
NMDOT Park and Ride Dispatch	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
NMDOT Park and Ride Dispatch	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
NMDOT Park and Ride Dispatch	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
NMDOT Park and Ride Dispatch	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
NMDOT Park and Ride Dispatch	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
NMDOT Park and Ride Dispatch	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
NMDOT Park and Ride Dispatch	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall dispatch fixed route or flexible route transit vehicles
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall collect transit operational data for use in the generation of routes and schedules.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall provide instructions or corrective actions to the transit vehicle operators based upon operational needs.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall manage large deviations of individual transit vehicles, deviations in rural areas, and deviations of large numbers of vehicles.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall generate the necessary corrective actions which may involve more than the vehicles concerned and more far reaching action, such as, the introduction of extra vehicles, wide area signal priority by traffic management, the premature termination of some services, etc.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
NMDOT Park and Ride Dispatch	Transit Center Fixed-Route Operations	The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services.
NMDOT Park and Ride Dispatch	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.
NMDOT Park and Ride Dispatch	Transit Center Security	The center shall monitor transit vehicle operational data to determine if the transit vehicle is off-route and assess whether a security incident is occurring.
NMDOT Park and Ride Dispatch	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
NMDOT Park and Ride Dispatch	Transit Center Security	The center shall support the back-office portion of functionality to authenticate transit vehicle operators.
NMDOT Park and Ride Dispatch	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
NMDOT Park and Ride Dispatch	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
NMDOT Park and Ride Dispatch	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
NMDOT Park and Ride Dispatch	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
NMDOT Park and Ride Dispatch	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
NMDOT Park and Ride Dispatch	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
NMDOT Park and Ride Dispatch	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT Park and Ride Dispatch	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
NMDOT Park and Ride Dispatch	Transit Data Collection	The center shall be able to produce sample products of the data available.
NMDOT Park and Ride Dispatch	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
NMDOT Park and Ride Dispatch	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.

Element Name	Equipment Package Name	Requirement
NMDOT Park and Ride Dispatch	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
NMDOT Park and Ride Dispatch	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
NMDOT Park and Ride Dispatch	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
NMDOT Park and Ride Dispatch	Transit Vehicle Operator Scheduling	The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies.
NMDOT Park and Ride Dispatch	Transit Vehicle Operator Scheduling	The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments.
NMDOT Park and Ride Dispatch	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
NMDOT Park and Ride Dispatch	Transit Vehicle Operator Scheduling	The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions.
NMDOT Park and Ride Shuttle Buses	On-board Fixed Route Schedule Management	The transit vehicle shall receive transit route information for its assigned route including transit service instructions, traffic information, road conditions, and other information for the operator.
NMDOT Park and Ride Shuttle Buses	On-board Fixed Route Schedule Management	The transit vehicle shall use the route information and its current location to determine the deviation from the predetermined schedule.
NMDOT Park and Ride Shuttle Buses	On-board Fixed Route Schedule Management	The transit vehicle shall calculate the estimated times of arrival (ETA) at transit stops.
NMDOT Park and Ride Shuttle Buses	On-board Fixed Route Schedule Management	The transit vehicle shall determine scenarios to correct the schedule deviation.
NMDOT Park and Ride Shuttle Buses	On-board Fixed Route Schedule Management	The transit vehicle shall provide the schedule deviations and instructions for schedule corrections to the transit vehicle operator if the deviation is small, or the transit vehicle is operating in an urban area.
NMDOT Park and Ride Shuttle Buses	On-board Fixed Route Schedule Management	The transit vehicle shall send the schedule deviation and estimated arrival time information to the center.
NMDOT Park and Ride Shuttle Buses	On-board Fixed Route Schedule Management	The transit vehicle shall support the operations of a flexible route service. This may include requests for route deviations that would then lead to schedule corrective actions.
NMDOT Park and Ride Shuttle Buses	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
NMDOT Park and Ride Shuttle Buses	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
NMDOT Park and Ride Shuttle Buses	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle's current location.
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall accept sensor control data to allow remote control of the sensors.
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
NMDOT Park and Ride Shuttle Buses	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
NMDOT Park and Ride Shuttle Buses	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.

Element Name	Equipment Package Name	Requirement
NMDOT Park and Ride Shuttle Buses	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
NMDOT Park and Ride Shuttle Buses	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
NMDOT Park and Ride Shuttle Buses	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
NMDOT Park and Ride Shuttle Buses	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
NMDOT Ramp Meters	Roadway Freeway Control	The field element shall include ramp metering controllers, mainline meters, and lane controls for use on freeways, under center control.
NMDOT Ramp Meters	Roadway Freeway Control	The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from the indicator control information.
NMDOT Ramp Meters	Roadway Freeway Control	The field element shall monitor operation of ramp meter, mainline meters, and lane control indicators and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions.
NMDOT Ramp Meters	Roadway Freeway Control	The field element shall return ramp metering controller, mainline meters, and lane control operational status to the controlling center.
NMDOT Ramp Meters	Roadway Freeway Control	The field element shall return ramp metering controller, mainline meters, and lane control fault data to the maintenance center for repair.
NMDOT Ramp Meters	Roadway Freeway Control	The field element shall provide indications to the driver that a freeway ramp or a lane is available for use, with possible usage data for the freeway lanes they are entering.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall receive traffic information from a center and present it to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	This public interface for travelers shall receive evacuation information from a center and present it to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall receive wide-area alerts and present it to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall provide the capability for digitized map data to act as the background to the information presented to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Basic Information Reception	The public interface for travelers shall be able to store frequently requested data.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive traffic information from a center and present it to the traveler upon request.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler upon request.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive yellow pages information (such as lodging, restaurants, theaters, bicycle facilities, and other tourist activities) from a center and present it to the traveler upon request.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler upon request.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive evacuation information from a center and present it to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall receive wide-area alerts and present it to the traveler.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Interactive Information Reception	The public interface for travelers shall be able to store frequently requested data.

Element Name	Equipment Package Name	Requirement
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Transit Information Services	The public interface for travelers shall collect and provide real-time travel-related information at transit stops, multi-modal transfer points, and other public transportation areas.
NMDOT Rest Area/Visitor Center/Truck Stop/Service Plaza Kiosks	Remote Transit Information Services	The public interface for travelers shall collect and present to the transit traveler information on transit routes, schedules, and real-time schedule adherence.
NMDOT Road Closure Gates	Field Barrier System Control	The field element shall return barrier system operational status to the controlling center.
NMDOT Road Closure Gates	Field Barrier System Control	The field element shall return barrier system fault data to the maintenance center for repair.
NMDOT Roadway Treatment Devices	Roadway Automated Treatment	The field element shall activate automated roadway treatment systems based on environmental or atmospheric conditions. Treatments can be in the form of fog dispersion, anti-icing chemicals, etc.
NMDOT Roadway Treatment Devices	Roadway Automated Treatment	The field element shall activate automated roadway treatment systems under center control. Treatments can be in the form of fog dispersion, anti-icing chemicals, etc.
NMDOT Roadway Treatment Devices	Roadway Automated Treatment	The field element shall return automated roadway treatment system and associated environmental sensor operational status to the maintenance center.
NMDOT Roadway Treatment Devices	Roadway Automated Treatment	The field element shall return automated roadway treatment system and associated environmental sensor fault data to the maintenance center for repair.
NMDOT RWIS	Roadway Environmental Monitoring	The field element shall include surface and sub-surface environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT RWIS	Roadway Environmental Monitoring	The field element shall include environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT RWIS	Roadway Environmental Monitoring	The field element's environmental sensors shall be remotely controlled by a traffic management center.
NMDOT RWIS	Roadway Environmental Monitoring	The field element shall provide environmental sensor equipment operational status to the controlling center or maintenance vehicle.
NMDOT RWIS	Roadway Environmental Monitoring	The field element shall provide environmental sensor equipment fault indication to the controlling center or maintenance vehicle.
NMDOT RWIS	Roadway Environmental Monitoring	The field element shall remotely aggregate environmental sensor data with environmental data collected from maintenance and construction vehicles.
NMDOT RWIS	Roadway Environmental Monitoring	The field element shall provide weather and road surface condition data to centers.
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall include security sensors that monitor conditions of secure areas including facilities (e.g. transit yards) and transportation infrastructure (e.g. bridges, tunnels, interchanges, roadway infrastructure, and transit railways or guideways).
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall be remotely controlled by a center.
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall provide equipment status and fault indication of security sensor equipment to a center.
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall include environmental threat sensors (e.g. chemical agent, toxic industrial chemical, biological, explosives, and radiological).
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall include infrastructure condition and integrity monitoring sensors.
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall include motion and intrusion detection sensors.
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall include object detection sensors (such as metal detectors).
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall provide raw security sensor data.
NMDOT Security Monitoring Field Equipment	Field Secure Area Sensor Monitoring	The field element shall remotely process security sensor data and provide an indication of potential incidents or threats to a center.
NMDOT Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall include video and/or audio surveillance of secure areas including facilities (e.g. transit yards) and transportation infrastructure (e.g. bridges, tunnels, interchanges, roadway infrastructure, and transit railways or guideways).
NMDOT Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall be remotely controlled by a center.
NMDOT Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall provide equipment status and fault indication of surveillance equipment to a center.
NMDOT Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall provide raw video or audio data.
NMDOT Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall remotely process video and audio data and provide an indication of potential incidents or threats to a center.
NMDOT Signal Lab	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT Signal Lab	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT Signal Lab	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT Signal Lab	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT Signal Lab	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT Signal Lab	Collect Traffic Surveillance	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for traffic data.
NMDOT Signal Lab	HRI Traffic Management	The center shall remotely control highway-rail intersection (HRI) equipment located in the field.
NMDOT Signal Lab	HRI Traffic Management	The center shall accept collect highway-rail intersection (HRI) advisory or alert data from rail operations centers.
NMDOT Signal Lab	HRI Traffic Management	The center shall collect highway-rail intersection (HRI) equipment operational status and compare against the control information sent by the center.

Element Name	Equipment Package Name	Requirement
NMDOT Signal Lab	HRI Traffic Management	The center shall provide the highway-rail intersection (HRI) equipment operational status to rail operations centers.
NMDOT Signal Lab	HRI Traffic Management	The center shall collect incident information related to a highway-rail intersection (HRI), such as intersection blockages or crashes or equipment malfunctions.
NMDOT Signal Lab	HRI Traffic Management	The center shall implement control plans to coordinate signalized intersections around highway-rail intersections (HRI), under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, equipment faults, pedestrian crossings, etc.
NMDOT Signal Lab	Rail Operations Coordination	The center shall exchange highway-rail intersection (HRI) information with rail operations centers. This information may include event schedules, requests for information from the Rail Operators, incident notification based on rail operations messages, and priority messages like notifications of a HAZMAT spill, equipment failure, or an intersection blockage.
NMDOT Signal Lab	Rail Operations Coordination	The center shall receive highway-rail intersection (HRI) maintenance schedules, train schedules, and incident notifications from rail operations centers.
NMDOT Signal Lab	Rail Operations Coordination	The center shall use the rail operations information to develop forecast HRI closure times and durations which may be applied in advanced traffic control strategies or delivered as enhanced traveler information.
NMDOT Signal Lab	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT Signal Lab	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT Signal Lab	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT Signal Lab	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT Signal Lab	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT Signal Lab	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
NMDOT Signal Lab	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
NMDOT Signal Lab	TMC Signal Control	The center shall remotely control traffic signal controllers.
NMDOT Signal Lab	TMC Signal Control	The center shall accept notifications of right-of-way requests from pedestrians.
NMDOT Signal Lab	TMC Signal Control	The center shall collect traffic signal controller operational status and compare against the control information sent by the center.
NMDOT Signal Lab	TMC Signal Control	The center shall collect traffic signal controller fault data from the field.
NMDOT Signal Lab	TMC Signal Control	The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc.
NMDOT Signal Lab	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT Signal Lab	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT Signal Lab	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
NMDOT Signal Lab	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT Signal Lab	Traffic Maintenance	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for traffic maintenance data.
NMDOT SITE Manager	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
NMDOT SITE Manager	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
NMDOT SITE Manager	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
NMDOT SITE Manager	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
NMDOT SITE Manager	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT SITE Manager	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT SITE Manager	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT SITE Manager	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.

Element Name	Equipment Package Name	Requirement
NMDOT SITE Manager	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT SITE Manager	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT SITE Manager	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT SITE Manager	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT SITE Manager	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT SITE Manager	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT SITE Manager	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT SITE Manager	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT SITE Manager	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT SITE Manager	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT SITE Manager	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT SITE Manager	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT SITE Manager	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT SITE Manager	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT Statewide Crash Information System	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
NMDOT Statewide Crash Information System	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
NMDOT Statewide Crash Information System	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
NMDOT Statewide Crash Information System	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
NMDOT Statewide Crash Information System	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT Statewide Crash Information System	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT Statewide Crash Information System	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT Statewide Crash Information System	On-Line Analysis and Mining	The center shall support the interface with Archive Data User Systems for requests for analysis of the archive data.
NMDOT Statewide Crash Information System	On-Line Analysis and Mining	The center shall provide the capability to perform activities such as data mining, data fusion, summarizations, aggregations, and recreation from archive data. This may include multidimensional analysis, selective summarization and expansion of data details, and many other advanced analysis services.
NMDOT Statewide Crash Information System	On-Line Analysis and Mining	The center shall receive the user's systems requests and develop the request to retrieve the data from the archive.
NMDOT Statewide Crash Information System	On-Line Analysis and Mining	The center shall respond to users systems requests for a catalog of the archived data analysis products available.
NMDOT Statewide Crash Information System	On-Line Analysis and Mining	For archive analysis and data mining products requiring financial payment the center shall process the financial requests and manage an interface to a Financial Institution.

Element Name	Equipment Package Name	Requirement
NMDOT Statewide Crash Information System	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT Statewide Crash Information System	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT Statewide Crash Information System	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT Statewide Crash Information System	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT Statewide Crash Information System	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT Statewide Crash Information System	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT Statewide Pavement Management System	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT Statewide Pavement Management System	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT Statewide Pavement Management System	On-Line Analysis and Mining	The center shall support the interface with Archive Data User Systems for requests for analysis of the archive data.
NMDOT Statewide Pavement Management System	On-Line Analysis and Mining	The center shall provide the capability to perform activities such as data mining, data fusion, summarizations, aggregations, and recreation from archive data. This may include multidimensional analysis, selective summarization and expansion of data details, and many other advanced analysis services.
NMDOT Statewide Pavement Management System	On-Line Analysis and Mining	The center shall receive the user's systems requests and develop the request to retrieve the data from the archive.
NMDOT Statewide Pavement Management System	On-Line Analysis and Mining	The center shall respond to users systems requests for a catalog of the archived data analysis products available.
NMDOT Statewide Pavement Management System	Traffic and Roadside Data Archival	The center shall manage the collection of archive data directly from collection equipment located at the roadside.
NMDOT Statewide Pavement Management System	Traffic and Roadside Data Archival	The center shall collect traffic sensor information from roadside devices.
NMDOT Statewide Pavement Management System	Traffic and Roadside Data Archival	The center shall collect environmental sensor information that from roadside devices.
NMDOT Statewide Pavement Management System	Traffic and Roadside Data Archival	The center shall respond to requests from the Archive Data Administer to input the parameters that control the collection process.
NMDOT Statewide Pavement Management System	Traffic and Roadside Data Archival	The center shall send the request for data and control parameters to the field equipment where the information is collected and returned.
NMDOT Statewide Pavement Management System	Traffic and Roadside Data Archival	The center shall record the status about the imported traffic and roadside data.
NMDOT Statewide Pavement Management System	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT Statewide Pavement Management System	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT Statewide Pavement Management System	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT Statewide Pavement Management System	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT Statewide Pavement Management System	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT Statewide Pavement Management System	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.

Element Name	Equipment Package Name	Requirement
NMDOT Statewide Public Information Office	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT Statewide Public Information Office	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
NMDOT Statewide Public Information Office	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
NMDOT Statewide Public Information Office	ISP Emergency Traveler Information	The center shall collect and provide to the traveler interface systems emergency evacuation information, including evacuation zones, shelter information, available transportation modes, road closures and detours, changes to transit services, and traffic and road conditions at the origin, destination, and along the evacuation routes.
NMDOT Statewide Public Information Office	ISP Emergency Traveler Information	The center shall provide evacuation information to shelter providers.
NMDOT Statewide Public Information Office	ISP Emergency Traveler Information	The center shall collect and provide wide-area alert information to the traveler interface system with region-specific data, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
NMDOT Statewide Public Information Office	ISP Emergency Traveler Information	The center shall provide the capability for a system operator to control the type and update frequency of emergency and wide-area alert information distributed to travelers.
NMDOT Statewide Public Information Office	ISP Traveler Data Collection	The center shall collect, process, and store traffic and highway condition information, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT Statewide Public Information Office	ISP Traveler Data Collection	The center shall collect, process, and store maintenance and construction information, including scheduled maintenance and construction work activities and work zone activities.
NMDOT Statewide Public Information Office	ISP Traveler Data Collection	The center shall collect, process, and store event information.
NMDOT Statewide TMC	Barrier System Management	The center shall remotely control barrier systems for transportation facilities and infrastructure. Barrier systems include automated or remotely controlled gates, barriers and other systems that manage entry to roadways.
NMDOT Statewide TMC	Barrier System Management	The center shall collect barrier system operational status.
NMDOT Statewide TMC	Barrier System Management	The center shall collect barrier system fault data and send to the maintenance center for repair.
NMDOT Statewide TMC	Barrier System Management	The center shall accept requests for barrier system activation from other centers and from center personnel to support emergency response and detours.
NMDOT Statewide TMC	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
NMDOT Statewide TMC	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
NMDOT Statewide TMC	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
NMDOT Statewide TMC	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
NMDOT Statewide TMC	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
NMDOT Statewide TMC	MCM Environmental Information Collection	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT Statewide TMC	MCM Environmental Information Collection	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT Statewide TMC	MCM Environmental Information Collection	The center shall remotely control environmental sensors on-board maintenance and construction vehicles that measure road and weather conditions including air and surface temperatures, wind speed, humidity, precipitation, visibility and other measures.
NMDOT Statewide TMC	MCM Environmental Information Collection	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from traffic, emergency, and transit management, traveler information providers, and environmental data collected from sensors deployed on and about the roadway as well as the fleet of maintenance and construction vehicles.
NMDOT Statewide TMC	MCM Environmental Information Collection	The center shall collect operational status for the roadside and vehicle-based environmental sensor equipment.
NMDOT Statewide TMC	MCM Environmental Information Collection	The center shall collect fault data for the roadside and vehicle-based environmental sensor equipment for repair.
NMDOT Statewide TMC	MCM Environmental Information Processing	The center shall respond to control data from center personnel regarding environmental sensor control and weather data collection and processing.
NMDOT Statewide TMC	MCM Environmental Information Processing	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services) and local environmental sensor data.
NMDOT Statewide TMC	MCM Environmental Information Processing	The center shall use the various data inputs of environmental sensors and road weather data to develop a view of current and predicted road weather and road conditions.
NMDOT Statewide TMC	MCM Environmental Information Processing	The center shall disseminate current and forecasted road weather and road condition information to weather service providers (such as the National Weather Service and value-added sector specific meteorological services) as well as other agencies including traffic, emergency, and transit management, traveler information providers, rail operations centers, media, and other maintenance management centers.
NMDOT Statewide TMC	MCM Environmental Information Processing	The center shall provide value-added sector specific meteorological services with information on basic road facility and treatment information that supports forecasts for road conditions.

Element Name	Equipment Package Name	Requirement
NMDOT Statewide TMC	Rail Operations Coordination	The center shall exchange highway-rail intersection (HRI) information with rail operations centers. This information may include event schedules, requests for information from the Rail Operators, incident notification based on rail operations messages, and priority messages like notifications of a HAZMAT spill, equipment failure, or an intersection blockage.
NMDOT Statewide TMC	Rail Operations Coordination	The center shall receive highway-rail intersection (HRI) maintenance schedules, train schedules, and incident notifications from rail operations centers.
NMDOT Statewide TMC	Rail Operations Coordination	The center shall use the rail operations information to develop forecast HRI closure times and durations which may be applied in advanced traffic control strategies or delivered as enhanced traveler information.
NMDOT Statewide TMC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure road surface temperature, moisture, icing, salinity, and other measures.
NMDOT Statewide TMC	TMC Environmental Monitoring	The center shall remotely control environmental sensors that measure weather conditions including temperature, wind, humidity, precipitation, and visibility.
NMDOT Statewide TMC	TMC Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information using a combination of weather service provider information (such as the National Weather Service and value-added sector specific meteorological services), data from roadway maintenance operations, and environmental data collected from sensors deployed on and about the roadway.
NMDOT Statewide TMC	TMC Environmental Monitoring	The center shall provide weather and road condition information to weather service providers and center personnel.
NMDOT Statewide TMC	TMC Evacuation Support	The center shall coordinate planning for evacuation with emergency management centers - including pre-planning activities such as establishing routes, areas to be evacuated, timing, etc.
NMDOT Statewide TMC	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
NMDOT Statewide TMC	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
NMDOT Statewide TMC	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
NMDOT Statewide TMC	TMC Freeway Management	The center shall remotely control systems to manage use of the freeways, including ramp meters, mainline metering, and lane controls.
NMDOT Statewide TMC	TMC Freeway Management	The center shall collect operational status from ramp meters, mainline metering, and lane controls and compare against the control information sent by the center.
NMDOT Statewide TMC	TMC Freeway Management	The center shall collect fault data from ramp meters, mainline metering, and lane controls.
NMDOT Statewide TMC	TMC Freeway Management	The center shall implement control strategies, under control of center personnel, on some or all of the freeway network devices (e.g. ramp meters, mainline metering, and lane controls), based on data from sensors monitoring traffic conditions upstream, downstream, and queue data on the ramps themselves.
NMDOT Statewide TMC	TMC Freeway Management	The center shall remotely control video surveillance equipment to monitor freeway operations.
NMDOT Statewide TMC	TMC Freeway Management	The center shall receive video images to support management of freeway operations.
NMDOT Statewide TMC	TMC Freeway Management	The center shall operate and control road closure gates to restrict traffic flow under adverse conditions.
NMDOT Statewide TMC	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
NMDOT Statewide TMC	TMC Incident Detection	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT Statewide TMC	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
NMDOT Statewide TMC	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
NMDOT Statewide TMC	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, media, and rail operations centers.
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.

Element Name	Equipment Package Name	Requirement
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
NMDOT Statewide TMC	TMC Incident Dispatch Coordination/Communication	The center shall receive inputs from emergency management and transit management centers to develop an overall status of the transportation system including emergency transit schedules in effect and current status and condition of the transportation infrastructure.
NMDOT Statewide TMC	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
NMDOT Statewide TMC	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall remotely control driver information systems that communicate directly from a center to the vehicle radio (such as Highway Advisory Radios) for dissemination of traffic and other information to drivers.
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall retrieve locally stored traffic information, including current and forecasted traffic information, road and weather conditions, traffic incident information, information on diversions and alternate routes, closures, and special traffic restrictions (lane/shoulder use, weight restrictions, width restrictions, HOV requirements), etc.
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall distribute traffic data to the media upon request; the capability to provide the information in both data stream and graphical display shall be supported.
NMDOT Statewide TMC	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
NMDOT Statewide TMC	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
NMDOT Statewide TMC	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT Statewide TMC	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
NMDOT Statewide TMC	Traffic Data Collection	The center shall be able to produce sample products of the data available.
NMDOT Statewide TMC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
NMDOT Statewide TMC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
NMDOT Statewide TMC	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
NMDOT Statewide TMC	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
NMDOT Statewide TMC	Traffic Maintenance	The center shall collect environmental sensor operational status.
NMDOT Statewide TMC	Traffic Maintenance	The center shall collect environmental sensor equipment fault data and send to the maintenance center for repair.
NMDOT Statewide TMC	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.
NMDOT Statewide Transit Database	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
NMDOT Statewide Transit Database	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
NMDOT Statewide Transit Database	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
NMDOT Statewide Transit Database	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
NMDOT Statewide Transit Database	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT Statewide Transit Database	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall include capabilities for archive to archive coordination.

Element Name	Equipment Package Name	Requirement
NMDOT Statewide Transit Database	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT Statewide Transit Database	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT Statewide Transit Database	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT Statewide Transit Database	On-Line Analysis and Mining	The center shall support the interface with Archive Data User Systems for requests for analysis of the archive data.
NMDOT Statewide Transit Database	On-Line Analysis and Mining	The center shall provide the capability to perform activities such as data mining, data fusion, summarizations, aggregations, and recreation from archive data. This may include multidimensional analysis, selective summarization and expansion of data details, and many other advanced analysis services.
NMDOT Statewide Transit Database	On-Line Analysis and Mining	The center shall receive the user's systems requests and develop the request to retrieve the data from the archive.
NMDOT Statewide Transit Database	On-Line Analysis and Mining	The center shall respond to users systems requests for a catalog of the archived data analysis products available.
NMDOT Statewide Transit Database	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT Statewide Transit Database	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT Statewide Transit Database	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT Statewide Transit Database	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT Statewide Transit Database	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT Statewide Transit Database	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT TIMS	Government Reporting Systems Support	The center shall provide data from an ITS archive to federal, state, or local government reporting systems.
NMDOT TIMS	Government Reporting Systems Support	The center shall provide the capability to select data from an ITS archive for use in government reports.
NMDOT TIMS	Government Reporting Systems Support	The center shall provide the capability to format data from an ITS archive suitable for input into government reports.
NMDOT TIMS	Government Reporting Systems Support	The center shall support requests for ITS archived data from Government Reporting Systems.
NMDOT TIMS	Government Reporting Systems Support	The center shall provide the applicable meta-data for any ITS archived data to satisfy government reporting system requests. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
NMDOT TIMS	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT TIMS	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT TIMS	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT TIMS	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT TIMS	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT TIMS	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT TIMS	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT TIMS	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT TIMS	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT TIMS	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT TIMS	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT TIMS	Traffic and Roadside Data Archival	The center shall manage the collection of archive data directly from collection equipment located at the roadside.
NMDOT TIMS	Traffic and Roadside Data Archival	The center shall collect traffic sensor information from roadside devices.
NMDOT TIMS	Traffic and Roadside Data Archival	The center shall collect environmental sensor information that from roadside devices.
NMDOT TIMS	Traffic and Roadside Data Archival	The center shall respond to requests from the Archive Data Administer to input the parameters that control the collection process.

Element Name	Equipment Package Name	Requirement
NMDOT TIMS	Traffic and Roadside Data Archival	The center shall send the request for data and control parameters to the field equipment where the information is collected and returned.
NMDOT TIMS	Traffic and Roadside Data Archival	The center shall record the status about the imported traffic and roadside data.
NMDOT TIMS	Traffic and Roadside Data Archival	The center shall use the status information to adjust the collection of traffic and roadside data.
NMDOT TIMS	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT TIMS	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT TIMS	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT TIMS	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT TIMS	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT TIMS	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall collect data to be archived from one or more data sources.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall perform quality checks on received data.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
NMDOT Traffic Safety Division Data System	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
NMDOT Traffic Safety Division Data System	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
NMDOT Traffic Safety Division Data System	On-Line Analysis and Mining	The center shall support the interface with Archive Data User Systems for requests for analysis of the archive data.
NMDOT Traffic Safety Division Data System	On-Line Analysis and Mining	The center shall provide the capability to perform activities such as data mining, data fusion, summarizations, aggregations, and recreation from archive data. This may include multidimensional analysis, selective summarization and expansion of data details, and many other advanced analysis services.
NMDOT Traffic Safety Division Data System	On-Line Analysis and Mining	The center shall receive the user's systems requests and develop the request to retrieve the data from the archive.
NMDOT Traffic Safety Division Data System	On-Line Analysis and Mining	The center shall respond to users systems requests for a catalog of the archived data analysis products available.
NMDOT Traffic Safety Division Data System	On-Line Analysis and Mining	For archive analysis and data mining products requiring financial payment the center shall process the financial requests and manage an interface to a Financial Institution.
NMDOT Traffic Safety Division Data System	Virtual Data Warehouse Services	The center shall provide capabilities to access "in-place" data from geographically dispersed archives. These capabilities may include analysis, data fusion, or data mining.
NMDOT Traffic Safety Division Data System	Virtual Data Warehouse Services	The center shall coordinate information exchange with a local data warehouse.
NMDOT Traffic Safety Division Data System	Virtual Data Warehouse Services	The center shall provide the specialized publishing, directory services, and transaction management functions associated with coordinating remote archives.
NMDOT Traffic Safety Division Data System	Virtual Data Warehouse Services	The center shall support the collection of archived data from other archives on an as-needed basis. (This minimizes the need to duplicate the comprehensive set of data from the remote archives in the local data warehouse.)
NMDOT Traffic Safety Division Data System	Virtual Data Warehouse Services	The center shall use data collected from different archives to build a set of global schema including the data archive definitions for the local archive plus any archives known to the local archive.
NMDOT Traffic Safety Division Data System	Virtual Data Warehouse Services	The center shall provide the local archived data schema to other archive systems.
NMDOT Traffic Signals	Roadway Signal Controls	The field element shall control traffic signals at intersections and on main highways for urban and rural areas, under center control.
NMDOT Traffic Signals	Roadway Signal Controls	The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner.
NMDOT Traffic Signals	Roadway Signal Controls	The field element shall provide the capability to notify the traffic management center that a pedestrian has requested right-of-way and when the request was or will be granted (request for right-of-way).

Element Name	Equipment Package Name	Requirement
NMDOT Traffic Signals	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from the indicator control information.
NMDOT Traffic Signals	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions.
NMDOT Traffic Signals	Roadway Signal Controls	The field element shall return traffic signal controller operational status to the controlling center.
NMDOT Traffic Signals	Roadway Signal Controls	The field element shall return traffic signal controller fault data to the maintenance center for repair.
NMDOT Traffic Signals	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings.
NMDOT Traffic Signals	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) priority requests from transit vehicles at intersections, pedestrian crossings, and multimodal crossings.
NMDOT Traffic Signals	Roadway Signal Priority	The field element shall notify controlling traffic management center and maintenance center that the signal timing has changed based on a signal preemption/priority request to help those centers determine whether a fault detected at the signal is a true malfunction or due to a signal override.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI).
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall receive track status from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and whether a train is approaching.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall control the dynamic message signs (DMS) in the vicinity of a highway-rail intersection (HRI) to advise drivers, cyclists, and pedestrians of approaching trains.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall close the highway-rail intersection (HRI) when a train is approaching using gates, lights/signs, barriers, and traffic control signals.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection.
NMDOT Traffic Signals	Standard Rail Crossing	The field element shall forward rail traffic advisories received from the Wayside Equipment to the traffic management center.
NMDOT Traveler Information Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
NMDOT Traveler Information Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
NMDOT Traveler Information Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate weather information to travelers.
NMDOT Traveler Information Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
NMDOT Traveler Information Website	Basic Information Broadcast	The center shall provide the capability to support requests from the media for traffic and incident data.
NMDOT Traveler Information Website	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
NMDOT Traveler Information Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes upon request.
NMDOT Traveler Information Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities upon request.
NMDOT Traveler Information Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized weather information to travelers upon request.
NMDOT Traveler Information Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized event information to travelers upon request.
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall provide the capability to process voice-formatted requests for traveler information from a traveler telephone information system, and return the information in the requested format.
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall provide the capability to process traveler information requests from a traveler telephone information system.
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall collect and provide information on traffic conditions in the requested voice format and for the requested location.
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall collect and provide work zone and roadway maintenance information in the requested voice format and for the requested location.
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall collect and provide roadway environment conditions information in the requested voice format and for the requested location.
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall collect and provide weather and event information in the requested voice format and for the requested location.
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall provide the capability to support both specific caller requests as well as bulk upload of regional traveler information.

Element Name	Equipment Package Name	Requirement
NMDOT Traveler Information Website	Traveler Telephone Information	The center shall receive and forward region-specific wide-area alert and advisory information to the traveler telephone information system, including major emergencies such as a natural or man-made disaster, civil emergency, child abductions, severe weather watches and warnings, military activities, and law enforcement warnings.
NMDOT Variable Speed Limit Signs	Roadway Freeway Control	The field element shall provide adjustable speed limits under center control.
NMDOT Variable Speed Limit Signs	Roadway Freeway Control	The field element shall return operational status to the controlling center.
NMDOT Variable Speed Limit Signs	Roadway Freeway Control	The field element shall return and lane control fault data to the maintenance center for repair.
NMDOT Welcome Center/Tourist Info Plazas	Remote Basic Information Reception	The public interface for travelers shall receive traffic information from a center and present it to the traveler.
NMDOT Welcome Center/Tourist Info Plazas	Remote Basic Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler.
NMDOT Welcome Center/Tourist Info Plazas	Remote Basic Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler.
NMDOT Welcome Center/Tourist Info Plazas	Remote Basic Information Reception	This public interface for travelers shall receive evacuation information from a center and present it to the traveler.
NMDOT Welcome Center/Tourist Info Plazas	Remote Basic Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
NMDOT Welcome Center/Tourist Info Plazas	Remote Basic Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
NMDOT Welcome Center/Tourist Info Plazas	Remote Basic Information Reception	The public interface for travelers shall be able to store frequently requested data.
NMDOT Welcome Center/Tourist Info Plazas	Remote Interactive Information Reception	The public interface for travelers shall receive traffic information from a center and present it to the traveler upon request.
NMDOT Welcome Center/Tourist Info Plazas	Remote Interactive Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler upon request.
NMDOT Welcome Center/Tourist Info Plazas	Remote Interactive Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler upon request.
NMDOT Welcome Center/Tourist Info Plazas	Remote Interactive Information Reception	The public interface for travelers shall receive evacuation information from a center and present it to the traveler.
NMDOT Welcome Center/Tourist Info Plazas	Remote Interactive Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
NMDOT Welcome Center/Tourist Info Plazas	Remote Interactive Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
NMDOT Welcome Center/Tourist Info Plazas	Remote Interactive Information Reception	The public interface for travelers shall be able to store frequently requested data.
NMDOT Welcome Center/Tourist Info Plazas	Remote Transit Information Services	The public interface for travelers shall collect and provide real-time travel-related information at transit stops, multi-modal transfer points, and other public transportation areas.
NMDOT Welcome Center/Tourist Info Plazas	Remote Transit Information Services	The public interface for travelers shall collect and present to the transit traveler information on transit routes, schedules, and real-time schedule adherence.
NMDOT Welcome Center/Tourist Info Plazas	Remote Transit Information Services	The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users.
NMDOT Welcome Center/Tourist Info Plazas	Remote Transit Information Services	The public interface for travelers shall present information to the traveler in a form suitable for travelers with physical disabilities.
NMDOT WIM Sensors	Roadway Data Collection	The field element shall collect sensor status and sensor faults from roadside equipment and send it along with the recorded data to a center for archival.
NMDOT WIM Sensors	Roadway Data Collection	The field element shall measure the weight of vehilces moving over the sensor.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall include work zone intrusion detection devices that detect when a vehicle has intruded upon the boundary of a work zone, under center control.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall include work zone intrusion detection devices that detect when crew workers have crossed the boundary between the work zone and vehicle traffic, under center control.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall include work zone intrusion alerting devices that alert crew workers of a work zone emergency or safety issue such as the intrusion of a vehicle into the work zone area or movement of field crew into the travel lanes.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall include work zone intrusion alerting devices that notify crew via maintenance vehicles of a work zone emergency or safety issue such as the intrusion of a vehicle into the work zone area or movement of field crew into the travel lanes.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall include work zone intrusion alerting devices that alert drivers that they have intruded upon the perimeter of the work zone, or are about to do so; may provide alerts to drivers directly or via in-vehicle signing.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall provide operational status for the work zone intrusion detection devices to the maintenance center.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall provide operational status for the work zone intrusion alerting devices to the maintenance center.
NMDOT Work Zone Equipment	Roadway Work Zone Safety	The field element shall provide fault data for the work zone intrusion alerting devices to the maintenance center for repair.
NMDOT Work Zone Equipment	Roadway Work Zone Traffic Control	The field element shall collect, process, and send work zone images to the center for further analysis and distribution, under center control.
NMDOT Work Zone Equipment	Roadway Work Zone Traffic Control	Under traffic and maintenance center control, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around the work zone through which they are currently passing.
NMDOT Work Zone Equipment	Roadway Work Zone Traffic Control	The field element shall provide operational status for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center.

Element Name	Equipment Package Name	Requirement
NMDOT Work Zone Equipment	Roadway Work Zone Traffic Control	The field element shall provide fault data for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center for repair.
North Central RTD Operations	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
North Central RTD Operations	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
North Central RTD Operations	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
North Central RTD Operations	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
North Central RTD Operations	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
North Central RTD Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
North Central RTD Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
North Central RTD Operations	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
North Central RTD Operations	Center Secure Area Surveillance	The center shall identify potential security threats based on collected security surveillance data.
North Central RTD Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
North Central RTD Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall be capable of establishing emergency fare structures to override all other fares during disasters, states of emergency, or evacuations.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall maintain a list of invalid traveler credit identities, or bad tag lists that can be forwarded to transit vehicles and transit stops or stations.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities.
North Central RTD Operations	Transit Center Fare and Load Management	The center shall provide transit fare information to other centers, including traveler information providers upon request.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall dispatch fixed route or flexible route transit vehicles
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall collect transit operational data for use in the generation of routes and schedules.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall provide instructions or corrective actions to the transit vehicle operators based upon operational needs.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall manage large deviations of individual transit vehicles, deviations in rural areas, and deviations of large numbers of vehicles.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall generate the necessary corrective actions which may involve more than the vehicles concerned and more far reaching action, such as, the introduction of extra vehicles, wide area signal priority by traffic management, the premature termination of some services, etc.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
North Central RTD Operations	Transit Center Fixed-Route Operations	The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services.
North Central RTD Operations	Transit Center Information Services	The center shall provide travelers using public transportation with traffic and advisory information upon request. Such information may include transit routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, and special events.
North Central RTD Operations	Transit Center Information Services	The center shall provide transit information to the media including details of deviations from schedule of regular transit services.
North Central RTD Operations	Transit Center Information Services	The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems.
North Central RTD Operations	Transit Center Information Services	The center shall provide transit service information to traveler information service providers including routes, schedules, schedule adherence, and fare information as well as transit service information during evacuation.

Element Name	Equipment Package Name	Requirement
North Central RTD Operations	Transit Center Information Services	The center shall broadcast transit advisory data, including alerts and advisories pertaining to major emergencies, or man made disasters.
North Central RTD Operations	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.
North Central RTD Operations	Transit Center Multi-Modal Coordination	The center shall share transfer cluster and transfer point information with multimodal transportation service providers, other transit agencies, and traveler information service providers. A transfer cluster is a collection of stops, stations, or terminals where transfers can be made conveniently.
North Central RTD Operations	Transit Center Multi-Modal Coordination	The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies.
North Central RTD Operations	Transit Center Paratransit Operations	The center shall process trip requests for demand responsive transit services, i.e. paratransit. Sources of the requests may include traveler information service providers.
North Central RTD Operations	Transit Center Paratransit Operations	The center shall monitor the operational status of the demand response vehicles including status of passenger pick-up and drop-off.
North Central RTD Operations	Transit Center Paratransit Operations	The center shall generate demand response transit (including paratransit) routes and schedules based on such factors as parameters input by the system operator, what other demand responsive transit schedules have been planned, the availability and location of vehicles, the relevance of any fixed transit routes and schedules, and road network information.
North Central RTD Operations	Transit Center Paratransit Operations	The center shall dispatch demand response (paratransit) transit vehicles.
North Central RTD Operations	Transit Center Paratransit Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
North Central RTD Operations	Transit Center Paratransit Operations	The center shall disseminate up-to-date schedules and route information to other centers for demand responsive transit services (paratransit).
North Central RTD Operations	Transit Center Security	The center shall monitor transit vehicle operational data to determine if the transit vehicle is off-route and assess whether a security incident is occurring.
North Central RTD Operations	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
North Central RTD Operations	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
North Central RTD Operations	Transit Center Security	The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.
North Central RTD Operations	Transit Center Security	The center shall send wide-area alert information to travelers (on-board transit vehicles or at stations/stops) and transit vehicle operators.
North Central RTD Operations	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
North Central RTD Operations	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
North Central RTD Operations	Transit Center Vehicle Tracking	The center shall support an interface with a map update provider, or other appropriate data sources, through which updates of digitized map data can be obtained and used as a background for transit tracking and dispatch.
North Central RTD Operations	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
North Central RTD Operations	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
North Central RTD Operations	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
North Central RTD Operations	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
North Central RTD Operations	Transit Data Collection	The center shall be able to produce sample products of the data available.
North Central RTD Operations	Transit Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to more effectively manage transit operations.
North Central RTD Operations	Transit Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers.
North Central RTD Operations	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
North Central RTD Operations	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.
North Central RTD Operations	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
North Central RTD Operations	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
North Central RTD Operations	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
North Central RTD Operations	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
North Central RTD Operations	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
North Central RTD Operations	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
North Central RTD Operations	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
North Central RTD Operations	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.

Element Name	Equipment Package Name	Requirement
North Central RTD Operations	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
North Central RTD Operations	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
North Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies.
North Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments.
North Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
North Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions.
North Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall receive transit route information for its assigned route including transit service instructions, traffic information, road conditions, and other information for the operator.
North Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall use the route information and its current location to determine the deviation from the predetermined schedule.
North Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall calculate the estimated times of arrival (ETA) at transit stops.
North Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall determine scenarios to correct the schedule deviation.
North Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall provide the schedule deviations and instructions for schedule corrections to the transit vehicle operator if the deviation is small, or the transit vehicle is operating in an urban area.
North Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall send the schedule deviation and estimated arrival time information to the center.
North Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall support the operations of a flexible route service. This may include requests for route deviations that would then lead to schedule corrective actions.
North Central RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
North Central RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
North Central RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.
North Central RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall manage data input to sensor(s) on-board a transit vehicle to determine the vehicle's availability for use in demand responsive and flexible-route transit services based on identity, type, and passenger capacity.
North Central RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall receive the status of demand responsive or flexible-route transit schedules and passenger loading from the transit vehicle operator.
North Central RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall provide the transit vehicle operator instructions about the demand responsive or flexible-route transit schedule that has been confirmed from the center.
North Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying.
North Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall determine the traveler's travel routing based on the transit vehicle's current location and the traveler's destination.
North Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information.
North Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall have access to the complete range of transit services (routes and schedules) that are available to the traveler.
North Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall include a database on-board the transit vehicle for use in fare processing from which the fares for all possible trips within the transit operational network can be determined.
North Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall support an emergency fare structure overriding all other fares that can be activated during disasters, states of emergency or evacuations.
North Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide passenger loading and fare statistics data to the center.
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle's current location.
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance and sensor equipment status and fault indications.
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.

Element Name	Equipment Package Name	Requirement
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall be capable of receiving an emergency message for broadcast to the travelers or to the transit vehicle operator.
North Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
North Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
North Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
North Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
North Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
North Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
North Central RTD Transit Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
North Central RTD Transit Website	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
North Central RTD Transit Website	Infrastructure Provided Trip Planning	The center shall provide the capability to provide specific pre-trip and enroute directions to travelers (and drivers), including costs, arrival times, and transfer points.
North Central RTD Transit Website	Infrastructure Provided Trip Planning	The center shall support on-line route guidance for travelers using personal devices (such as PDAs).
North Central RTD Transit Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on transit services, including fares, schedules, and requirements for travelers with special needs.
North Central RTD Transit Website	Infrastructure Provided Trip Planning	The center shall generate trips based on the use of more than one mode of transport.
North Central RTD Transit Website	Infrastructure Provided Trip Planning	The center shall provide the capability for the traveler to confirm the proposed trip plan.
Private Ambulance Provider Dispatch-Statewide	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
Private Ambulance Provider Dispatch-Statewide	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
Private Ambulance Provider Dispatch-Statewide	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
Private Ambulance Provider Dispatch-Statewide	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
Private Ambulance Provider Dispatch-Statewide	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
Private Ambulance Provider Dispatch-Statewide	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Private Ambulance Provider Dispatch-Statewide	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
Private Ambulance Provider Dispatch-Statewide	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
Private Ambulance Provider Dispatch-Statewide	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Private Ambulance Provider Dispatch-Statewide	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Private Ambulance Provider Dispatch-Statewide	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Private Ambulance Provider Dispatch-Statewide	Emergency Routing	The center shall calculate emergency vehicle routes, under center personnel control, based on information from traffic management and maintenance centers.
Private Ambulance Provider Dispatch-Statewide	Emergency Routing	Once the route is calculated the route shall be provided to the dispatch function.
Private Ambulance Provider Dispatch-Statewide	Emergency Routing	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Private Ambulance Provider Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
Private Ambulance Provider Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
Private Ambulance Provider Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
Private Ambulance Provider Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
Private Ambulance Provider Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
Private Ambulance Provider Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
Private Ambulance Provider Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
Private HAZMAT Response Providers	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.

Element Name	Equipment Package Name	Requirement
Private HAZMAT Response Providers	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
Private HAZMAT Response Providers	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
Private HAZMAT Response Providers	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
Private HAZMAT Response Providers	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
Private HAZMAT Response Providers	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Private HAZMAT Response Providers	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
Private HAZMAT Response Providers	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
Private HAZMAT Response Providers	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Private HAZMAT Response Providers	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Private HAZMAT Response Providers	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Private HAZMAT Response Providers	Emergency Response Management	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Private Sector Traveler Information Services	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
Private Sector Traveler Information Services	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
Private Sector Traveler Information Services	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
Private Sector Traveler Information Services	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
Private Sector Traveler Information Services	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized traffic and highway condition information to travelers, including incident information, detours and road closures, recommended routes, and current speeds on specific routes upon request.
Private Sector Traveler Information Services	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities upon request.
Private Sector Traveler Information Services	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request.
Private Sector Traveler Information Services	Interactive Infrastructure Information	The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier.
Private Sector Traveler Information Services	Interactive Infrastructure Information	The center shall provide the capability for a system operator to control the type and update frequency of traveler information.
Private Tow/Wrecker Dispatch	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
Private Tow/Wrecker Dispatch	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
Private Tow/Wrecker Dispatch	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
Private Tow/Wrecker Dispatch	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
Private Tow/Wrecker Dispatch	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
Private Tow/Wrecker Dispatch	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Private Tow/Wrecker Dispatch	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
Private Tow/Wrecker Dispatch	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Private Tow/Wrecker Dispatch	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Private Tow/Wrecker Dispatch	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Private Tow/Wrecker Dispatch	Emergency Response Management	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Private Tow/Wrecker Dispatch	Emergency Response Management	The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations.
Private Tow/Wrecker Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
Private Tow/Wrecker Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
Private Tow/Wrecker Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
Private Tow/Wrecker Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.

Element Name	Equipment Package Name	Requirement
Private Tow/Wrecker Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
Private Tow/Wrecker Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
Private Tow/Wrecker Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
Private Travelers Personal Computing Devices	Personal Basic Information Reception	The personal traveler interface shall receive traffic information from a center and present it to the traveler.
Private Travelers Personal Computing Devices	Personal Basic Information Reception	The personal traveler interface shall receive transit information from a center and present it to the traveler.
Private Travelers Personal Computing Devices	Personal Basic Information Reception	The personal traveler interface shall receive event information from a center and present it to the traveler.
Private Travelers Personal Computing Devices	Personal Basic Information Reception	The personal traveler interface shall receive evacuation information from a center and present it to the traveler.
Private Travelers Personal Computing Devices	Personal Basic Information Reception	The personal traveler interface shall receive wide-area alerts and present it to the traveler.
Private Travelers Personal Computing Devices	Personal Basic Information Reception	The personal traveler interface shall provide the capability for digitized map data to act as the background to the information presented to the traveler.
Private Travelers Personal Computing Devices	Personal Basic Information Reception	The personal traveler interface shall present information to the traveler in audible or visual forms, consistent with a personal device.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall receive traffic information from a center and present it to the traveler upon request.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall receive transit information from a center and present it to the traveler upon request.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall receive event information from a center and present it to the traveler upon request.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall receive evacuation information from a center and present it to the traveler.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall support traveler input in audio or manual form.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall present information to the traveler in audible or visual forms consistent with a personal device, and suitable for travelers with hearing and vision physical disabilities.
Private Travelers Personal Computing Devices	Personal Interactive Information Reception	The personal traveler interface shall be able to store frequently requested or used data, including the traveler's identity, home and work locations, etc.
Private Vehicles	Interactive Vehicle Reception	The vehicle shall receive formatted traffic and travel advisories from a center and present them to the driver upon request.
Private Vehicles	Interactive Vehicle Reception	The transit vehicle shall receive formatted traffic and travel advisories from a center and present them to the transit vehicle traveler upon request.
Private Vehicles	Interactive Vehicle Reception	The vehicle shall receive event information from a center and present it to the driver upon request.
Rail Runner Commuter Rail Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
Rail Runner Commuter Rail Website	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
Rail Runner Commuter Rail Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request.
Rail Runner Commuter Rail Website	Interactive Infrastructure Information	The center shall provide all traveler information based on the traveler's current location or a specific location identified by the traveler, and filter or customize the provided information accordingly.
Rail Runner Commuter Rail Website	Interactive Infrastructure Information	The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier.
Rail Runner Commuter Rail Website	Interactive Infrastructure Information	The center shall provide the capability for a system operator to control the type and update frequency of traveler information.
Rail Runner Operations	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from travelers in secure areas (such as transit stops, rest areas, park and ride lots, modal interchange facilities).
Rail Runner Operations	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
Rail Runner Operations	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
Rail Runner Operations	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
Rail Runner Operations	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
Rail Runner Operations	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
Rail Runner Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.

Element Name	Equipment Package Name	Requirement
Rail Runner Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
Rail Runner Operations	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
Rail Runner Operations	Center Secure Area Surveillance	The center shall identify potential security threats based on collected security surveillance data.
Rail Runner Operations	Center Secure Area Surveillance	The center shall verify potential security threats by correlating security surveillance data from multiple sources.
Rail Runner Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
Rail Runner Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
Rail Runner Operations	Center Secure Area Surveillance	The center shall respond to control data from center personnel regarding security surveillance data collection, processing, threat detection, and image matching.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall collect transit operational data for use in the generation of routes and schedules.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall provide instructions or corrective actions to the transit vehicle operators based upon operational needs.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall manage large deviations of individual transit vehicles, deviations in rural areas, and deviations of large numbers of vehicles.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall generate the necessary corrective actions which may involve more than the vehicles concerned and more far reaching action, such as, the introduction of extra vehicles, wide area signal priority by traffic management, the premature termination of some services, etc.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall dispatch rail cars.
Rail Runner Operations	Transit Center Fixed-Route Operations	The center shall disseminate up-to-date schedules and route information to other centers for rail services.
Rail Runner Operations	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.
Rail Runner Operations	Transit Center Multi-Modal Coordination	The center shall share transfer cluster and transfer point information with multimodal transportation service providers, other transit agencies, and traveler information service providers. A transfer cluster is a collection of stops, stations, or terminals where transfers can be made conveniently.
Rail Runner Operations	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
Rail Runner Operations	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
Rail Runner Operations	Transit Center Security	The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.
Rail Runner Operations	Transit Center Security	The center shall send wide-area alert information to travelers (on-board transit vehicles or at stations/stops) and transit vehicle operators.
Rail Runner Operations	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
Rail Runner Operations	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
Rail Runner Operations	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
Rail Runner Operations	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
Rail Runner Operations	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
Rail Runner Operations	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Rail Runner Operations	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
Rail Runner Operations	Transit Data Collection	The center shall be able to produce sample products of the data available.
Rail Runner Operations	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
Rail Runner Operations	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.
Rail Runner Operations	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
Rail Runner Operations	Transit Evacuation Support	The center shall coordinate the use of rail assets during an evacuation, supporting evacuation of those with special needs and the general population.
Rail Runner Operations	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
Rail Runner Operations	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
Rail Runner Operations	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.

Element Name	Equipment Package Name	Requirement
Rail Runner Operations	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
Rail Runner Operations	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
Rail Runner Operations	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
Rail Runner Operations	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
Rail Runner Operations	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
Rail Runner Operations	Transit Vehicle Operator Scheduling	The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies.
Rail Runner Operations	Transit Vehicle Operator Scheduling	The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments.
Rail Runner Operations	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
Rail Runner Operations	Transit Vehicle Operator Scheduling	The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions.
Rail Runner Transit Rail Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall receive transit route information for its assigned route including transit service instructions, traffic information, road conditions, and other information for the operator.
Rail Runner Transit Rail Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall use the route information and its current location to determine the deviation from the predetermined schedule.
Rail Runner Transit Rail Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall calculate the estimated times of arrival (ETA) at transit stops.
Rail Runner Transit Rail Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall determine scenarios to correct the schedule deviation.
Rail Runner Transit Rail Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall provide the schedule deviations and instructions for schedule corrections to the transit vehicle operator if the deviation is small, or the transit vehicle is operating in an urban area.
Rail Runner Transit Rail Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall send the schedule deviation and estimated arrival time information to the center.
Rail Runner Transit Rail Vehicles	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
Rail Runner Transit Rail Vehicles	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle’s current location.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed sensor information to the center along with the vehicle’s current location.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance and sensor equipment status and fault indications.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall be capable of receiving an emergency message for broadcast to the travelers or to the transit vehicle operator.
Rail Runner Transit Rail Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
Rail Runner Transit Rail Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
Rail Runner Transit Rail Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
Rail Runner Transit Rail Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
Rail Runner Transit Rail Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall support the interface to the Emergency Telecommunications System (e.g. 911 or 7-digit call routing) to receive emergency notification information and provide it to the emergency system operator.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator.

Element Name	Equipment Package Name	Requirement
Regional Emergency Communications Center	Emergency Call-Taking	The center shall receive emergency call information from mayday service providers and present the possible incident information to the emergency system operator.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall update the incident information log once the emergency system operator has verified the incident.
Regional Emergency Communications Center	Emergency Call-Taking	The center shall provide the capability for digitized map data to act as the background to the emergency information presented to the emergency system operator.
Regional Emergency Communications Center	Emergency Commercial Vehicle Response	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
Regional Emergency Communications Center	Emergency Data Collection	The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data.
Regional Emergency Communications Center	Emergency Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Regional Emergency Communications Center	Emergency Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself.
Regional Emergency Communications Center	Emergency Data Collection	The center shall be able to produce sample products of the data available.
Regional Emergency Communications Center	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
Regional Emergency Communications Center	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
Regional Emergency Communications Center	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
Regional Emergency Communications Center	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
Regional Emergency Communications Center	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
Regional Emergency Communications Center	Emergency Dispatch	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Regional Emergency Communications Center	Emergency Dispatch	The center shall receive traffic images to support dispatch of emergency vehicles.
Regional Emergency Communications Center	Emergency Dispatch	The center shall provide the capability to request remote control of traffic surveillance devices
Regional Emergency Communications Center	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
Regional Emergency Communications Center	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
Regional Emergency Communications Center	Emergency Environmental Monitoring	The center shall collect current road and weather information from roadway maintenance operations.
Regional Emergency Communications Center	Emergency Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to support incident management.
Regional Emergency Communications Center	Emergency Environmental Monitoring	The center shall present the current and forecast road and weather information to the emergency system operator.
Regional Emergency Communications Center	Emergency Environmental Monitoring	The center shall provide aggregated or processed environmental probe information from its fleet of emergency vehicles to traffic management and maintenance centers.
Regional Emergency Communications Center	Emergency Evacuation Support	The center shall develop and exchange evacuation plans with allied agencies prior to the occurrence of a disaster.
Regional Emergency Communications Center	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
Regional Emergency Communications Center	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Regional Emergency Communications Center	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Regional Emergency Communications Center	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Regional Emergency Communications Center	Emergency Response Management	The center shall receive event scheduling information from Event Promoters.
Regional Emergency Communications Center	Emergency Response Management	The center shall support remote control of field equipment normally under control of the traffic management center including traffic signals, dynamic message signs, gates, and barriers.
Regional Emergency Communications Center	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
Regional Emergency Communications Center	Emergency Response Management	The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations.

Element Name	Equipment Package Name	Requirement
Regional Emergency Communications Center	Emergency Response Management	The center shall assimilate the status of the transit, traffic, rail, maintenance, and other emergency center services and systems to create an overall transportation system status, and disseminate to each of these centers and the traveling public via traveler information providers.
Regional Emergency Communications Center	Emergency Response Management	The center shall provide information to the media concerning the status of an emergency response.
Regional Emergency Communications Center	Emergency Response Management	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Regional Emergency Communications Center	Emergency Response Management	The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations.
Regional Emergency Communications Center	Emergency Routing	The center shall collect current traffic and road condition information from traffic management centers for emergency vehicle route calculation.
Regional Emergency Communications Center	Emergency Routing	The center shall receive inputs from traffic management and maintenance centers on the location and status of traffic control equipment and work zones along potential emergency routes.
Regional Emergency Communications Center	Emergency Routing	The center shall receive status information from care facilities to determine the appropriate facility and its location.
Regional Emergency Communications Center	Emergency Routing	The center shall receive asset restriction information from maintenance centers to support the dispatching of appropriate emergency resources.
Regional Emergency Communications Center	Emergency Routing	The center shall calculate emergency vehicle routes, under center personnel control, based on information from traffic management and maintenance centers.
Regional Emergency Communications Center	Emergency Routing	The center shall request and receive ingress and egress routes or other specialized emergency access routes from the traffic management center.
Regional Emergency Communications Center	Emergency Routing	Once the route is calculated the route shall be provided to the dispatch function.
Regional Emergency Communications Center	Emergency Routing	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Regional Emergency Communications Center	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
Regional Emergency Communications Center	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
Regional Emergency Communications Center	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
Regional Emergency Communications Center	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall provide the capability to correlate alerts and advisories, incident information, and security sensor and surveillance data.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to traffic management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to transit management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to traveler information service providers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to maintenance centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall broadcast wide-area alerts and advisories to other emergency management centers for emergency situations such as severe weather events, civil emergencies, child abduction (AMBER alert system), military activities, and other situations that pose a threat to life and property.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall process status information from each of the centers that have been sent the wide-area alert.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall coordinate the broadcast of wide-area alerts and advisories with other emergency management centers.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall receive incident information from other transportation management centers to support the early warning system.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall present the alert and advisory information and the status of the actions taken in response to the alert by the other centers to the emergency system operator as received from other system inputs.
Regional Emergency Operations Center (EOC)	Emergency Early Warning System	The center shall support the entry of alert and advisory information directly from the emergency system operator.
Regional Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
Regional Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall collect current road and weather information from roadway maintenance operations.
Regional Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to support incident management.
Regional Emergency Operations Center (EOC)	Emergency Environmental Monitoring	The center shall present the current and forecast road and weather information to the emergency system operator.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall manage inter-agency coordination of evacuation operations, from initial planning through the evacuation process and reentry.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall develop and exchange evacuation plans with allied agencies prior to the occurrence of a disaster.

Element Name	Equipment Package Name	Requirement
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall provide an interface to the emergency system operator to enter evacuation plans and procedures and present the operator with other agencies' plans.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall coordinate evacuation destinations and shelter needs with shelter providers (e.g., the American Red Cross) in the region.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall provide evacuation information to traffic, transit, maintenance and construction, rail operations, and other emergency management centers as needed.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall request resources from transit agencies as needed to support the evacuation.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall request traffic management agencies to implement special traffic control strategies and to control evacuation traffic, including traffic on local streets and arterials as well as the major evacuation routes.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall provide traveler information systems with evacuation guidance including basic information to assist potential evacuees in determining whether evacuation is necessary and when it is safe to return.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall monitor the progress or status of the evacuation once it begins and exchange tactical plans, prepared during the incident, with allied agencies.
Regional Emergency Operations Center (EOC)	Emergency Evacuation Support	The center shall monitor the progress of the reentry process.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide strategic emergency response capabilities such as that of an Emergency Operations Center for large-scale incidents and disasters.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall manage coordinated inter-agency responses to and recovery from large-scale emergencies. Such agencies include traffic management, transit, maintenance and construction management, rail operations, and other emergency management agencies.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall receive event scheduling information from Event Promoters.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall support remote control of field equipment normally under control of the traffic management center including traffic signals, dynamic message signs, gates, and barriers.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability to request transit resource availability from transit centers for use during disaster and evacuation operations.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall assimilate the status of the transit, traffic, rail, maintenance, and other emergency center services and systems to create an overall transportation system status, and disseminate to each of these centers and the traveling public via traveler information providers.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide information to the media concerning the status of an emergency response.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability for digitized map data to act as the background to the information presented to the emergency system operator.
Regional Emergency Operations Center (EOC)	Emergency Response Management	The center shall provide the capability for center personnel to provide inputs to the management of incidents, disasters and evacuations.
Regional Emergency Operations Center (EOC)	Incident Command	The center shall provide tactical decision support, resource coordination, and communications integration for Incident Commands that are established by first responders to support local management of an incident.
Regional Emergency Operations Center (EOC)	Incident Command	The center shall provide incident command communications with public safety, emergency management, transportation, and other allied response agency centers.
Regional Emergency Operations Center (EOC)	Incident Command	The center shall track and maintain resource information and action plans pertaining to the incident command.
Regional Emergency Operations Center (EOC)	Incident Command	The center shall share incident command information with other public safety agencies including resource deployment status, hazardous material information, rail incident information, evacuation advice as well as traffic, road, and weather conditions.
Regional Emergency Operations Center (EOC)	Incident Command	The center shall assess the status of responding emergency vehicles as part of an incident command.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	This public interface for travelers shall receive evacuation information from a center and present it to the traveler.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	The public interface for travelers shall receive wide-area alerts and present it to the traveler.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	The public interface for travelers shall provide the capability for digitized map data to act as the background to the information presented to the traveler.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
Regional Transit Kiosks-Statewide	Remote Basic Information Reception	The public interface for travelers shall be able to store frequently requested data.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler upon request.

Element Name	Equipment Package Name	Requirement
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler upon request.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall receive evacuation information from a center and present it to the traveler.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall receive wide-area alerts and present it to the traveler.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall provide digitized map data to act as the background to the information presented to the traveler.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
Regional Transit Kiosks-Statewide	Remote Interactive Information Reception	The public interface for travelers shall be able to store frequently requested data.
Regional Transit Kiosks-Statewide	Remote Transit Fare Management	The public interface for travelers shall accept and process current transit passenger fare collection information.
Regional Transit Kiosks-Statewide	Remote Transit Fare Management	The public interface for travelers shall calculate a fare based on the origin and destination provided by the traveler, in conjunction with transit routing, transit fare category, and transit user history.
Regional Transit Kiosks-Statewide	Remote Transit Fare Management	The public interface for travelers shall provide an interface to a transit user traveler card in support of payment for transit fares, tolls, and/or parking lot charges. The stored credit value data from the card shall be collected and updated based on the fare or other charges, or the credit identity shall be collected.
Regional Transit Kiosks-Statewide	Remote Transit Fare Management	The public interface for travelers shall provide information to the center for financial authorization and transaction processing.
Regional Transit Kiosks-Statewide	Remote Transit Fare Management	The public interface for travelers shall determine the routing based on the traveler's destination and the location of the closest transit stop from which a route request is being made.
Regional Transit Kiosks-Statewide	Remote Transit Fare Management	The public interface for travelers shall create passenger loading and fare statistics data based upon data collected at a transit stop.
Regional Transit Kiosks-Statewide	Remote Transit Fare Management	The public interface for travelers shall present information to the traveler in a form suitable for travelers with physical disabilities.
Regional Transit Kiosks-Statewide	Remote Transit Information Services	The public interface for travelers shall collect and provide real-time travel-related information at transit stops, multi-modal transfer points, and other public transportation areas.
Regional Transit Kiosks-Statewide	Remote Transit Information Services	The public interface for travelers shall collect and present to the transit traveler information on transit routes, schedules, and real-time schedule adherence.
Regional Transit Kiosks-Statewide	Remote Transit Information Services	The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users.
Regional Transit Kiosks-Statewide	Remote Transit Information Services	The public interface for travelers shall present information to the traveler in a form suitable for travelers with physical disabilities.
Regional Transportation Centers	Remote Basic Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler.
Regional Transportation Centers	Remote Basic Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler.
Regional Transportation Centers	Remote Basic Information Reception	This public interface for travelers shall receive evacuation information from a center and present it to the traveler.
Regional Transportation Centers	Remote Basic Information Reception	The public interface for travelers shall receive wide-area alerts and present it to the traveler.
Regional Transportation Centers	Remote Basic Information Reception	The public interface for travelers shall provide the capability for digitized map data to act as the background to the information presented to the traveler.
Regional Transportation Centers	Remote Basic Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
Regional Transportation Centers	Remote Basic Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.
Regional Transportation Centers	Remote Basic Information Reception	The public interface for travelers shall be able to store frequently requested data.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall receive transit information from a center and present it to the traveler upon request.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall receive yellow pages information (such as lodging, restaurants, theaters, bicycle facilities, and other tourist activities) from a center and present it to the traveler upon request.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall receive event information from a center and present it to the traveler upon request.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall receive evacuation information from a center and present it to the traveler.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall receive wide-area alerts and present it to the traveler.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall base requests from the traveler on the traveler's current location or a specific location identified by the traveler, and filter the provided information accordingly.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall provide digitized map data to act as the background to the information presented to the traveler.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall support traveler input in audio or manual form.
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall present information to the traveler in audible or visual forms consistent with a kiosk, including those that are suitable for travelers with hearing or vision physical disabilities.

Element Name	Equipment Package Name	Requirement
Regional Transportation Centers	Remote Interactive Information Reception	The public interface for travelers shall be able to store frequently requested data.
Regional Transportation Centers	Remote Transit Information Services	The public interface for travelers shall collect and provide real-time travel-related information at transit stops, multi-modal transfer points, and other public transportation areas.
Regional Transportation Centers	Remote Transit Information Services	The public interface for travelers shall collect and present to the transit traveler information on transit routes, schedules, and real-time schedule adherence.
Regional Transportation Centers	Remote Transit Information Services	The public interface for travelers shall provide support for general annunciation and/or display of imminent arrival information and other information of general interest to transit users.
Regional Transportation Centers	Remote Transit Information Services	The public interface for travelers shall present information to the traveler in a form suitable for travelers with physical disabilities.
Regional Transportation Centers	Remote Traveler Security	The public interface for travelers shall provide the capability for a traveler to report an emergency and summon assistance from secure areas such as transit stops, transit stations, modal transfer facilities, rest stops, park-and-ride areas, travel information areas, and emergency pull off areas.
Regional Transportation Centers	Remote Traveler Security	When initiated by a traveler, the public interface for travelers shall forward a request for assistance to an emergency management function and acknowledge the request.
Regional Transportation Centers	Remote Traveler Security	The public interface for travelers shall provide the capability to broadcast a message to advise or warn a traveler.
Regional Transportation Centers	Remote Traveler Security	The public interface for travelers shall accept input and provide information to the traveler in a form suitable for travelers with physical disabilities.
Regional Transportation Centers	Traveler Secure Area Surveillance	The field element shall include video and/or audio surveillance of traveler secure areas including transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and traveler information centers).
Regional Transportation Centers	Traveler Secure Area Surveillance	The field element shall be remotely controlled by a center.
Regional Transportation Centers	Traveler Secure Area Surveillance	The field element shall provide equipment status and fault indication of surveillance equipment to a center.
Regional Transportation Centers	Traveler Secure Area Surveillance	The field element shall provide raw video or audio data.
Regional Transportation Centers	Traveler Secure Area Surveillance	The field element shall remotely process video and audio data and provide an indication of potential incidents or threats to a center.
Roadside Safety Inspection System	Citation and Accident Electronic Recording	The roadside check facility equipment shall record the results of roadside inspections carried using an inspector's hand held terminal interface.
Roadside Safety Inspection System	Citation and Accident Electronic Recording	The roadside check facility equipment shall provide an interface for an inspector to add comments to the inspection results.
Roadside Safety Inspection System	Citation and Accident Electronic Recording	The roadside check facility equipment shall forward results of the roadside inspections to the commercial vehicle administration center either as needed or on a periodic (e.g. basis). These reports include accident reports, violation notifications, citations, and daily site activity logs.
Roadside Safety Inspection System	Roadside Electronic Screening	The roadside check facility equipment shall detect the presence of commercial vehicles and freight equipment approaching a facility. Sensors can differentiate between different types of vehicles and determine the number of axles, gross vehicle weight, and the identification of the vehicle and its cargo.
Roadside Safety Inspection System	Roadside Electronic Screening	The roadside check facility equipment shall receive the credential and credentials status information (e.g. snapshots) from the commercial vehicle administration center to maintain an up to date list of which vehicles have been cleared (enrolled) to potentially pass through without stopping.
Roadside Safety Inspection System	Roadside Electronic Screening	The roadside check facility equipment shall request and input electronic screening data from the commercial vehicle's electronic tag data.
Roadside Safety Inspection System	Roadside Electronic Screening	The roadside check facility equipment shall send a pass/pull-in notification to the commercial vehicle and its driver based on the information received from the vehicle, the administration center, enforcement agencies, and the inspector. The message may be sent to the on-board equipment in the commercial vehicle or transmitted to the driver using equipment such as dynamic message signs, red-green lights, flashing signs, etc.
Roadside Safety Inspection System	Roadside Electronic Screening	The roadside check facility equipment shall send a record of daily activities at the facility including summaries of screening events and inspections to the commercial vehicle administration center.
Roadside Safety Inspection System	Roadside Safety and Security Inspection	The roadside check facility equipment shall receive information concerning commercial vehicles and freight equipment approaching a facility that are being pulled in for safety inspections.
Roadside Safety Inspection System	Roadside Safety and Security Inspection	The roadside check facility equipment shall receive the safety inspection and status information from the commercial vehicle administration center to include information such as safety ratings, inspection summaries, and violation summaries. Corresponds to the safety portion of CVISN "snapshots."
Roadside Safety Inspection System	Roadside Safety and Security Inspection	The roadside check facility equipment shall provide an interface to inspectors in the field to allow them to safety inspection data including overrides to the pull-in decisions made by the system.
Roadside Safety Inspection System	Roadside Safety and Security Inspection	The roadside check facility equipment shall request and input electronic safety data from the commercial vehicle's electronic tag data. This includes driver logs, on-board safety data, safety inspection records, commercial vehicle breach information, as well as freight equipment information.
Roadside Safety Inspection System	Roadside Safety and Security Inspection	The roadside check facility equipment shall send a pass/pull-in notification to the commercial vehicle and its driver based on the information received from the vehicle, the administration center, and the inspector. The message may be sent to the on-board equipment in the commercial vehicle or transmitted to the driver using equipment such as dynamic message signs, red-green lights, flashing signs, etc.
South Central RTD Operations	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from travelers in secure areas (such as transit stops, rest areas, park and ride lots, modal interchange facilities).
South Central RTD Operations	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
South Central RTD Operations	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.

Element Name	Equipment Package Name	Requirement
South Central RTD Operations	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
South Central RTD Operations	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
South Central RTD Operations	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
South Central RTD Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
South Central RTD Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
South Central RTD Operations	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
South Central RTD Operations	Center Secure Area Surveillance	The center shall identify potential security threats based on collected security surveillance data.
South Central RTD Operations	Center Secure Area Surveillance	The center shall verify potential security threats by correlating security surveillance data from multiple sources.
South Central RTD Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
South Central RTD Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall be capable of establishing emergency fare structures to override all other fares during disasters, states of emergency, or evacuations.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall maintain a list of invalid traveler credit identities, or bad tag lists that can be forwarded to transit vehicles and transit stops or stations.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities.
South Central RTD Operations	Transit Center Fare and Load Management	The center shall provide transit fare information to other centers, including traveler information providers upon request.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall generate transit routes and schedules based on such factors as parameters input by the system operator, road network conditions, operational data on current routes and schedules, and digitized map data.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall provide the interface to the system operator to control the generation of new routes and schedules (transit services) including the ability to review and update the parameters used by the routes and schedules generation processes and to initiate these processes
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall be able to generate special routes and schedules to support an incident, disaster, evacuation, or other emergency.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall dispatch fixed route or flexible route transit vehicles
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall collect transit operational data for use in the generation of routes and schedules.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall provide instructions or corrective actions to the transit vehicle operators based upon operational needs.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall manage large deviations of individual transit vehicles, deviations in rural areas, and deviations of large numbers of vehicles.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall generate the necessary corrective actions which may involve more than the vehicles concerned and more far reaching action, such as, the introduction of extra vehicles, wide area signal priority by traffic management, the premature termination of some services, etc.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
South Central RTD Operations	Transit Center Fixed-Route Operations	The center shall disseminate up-to-date schedules and route information to other centers for fixed and flexible route services.
South Central RTD Operations	Transit Center Information Services	The center shall provide travelers using public transportation with traffic and advisory information upon request. Such information may include transit routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, and special events.
South Central RTD Operations	Transit Center Information Services	The center shall provide transit information to the media including details of deviations from schedule of regular transit services.
South Central RTD Operations	Transit Center Information Services	The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems.
South Central RTD Operations	Transit Center Information Services	The center shall provide transit service information to traveler information service providers including routes, schedules, schedule adherence, and fare information as well as transit service information during evacuation.
South Central RTD Operations	Transit Center Information Services	The center shall broadcast transit advisory data, including alerts and advisories pertaining to major emergencies, or man made disasters.
South Central RTD Operations	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.

Element Name	Equipment Package Name	Requirement
South Central RTD Operations	Transit Center Multi-Modal Coordination	The center shall share transfer cluster and transfer point information with multimodal transportation service providers, other transit agencies, and traveler information service providers. A transfer cluster is a collection of stops, stations, or terminals where transfers can be made conveniently.
South Central RTD Operations	Transit Center Multi-Modal Coordination	The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies.
South Central RTD Operations	Transit Center Paratransit Operations	The center shall process trip requests for demand responsive transit services, i.e. paratransit. Sources of the requests may include traveler information service providers.
South Central RTD Operations	Transit Center Paratransit Operations	The center shall monitor the operational status of the demand response vehicles including status of passenger pick-up and drop-off.
South Central RTD Operations	Transit Center Paratransit Operations	The center shall generate demand response transit (including paratransit) routes and schedules based on such factors as parameters input by the system operator, what other demand responsive transit schedules have been planned, the availability and location of vehicles, the relevance of any fixed transit routes and schedules, and road network information.
South Central RTD Operations	Transit Center Paratransit Operations	The center shall dispatch demand response (paratransit) transit vehicles.
South Central RTD Operations	Transit Center Paratransit Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
South Central RTD Operations	Transit Center Paratransit Operations	The center shall disseminate up-to-date schedules and route information to other centers for demand responsive transit services (paratransit).
South Central RTD Operations	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
South Central RTD Operations	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
South Central RTD Operations	Transit Center Security	The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.
South Central RTD Operations	Transit Center Security	The center shall send wide-area alert information to travelers (on-board transit vehicles or at stations/stops) and transit vehicle operators.
South Central RTD Operations	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
South Central RTD Operations	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
South Central RTD Operations	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
South Central RTD Operations	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
South Central RTD Operations	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
South Central RTD Operations	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
South Central RTD Operations	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
South Central RTD Operations	Transit Data Collection	The center shall be able to produce sample products of the data available.
South Central RTD Operations	Transit Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to more effectively manage transit operations.
South Central RTD Operations	Transit Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers.
South Central RTD Operations	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
South Central RTD Operations	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.
South Central RTD Operations	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
South Central RTD Operations	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
South Central RTD Operations	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
South Central RTD Operations	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
South Central RTD Operations	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
South Central RTD Operations	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
South Central RTD Operations	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
South Central RTD Operations	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
South Central RTD Operations	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
South Central RTD Operations	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.

Element Name	Equipment Package Name	Requirement
South Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies.
South Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments.
South Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
South Central RTD Operations	Transit Vehicle Operator Scheduling	The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions.
South Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall receive transit route information for its assigned route including transit service instructions, traffic information, road conditions, and other information for the operator.
South Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall use the route information and its current location to determine the deviation from the predetermined schedule.
South Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall calculate the estimated times of arrival (ETA) at transit stops.
South Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall determine scenarios to correct the schedule deviation.
South Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall provide the schedule deviations and instructions for schedule corrections to the transit vehicle operator if the deviation is small, or the transit vehicle is operating in an urban area.
South Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall send the schedule deviation and estimated arrival time information to the center.
South Central RTD Transit Vehicles	On-board Fixed Route Schedule Management	The transit vehicle shall support the operations of a flexible route service. This may include requests for route deviations that would then lead to schedule corrective actions.
South Central RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
South Central RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
South Central RTD Transit Vehicles	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.
South Central RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall manage data input to sensor(s) on-board a transit vehicle to determine the vehicle's availability for use in demand responsive and flexible-route transit services based on identity, type, and passenger capacity.
South Central RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall receive the status of demand responsive or flexible-route transit schedules and passenger loading from the transit vehicle operator.
South Central RTD Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall provide the transit vehicle operator instructions about the demand responsive or flexible-route transit schedule that has been confirmed from the center.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide an image of all travelers which shall be used for violation processing of those who do not have a traveler card / payment instrument or whose transit fare transaction fails.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall determine the traveler's travel routing based on the transit vehicle's current location and the traveler's destination.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall have access to the complete range of transit services (routes and schedules) that are available to the traveler.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall include a database on-board the transit vehicle for use in fare processing from which the fares for all possible trips within the transit operational network can be determined.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall support an emergency fare structure overriding all other fares that can be activated during disasters, states of emergency or evacuations.
South Central RTD Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide passenger loading and fare statistics data to the center.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle’s current location.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed sensor information to the center along with the vehicle’s current location.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall accept sensor control data to allow remote control of the sensors.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall be capable of receiving an emergency message for broadcast to the travelers or to the transit vehicle operator.

Element Name	Equipment Package Name	Requirement
South Central RTD Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
South Central RTD Transit Vehicles	On-board Transit Signal Priority	The transit vehicle shall determine the schedule deviation and estimated times of arrival (ETA) at transit stops.
South Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
South Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
South Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
South Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
South Central RTD Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
South Central RTD Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
South Central RTD Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
South Central RTD Website	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall provide the capability to provide specific pre-trip and enroute directions to travelers (and drivers), including costs, arrival times, and transfer points.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall include bicycle routes, walkways, skyways, and multi-use trails in the pre-trip and enroute directions it provides to travelers.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall support on-line route guidance for travelers using personal devices (such as PDAs).
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall support on-line route guidance for drivers in vehicles.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall support on-line route guidance for specialty vehicles, such as commercial vehicles.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on current and/or predicted conditions of the road network, scheduled maintenance and construction work activities, and work zone activities.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on transit services, including fares, schedules, and requirements for travelers with special needs.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on current asset restrictions, such as height and weight restrictions on tunnels or bridges.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on current or forecasted weather.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on ferry, rail, air, or other multimodal transportation data.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall log route plans, particularly for special vehicles such as those containing hazardous materials, over-sized vehicles, or motorcades, with a traffic center.
South Central RTD Website	Infrastructure Provided Trip Planning	The center shall provide the capability for center personnel to control route calculation parameters.
South Central RTD Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers upon request.
South Central RTD Website	Interactive Infrastructure Information	The center shall collect, process, store, and disseminate customized air quality information to travelers upon request.
South Central RTD Website	Interactive Infrastructure Information	The center shall provide all traveler information based on the traveler's current location or a specific location identified by the traveler, and filter or customize the provided information accordingly.
South Central RTD Website	Interactive Infrastructure Information	The center shall accept traveler profiles for determining the type of personalized data to send to the traveler.
South Central RTD Website	Interactive Infrastructure Information	The center shall provide the capability to exchange information with another traveler information service provider current or predicted data for road links that are outside the area served by the local supplier.
South Central RTD Website	Interactive Infrastructure Information	The center shall provide the capability for a system operator to control the type and update frequency of traveler information.
South Central RTD Website	ISP Traveler Data Collection	The center shall collect, process, and store transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information.
Southwest RTD Demand Response Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process vehicle mileage data available to sensors on-board.
Southwest RTD Demand Response Transit Vehicles	On-board Maintenance	The transit vehicle shall collect and process the transit vehicle's operating conditions such as engine temperature, oil pressure, brake wear, internal lighting, environmental controls, etc.
Southwest RTD Demand Response Transit Vehicles	On-board Maintenance	The transit vehicle shall transmit vehicle maintenance data to the center to be used for scheduling future vehicle maintenance.
Southwest RTD Demand Response Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall manage data input to sensor(s) on-board a transit vehicle to determine the vehicle's availability for use in demand responsive and flexible-route transit services based on identity, type, and passenger capacity.
Southwest RTD Demand Response Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall receive the status of demand responsive or flexible-route transit schedules and passenger loading from the transit vehicle operator.
Southwest RTD Demand Response Transit Vehicles	On-board Paratransit Operations	The transit vehicle shall provide the transit vehicle operator instructions about the demand responsive or flexible-route transit schedule that has been confirmed from the center.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall detect embarking travelers on-board a transit vehicle and read data from the traveler card / payment instrument that they are carrying.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall determine the traveler's travel routing based on the transit vehicle's current location and the traveler's destination.

Element Name	Equipment Package Name	Requirement
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall calculate the traveler's fare based on the origin and destination provided by the traveler as well as factors such as the transit routing, transit fare category, traveler history, and route-specific information.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall have access to the complete range of transit services (routes and schedules) that are available to the traveler.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide a transit fare payment interface that is suitable for travelers with physical disabilities.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall include a database on-board the transit vehicle for use in fare processing from which the fares for all possible trips within the transit operational network can be determined.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall support an emergency fare structure overriding all other fares that can be activated during disasters, states of emergency or evacuations.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Fare and Load Management	The transit vehicle shall provide passenger loading and fare statistics data to the center.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall perform video and audio surveillance inside of transit vehicles and output raw video or audio data for either local monitoring (for processing or direct output to the transit vehicle operator), remote monitoring or for local storage (e.g., in an event recorder).
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall perform local monitoring of video or audio surveillance data collected inside of transit vehicles, and identify potential incidents or threats based on received processing parameters.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed video or audio information to the center along with the vehicle's current location.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall output an indication of potential incidents or threats and the processed sensor information to the center along with the vehicle's current location.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall accept emergency inputs from either the transit vehicle operator or a traveler through such interfaces as panic buttons, silent or audible alarms, etc.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall output reported emergencies to the center.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall receive acknowledgments of the emergency request from the center and output this acknowledgment to the transit vehicle operator or to the travelers.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Security	The transit vehicle shall monitor and output surveillance equipment status and fault indications.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall compute the location of the transit vehicle based on inputs from a vehicle location determination function.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall support the computation of the location of a transit vehicle using on-board sensors to augment the location determination function. This may include proximity to the transit stops or other known reference points as well as recording trip length.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including vehicle mileage and fuel usage.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall record transit trip monitoring data including operational status information such as doors open/closed, passenger loading, running times, etc.
Southwest RTD Demand Response Transit Vehicles	On-board Transit Trip Monitoring	The transit vehicle shall send the transit vehicle trip monitoring data to center-based trip monitoring functions.
Southwest RTD Operations	Center Secure Area Alarm Support	The center shall collect silent and audible alarms received from transit vehicles, originated by the traveler or the transit vehicle operator.
Southwest RTD Operations	Center Secure Area Alarm Support	After the alarm message has been received, the center shall generate an alarm acknowledgment to the sender.
Southwest RTD Operations	Center Secure Area Alarm Support	After the alarm message becomes a verified incident, the center shall determine the appropriate response.
Southwest RTD Operations	Center Secure Area Alarm Support	The center shall determine whether the alarm message indicates an emergency that requires the attention of public safety agencies, and forward alarm message data to the appropriate agency as necessary.
Southwest RTD Operations	Center Secure Area Alarm Support	The center shall forward the alarm message to center personnel and respond to the traveler or transit vehicle operator as directed by the personnel.
Southwest RTD Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers). The data may be raw or pre-processed in the field.
Southwest RTD Operations	Center Secure Area Surveillance	The center shall remotely monitor video images and audio surveillance data collected on-board transit vehicles. The data may be raw or pre-processed in the field.
Southwest RTD Operations	Center Secure Area Surveillance	The center shall exchange surveillance data with other emergency centers.
Southwest RTD Operations	Center Secure Area Surveillance	The center shall identify potential security threats based on collected security surveillance data.
Southwest RTD Operations	Center Secure Area Surveillance	The center shall verify potential security threats by correlating security surveillance data from multiple sources.
Southwest RTD Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices in traveler secure areas, which include transit stations, transit stops, rest areas, park and ride lots, and other fixed sites along travel routes (e.g., emergency pull-off areas and travel information centers).
Southwest RTD Operations	Center Secure Area Surveillance	The center shall remotely control security surveillance devices on-board transit vehicles.
Southwest RTD Operations	Center Secure Area Surveillance	The center shall respond to control data from center personnel regarding security surveillance data collection, processing, threat detection, and image matching.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall manage the actual value of transit fares for each segment of each regular transit route, including the transmission of the information to transit vehicles and transit stops or stations.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall provide the capability for a system operator to manage the transit fares and control the exchange of transit fare information.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall process the financial requests from the transit vehicles or roadside and manage an interface to a Financial Institution.

Element Name	Equipment Package Name	Requirement
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall support the payment of transit fare transactions using data provided by the traveler cards / payment instruments.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall be capable of establishing emergency fare structures to override all other fares during disasters, states of emergency, or evacuations.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall maintain a list of invalid traveler credit identities, or bad tag lists that can be forwarded to transit vehicles and transit stops or stations.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall collect passenger loading and fare statistics data to implement variable and flexible fare structures.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall exchange fare and load information with other transit management centers, including potential Centralized Payments facilities.
Southwest RTD Operations	Transit Center Fare and Load Management	The center shall provide transit fare information to other centers, including traveler information providers upon request.
Southwest RTD Operations	Transit Center Information Services	The center shall provide travelers using public transportation with traffic and advisory information upon request. Such information may include transit routes, schedules, transfer options, fares, real-time schedule adherence, current incidents, weather conditions, and special events.
Southwest RTD Operations	Transit Center Information Services	The center shall provide transit information to the media including details of deviations from schedule of regular transit services.
Southwest RTD Operations	Transit Center Information Services	The center shall exchange transit schedules, real-time arrival information, fare schedules, and general transit service information with other transit organizations to support transit traveler information systems.
Southwest RTD Operations	Transit Center Information Services	The center shall provide transit service information to traveler information service providers including routes, schedules, schedule adherence, and fare information as well as transit service information during evacuation.
Southwest RTD Operations	Transit Center Information Services	The center shall broadcast transit advisory data, including alerts and advisories pertaining to major emergencies, or man made disasters.
Southwest RTD Operations	Transit Center Multi-Modal Coordination	The center shall coordinate schedules and services between transit agencies, traffic management, maintenance and construction operations, parking management, and other surface or air transportation modes.
Southwest RTD Operations	Transit Center Multi-Modal Coordination	The center shall share transfer cluster and transfer point information with multimodal transportation service providers, other transit agencies, and traveler information service providers. A transfer cluster is a collection of stops, stations, or terminals where transfers can be made conveniently.
Southwest RTD Operations	Transit Center Multi-Modal Coordination	The center shall accept requests from traffic management to change routes and schedules as part of the implementation of demand management strategies.
Southwest RTD Operations	Transit Center Paratransit Operations	The center shall process trip requests for demand responsive transit services, i.e. paratransit. Sources of the requests may include traveler information service providers.
Southwest RTD Operations	Transit Center Paratransit Operations	The center shall monitor the operational status of the demand response vehicles including status of passenger pick-up and drop-off.
Southwest RTD Operations	Transit Center Paratransit Operations	The center shall generate demand response transit (including paratransit) routes and schedules based on such factors as parameters input by the system operator, what other demand responsive transit schedules have been planned, the availability and location of vehicles, the relevance of any fixed transit routes and schedules, and road network information.
Southwest RTD Operations	Transit Center Paratransit Operations	The center shall dispatch demand response (paratransit) transit vehicles.
Southwest RTD Operations	Transit Center Paratransit Operations	The center shall exchange information with Maintenance and Construction Operations concerning work zones, roadway conditions, asset restrictions, work plans, etc.
Southwest RTD Operations	Transit Center Paratransit Operations	The center shall disseminate up-to-date schedules and route information to other centers for demand responsive transit services (paratransit).
Southwest RTD Operations	Transit Center Security	The center shall receive reports of emergencies on-board transit vehicles entered directly be the transit vehicle operator or from a traveler through interfaces such as panic buttons or alarm switches.
Southwest RTD Operations	Transit Center Security	The center shall exchange transit incident information along with other service data with other transit agencies.
Southwest RTD Operations	Transit Center Security	The center shall receive information pertaining to a wide-area alert such as weather alerts, disaster situations, or child abductions. This information may come from Emergency Management or from other Alerting and Advisory Systems.
Southwest RTD Operations	Transit Center Security	The center shall send wide-area alert information to travelers (on-board transit vehicles or at stations/stops) and transit vehicle operators.
Southwest RTD Operations	Transit Center Security	The center shall coordinate the response to security incidents involving transit with other agencies including Emergency Management, other transit agencies, media, traffic management, and traveler information service providers.
Southwest RTD Operations	Transit Center Vehicle Tracking	The center shall monitor the locations of all transit vehicles within its network.
Southwest RTD Operations	Transit Center Vehicle Tracking	The center shall determine adherence of transit vehicles to their assigned schedule.
Southwest RTD Operations	Transit Center Vehicle Tracking	The center shall provide transit operational data to traveler information service providers.
Southwest RTD Operations	Transit Data Collection	The center shall collect transit management data such as transit fares and passenger use, transit services, paratransit operations, transit vehicle maintenance data, etc.
Southwest RTD Operations	Transit Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Southwest RTD Operations	Transit Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the transit data or for the data itself.
Southwest RTD Operations	Transit Data Collection	The center shall be able to produce sample products of the data available.
Southwest RTD Operations	Transit Environmental Monitoring	The center shall assimilate current and forecast road conditions and surface weather information to more effectively manage transit operations.
Southwest RTD Operations	Transit Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers.
Southwest RTD Operations	Transit Evacuation Support	The center shall manage the use of transit resources to support evacuation and subsequent reentry of a population in the vicinity of a disaster or other emergency.
Southwest RTD Operations	Transit Evacuation Support	The center shall coordinate regional evacuation plans with Emergency Management - identifying the transit role in an evacuation and the transit resources that would be used.

Element Name	Equipment Package Name	Requirement
Southwest RTD Operations	Transit Evacuation Support	The center shall coordinate the use of transit and school bus fleets during an evacuation, supporting evacuation of those with special needs and the general population.
Southwest RTD Operations	Transit Evacuation Support	The center shall adjust and update transit service and fare schedules and provide that information to other agencies as they coordinate evacuations.
Southwest RTD Operations	Transit Garage Maintenance	The center shall collect operational and maintenance data from transit vehicles.
Southwest RTD Operations	Transit Garage Maintenance	The center shall monitor the condition of a transit vehicle to analyze brake, drive train, sensors, fuel, steering, tire, processor, communications equipment, and transit vehicle mileage to identify mileage based maintenance, out-of-specification or imminent failure conditions.
Southwest RTD Operations	Transit Garage Maintenance	The center shall generate transit vehicle maintenance schedules, includes what and when the maintenance or repair is to be performed.
Southwest RTD Operations	Transit Garage Maintenance	The center shall generate transit vehicle availability listings, current and forecast, to support transit vehicle assignment planning based, in part, on the transit vehicle maintenance schedule.
Southwest RTD Operations	Transit Garage Maintenance	The center shall assign technicians to a transit vehicle maintenance schedule, based upon such factors as personnel eligibility, work assignments, preferences and seniority.
Southwest RTD Operations	Transit Garage Maintenance	The center shall verify that the transit vehicle maintenance activities were performed correctly, using the transit vehicle's status, the maintenance personnel's work assignment, and the transit maintenance schedules.
Southwest RTD Operations	Transit Garage Maintenance	The center shall generate a time-stamped maintenance log of all maintenance activities performed on a transit vehicle.
Southwest RTD Operations	Transit Garage Maintenance	The center shall provide the transit system operator with the capability to update transit vehicle maintenance information and receive reports on all transit vehicle operations data.
Southwest RTD Operations	Transit Vehicle Operator Scheduling	The center shall maintain records of a transit vehicle operator's performance. This may be done utilizing standardized performance evaluation criteria set forth by governmental regulations and transit operating company policies, assessing the transit vehicle operator's driving history, and assessing comments from the transit vehicle operator's supervisor(s) as well as noting any moving violations or accidents, supervisor comments, government regulations, and company policies.
Southwest RTD Operations	Transit Vehicle Operator Scheduling	The center shall assess the transit vehicle operator's availability based on previous work assignments, accumulated hours, plus health and vacation commitments.
Southwest RTD Operations	Transit Vehicle Operator Scheduling	The center shall assign transit vehicle operators to transit schedules based on their eligibility, route preferences, seniority, and transit vehicle availability.
Southwest RTD Operations	Transit Vehicle Operator Scheduling	The center shall provide an interface through which the transit vehicle operator information can be maintained - either from the transit vehicle operator, a transit system operator (i.e. center personnel), or other functions.
Southwest RTD Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
Southwest RTD Website	Basic Information Broadcast	The center shall collect, process, store, and disseminate event information to travelers.
Southwest RTD Website	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall provide the capability to provide specific pre-trip and enroute directions to travelers (and drivers), including costs, arrival times, and transfer points.
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall include bicycle routes, walkways, skyways, and multi-use trails in the pre-trip and enroute directions it provides to travelers.
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall support on-line route guidance for travelers using personal devices (such as PDAs).
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall generate route plans based on transit services, including fares, schedules, and requirements for travelers with special needs.
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall generate trips based on the use of more than one mode of transport.
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall use the preferences and constraints specified by the traveler in the trip request to select the most appropriate mode of transport.
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall provide the capability for the traveler to confirm the proposed trip plan.
Southwest RTD Website	Infrastructure Provided Trip Planning	The center shall provide the capability for center personnel to control route calculation parameters.
State Emergency Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
State Emergency Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
State Emergency Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
State Emergency Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
State Emergency Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
State Emergency Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
State Emergency Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
State Emergency Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall collect data to be archived from one or more data sources.

Element Name	Equipment Package Name	Requirement
Tribal Archive Data Warehouse	ITS Data Repository	The center shall collect data catalogs from one or more data sources. A catalog describes the data contained in the collection of archived data and may include descriptions of the schema or structure of the data, a description of the contents of the data; e.g., time range of entries, number of entries; or a sample of the data (e. g. a thumbnail).
Tribal Archive Data Warehouse	ITS Data Repository	The center shall store the archived data in a focused repository that is suited to a particular set of ITS data users.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall include capabilities for performing quality checks on the incoming archived data.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall include capabilities for error notification on the incoming archived data.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall include capabilities for archive to archive coordination.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall support a broad range of archived data management implementations, ranging from simple data marts that collect a focused set of data and serve a particular user community to large-scale data warehouses that collect, integrate, and summarize transportation data from multiple sources and serve a broad array of users within a region.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall perform quality checks on received data.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall provide the capability to execute methods on the incoming data such as cleansing, summarizations, aggregations, or transformations applied to the data before it is stored in the archive.
Tribal Archive Data Warehouse	ITS Data Repository	The center shall respond to requests from the administrator interface function to maintain the archive data.
Tribal Archive Data Warehouse	ITS Data Repository	When data or a catalog of data is received from the archive, the center shall generate the requested data product for the users systems.
Tribal Archive Data Warehouse	Traffic and Roadside Data Archival	The center shall manage the collection of archive data directly from collection equipment located at the roadside.
Tribal Archive Data Warehouse	Traffic and Roadside Data Archival	The center shall collect traffic sensor information from roadside devices.
Tribal Archive Data Warehouse	Traffic and Roadside Data Archival	The center shall respond to requests from the Archive Data Administer to input the parameters that control the collection process.
Tribal Archive Data Warehouse	Traffic and Roadside Data Archival	The center shall send the request for data and control parameters to the field equipment where the information is collected and returned.
Tribal Archive Data Warehouse	Traffic and Roadside Data Archival	The center shall record the status about the imported traffic and roadside data.
Tribal Archive Data Warehouse	Traffic and Roadside Data Archival	The center shall use the status information to adjust the collection of traffic and roadside data.
Tribal ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, digitize, and send traffic sensor data (speed, volume, and occupancy) to the center for further analysis and storage, under center control.
Tribal ITS Field Equipment	Roadway Basic Surveillance	The field element shall collect, process, and send traffic images to the center for further analysis and distribution.
Tribal ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system operational status to the controlling center.
Tribal ITS Field Equipment	Roadway Basic Surveillance	The field element shall return sensor and CCTV system fault data to the controlling center for repair.
Tribal ITS Field Equipment	Roadway Data Collection	The field element shall collect traffic, road, and environmental conditions information.
Tribal ITS Field Equipment	Roadway Data Collection	The field element shall include the sensors and supporting roadside devices that sense, collect, and send traffic, road, and environmental conditions information to a center for archival.
Tribal ITS Field Equipment	Roadway Data Collection	The field element shall collect sensor status and sensor faults from roadside equipment and send it along with the recorded data to a center for archival.
Tribal ITS Field Equipment	Roadway Signal Controls	The field element shall control traffic signals at intersections and on main highways for urban and rural areas, under center control.
Tribal ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from the indicator control information.
Tribal ITS Field Equipment	Roadway Signal Controls	The field element shall monitor operation of traffic signal controllers and report to the center any instances in which the indicator response does not match that expected from known indicator preemptions.
Tribal ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller operational status to the controlling center.
Tribal ITS Field Equipment	Roadway Signal Controls	The field element shall return traffic signal controller fault data to the maintenance center for repair.
Tribal ITS Field Equipment	Roadway Signal Priority	The field element shall respond to requests for indicator (e.g., signal) preemption requests from emergency vehicles at intersections, pedestrian crossings, and multimodal crossings.
Tribal ITS Field Equipment	Roadway Signal Priority	The field element shall notify controlling traffic management center and maintenance center that the signal timing has changed based on a signal preemption/priority request to help those centers determine whether a fault detected at the signal is a true malfunction or due to a signal override.
Tribal ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall include dynamic messages signs for dissemination of traffic and other information to drivers, under center control; the DMS may be either those that display variable text messages, or those that have fixed format display(s) (e.g. vehicle restrictions, or lane open/close).
Tribal ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide operational status for the driver information systems equipment (DMS, HAR, etc.) to the center.
Tribal ITS Field Equipment	Roadway Traffic Information Dissemination	The field element shall provide fault data for the driver information systems equipment (DMS, HAR, etc.) to the center for repair.
Tribal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall collect, process, and send work zone images to the center for further analysis and distribution, under center control.
Tribal ITS Field Equipment	Roadway Work Zone Traffic Control	Under traffic and maintenance center control, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around the work zone through which they are currently passing.

Element Name	Equipment Package Name	Requirement
Tribal ITS Field Equipment	Roadway Work Zone Traffic Control	Under the control of field personnel within maintenance vehicles, the field element shall include driver information systems (such as dynamic messages signs and highway advisory radios) that advise drivers of activity around a work zone through which they are currently passing.
Tribal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall control access to the work zone using automated gate or barrier systems. This includes automated flagger assistance devices that include automated gate arms and other automated gate/barrier systems.
Tribal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide operational status for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center.
Tribal ITS Field Equipment	Roadway Work Zone Traffic Control	The field element shall provide fault data for the surveillance (e.g. CCTV), driver information systems, and gates/barriers in work zones to the maintenance center for repair.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall collect and process, traffic sensor data in the vicinity of a highway-rail intersection (HRI).
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the traffic management center.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall monitor the status of the highway-rail intersection (HRI) equipment, including both the current state and mode of operation and the current equipment condition, to be forwarded on to the rail wayside equipment.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall receive track status from the rail wayside equipment that can be passed on to the traffic management center. This may include the current status of the tracks and whether a train is approaching.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall collect pedestrian images and pedestrian sensor data, and respond to pedestrian crossing requests via display, audio signal, or other manner.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall control the dynamic message signs (DMS) in the vicinity of a highway-rail intersection (HRI) to advise drivers, cyclists, and pedestrians of approaching trains.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall close the highway-rail intersection (HRI) when a train is approaching using gates, lights/signs, barriers, and traffic control signals.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall support the integrated control of adjacent traffic signals to clear an area in advance of an approaching train and to manage traffic around the intersection.
Tribal ITS Field Equipment	Standard Rail Crossing	The field element shall forward rail traffic advisories received from the Wayside Equipment to the traffic management center.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall support the interface to the Emergency Telecommunications System (e.g. 911 or 7-digit call routing) to receive emergency notification information and provide it to the emergency system operator.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall receive emergency call information from 911 services and present the possible incident information to the emergency system operator.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall receive emergency notification information from other public safety agencies and present the possible incident information to the emergency system operator.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall receive emergency notification information from public transit systems and present the possible incident information to the emergency system operator.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall coordinate, correlate, and verify all emergency inputs, including those identified based on external calls and internal analysis of security sensor and surveillance data, and assign each a level of confidence.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall send a request for remote control of CCTV systems from a traffic management center in order to verify the reported incident.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
Tribal Public Safety Dispatch-Statewide	Emergency Call-Taking	The center shall update the incident information log once the emergency system operator has verified the incident.
Tribal Public Safety Dispatch-Statewide	Emergency Commercial Vehicle Response	The center shall forward the verified emergency information to the responding agency based on the location and nature of the emergency.
Tribal Public Safety Dispatch-Statewide	Emergency Data Collection	The center shall collect emergency service data, emergency vehicle management data, emergency vehicle data, sensor and surveillance data, threat data, and incident data.
Tribal Public Safety Dispatch-Statewide	Emergency Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.
Tribal Public Safety Dispatch-Statewide	Emergency Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the emergency management data or for the data itself.
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall dispatch emergency vehicles to respond to verified emergencies under center personnel control.
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall store the current status of all emergency vehicles available for dispatch and those that have been dispatched.
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall relay location and incident details to the responding vehicles.
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall track the location and status of emergency vehicles responding to an emergency based on information from the emergency vehicle.
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall store and maintain the emergency service responses in an action log.
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall receive traffic images to support dispatch of emergency vehicles.
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall provide the capability to request remote control of traffic surveillance devices
Tribal Public Safety Dispatch-Statewide	Emergency Dispatch	The center shall coordinate response to incidents with other Emergency Management centers to ensure appropriate resources are dispatched and utilized.
Tribal Public Safety Dispatch-Statewide	Emergency Environmental Monitoring	The center shall collect current and forecast road and weather information from weather service providers (such as the National Weather Service and value-added sector specific meteorological services).

Element Name	Equipment Package Name	Requirement
Tribal Public Safety Dispatch-Statewide	Emergency Environmental Monitoring	The center shall collect current road and weather information from roadway maintenance operations.
Tribal Public Safety Dispatch-Statewide	Emergency Environmental Monitoring	The center shall present the current and forecast road and weather information to the emergency system operator.
Tribal Public Safety Dispatch-Statewide	Emergency Environmental Monitoring	The center shall provide aggregated or processed environmental probe information from its fleet of emergency vehicles to traffic management and maintenance centers.
Tribal Public Safety Dispatch-Statewide	Emergency Response Management	The center shall provide the capability to implement response plans and track progress through the incident by exchanging incident information and distributing response status to allied agencies.
Tribal Public Safety Dispatch-Statewide	Emergency Response Management	The center shall develop, coordinate with other agencies, and store emergency response plans.
Tribal Public Safety Dispatch-Statewide	Emergency Response Management	The center shall track the availability of resources (including vehicles, roadway cleanup, etc.), request additional resources from traffic, maintenance, or other emergency centers if needed.
Tribal Public Safety Dispatch-Statewide	Emergency Response Management	The center shall allocate the appropriate emergency services, resources, and vehicle (s) to respond to incidents, and shall provide the capability to override the current allocation to suit the special needs of a current incident.
Tribal Public Safety Dispatch-Statewide	Emergency Response Management	The center shall provide the capability to remotely control and monitor CCTV systems normally operated by a traffic management center.
Tribal Public Safety Dispatch-Statewide	Emergency Routing	The center shall collect current traffic and road condition information from traffic management centers for emergency vehicle route calculation.
Tribal Public Safety Dispatch-Statewide	Emergency Routing	The center shall receive inputs from traffic management and maintenance centers on the location and status of traffic control equipment and work zones along potential emergency routes.
Tribal Public Safety Dispatch-Statewide	Emergency Routing	The center shall receive status information from care facilities to determine the appropriate facility and its location.
Tribal Public Safety Dispatch-Statewide	Emergency Routing	The center shall calculate emergency vehicle routes, under center personnel control, based on information from traffic management and maintenance centers.
Tribal Public Safety Dispatch-Statewide	Emergency Routing	The center shall request and receive ingress and egress routes or other specialized emergency access routes from the traffic management center.
Tribal Public Safety Dispatch-Statewide	Emergency Routing	Once the route is calculated the route shall be provided to the dispatch function.
Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall send the current en route status (including estimated time of arrival) and requests for emergency dispatch updates.
Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall provide the personnel on-board with dispatch information, including incident type and location, and forward an acknowledgment from personnel to the center that the vehicle is on its way to the incident scene.
Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall compute the location of the emergency vehicle based on inputs from a vehicle location determination function.
Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall send the vehicle's location and operational data to the center for emergency management and dispatch.
Tribal Public Safety Vehicles	On-board EV En Route Support	The emergency vehicle shall receive incident details and a suggested route when dispatched to a scene.
Tribal Public Safety Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall receive dispatch instructions sufficient to enable emergency personnel in the field to implement an effective incident response. It includes local traffic, road, and weather conditions, hazardous material information, and the current status of resources that have been allocated to an incident.
Tribal Public Safety Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the incident site such as the extent of injuries, identification of vehicles and people involved, hazardous material, etc.
Tribal Public Safety Vehicles	On-board EV Incident Management Communication	The emergency vehicle shall provide an interface to the center for emergency personnel to transmit information about the current incident response status such as the identification of the resources on site, site management strategies in effect, and current clearance status.
Tribal Public Websites	Basic Information Broadcast	The center shall collect, process, store, and disseminate traffic and highway condition information to travelers, including incident information, detours and road closures, event information, recommended routes, and current speeds on specific routes.
Tribal Public Websites	Basic Information Broadcast	The center shall collect, process, store, and disseminate maintenance and construction information to travelers, including scheduled maintenance and construction work activities and work zone activities.
Tribal Public Websites	Basic Information Broadcast	The center shall collect, process, store, and disseminate transit routes and schedules, transit transfer options, transit fares, and real-time schedule adherence information to travelers.
Tribal Public Websites	Basic Information Broadcast	The center shall collect, process, store, and disseminate parking information to travelers, including location, availability, and fees.
Tribal Public Websites	Basic Information Broadcast	The center shall provide the capability for a system operator to control the type and update frequency of broadcast traveler information.
Tribal Road Maintenance	MCM Incident Management	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
Tribal Road Maintenance	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.
Tribal Road Maintenance	MCM Incident Management	The center shall exchange road network status assessment information with emergency management and traffic management centers including an 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.

Element Name	Equipment Package Name	Requirement
Tribal Road Maintenance	MCM Incident Management	The center shall provide 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.
Tribal Road Maintenance	MCM Incident Management	The center shall receive information indicating the damage sustained by transportation assets, derived from aerial surveillance, field reports, inspections, tests, and analyses to support incident management.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall maintain an interface with asset management systems to track the inventory, restrictions, repair needs and status updates of transportation assets (pavement, bridges, signs, etc.) including location, installation and materials information, vendor/contractor, current maintenance status, standard height, width, and weight restrictions.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall respond to requests from emergency management and traffic management centers for hazard removal, field equipment repair, and other roadway maintenance.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall provide emergency management and traffic management centers with information about scheduled maintenance and construction work activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from roadside equipment, such as traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall collect the status and fault data from traffic management centers, including data for traffic, infrastructure, and environmental sensors, highway advisory radio and dynamic message signs, automated roadway treatment systems, barrier and safeguard systems, cameras, traffic signals and override equipment, ramp meters, beacons, security sensors and surveillance equipment, etc., and provide a cohesive view of equipment repair needs.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall remotely control and collect data from infrastructure monitoring sensors located along the roadway infrastructure or on maintenance and construction vehicles.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of roadway maintenance and construction activities.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall dispatch and route maintenance and construction vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall manage an interface with center personnel to accept vehicle systems control information and remotely control maintenance and construction vehicle on-board equipment.
Tribal Road Maintenance	MCM Roadway Maintenance and Construction	The center shall track the status of roadway maintenance and construction activities by monitoring collected data from the dispatched vehicles and equipment.
Tribal Road Maintenance	MCM Vehicle and Equipment Maintenance Management	The center shall collect and analyze vehicle diagnostics information from maintenance and construction vehicles. 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.
Tribal Road Maintenance	MCM Vehicle and Equipment Maintenance Management	The center shall exchange information with equipment repair facilities including status and history of repairs concerning maintenance and construction vehicles. This information includes vehicle status and diagnostic information, vehicle utilization, and coordination of when vehicles will be available for preventative and corrective maintenance.
Tribal Road Maintenance	MCM Vehicle and Equipment Maintenance Management	The center shall schedule preventive and corrective vehicle maintenance with the equipment repair facility based on fleet health reports, maintenance records, vehicle utilization and vehicle availability schedules.
Tribal Road Maintenance	MCM Vehicle Tracking	The center shall monitor the locations of all maintenance and construction vehicles and other equipment under its jurisdiction.
Tribal Road Maintenance	MCM Vehicle Tracking	The center shall present location data to center personnel for the fleet of maintenance and construction vehicles and other equipment.
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall provide status information about scheduled winter maintenance activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, and the media.
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall receive equipment availability and materials storage status information from storage facilities to support the scheduling of winter maintenance activities.
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall collect current and forecast traffic and weather information from traffic management centers and weather service providers (such as the National Weather Service and value-added sector specific meteorological services).
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall dispatch and route winter maintenance vehicle drivers and support them with route- specific environmental, incident, advisory, threat, alert, and traffic congestion information.

Element Name	Equipment Package Name	Requirement
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall determine the need for roadway treatment based on current and forecasted weather information, current usage of treatments and materials, available resources, requests for action from other agencies, and recommendations from the Maintenance Decision Support system, specifically under winter conditions. This supports winter maintenance such as plowing, treating, anti-icing, etc.
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall provide dispatch instructions for vehicle operators based on input parameters from center personnel, specifically for winter conditions. This could include a treatment route, treatment application rates, start and end times, and other treatment instructions.
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall support remote control of on-board maintenance and construction vehicle systems and field equipment that is remotely controlled by the vehicle such as adjusting material application rates and spread patterns.
Tribal Road Maintenance	MCM Winter Maintenance Management	The center shall assess the current status of all winter maintenance activities, including actual work activities performed, current locations and operational conditions of vehicles, materials and equipment inventories, field equipment status, environmental information, etc.
Tribal Road Maintenance	MCM Work Activity Coordination	The center shall provide 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.
Tribal Road Maintenance	MCM Work Activity Coordination	The center shall provide status information about scheduled maintenance and construction activities including anticipated closures and impact to the roadway, alternate routes, anticipated delays, closure times, and durations. The information is provided to other management centers such as traffic, emergency, transit, traveler information providers, other maintenance centers, multimodal transportation providers, rail operations, and the media.
Tribal Road Maintenance	MCM Work Activity Coordination	The center shall collect and respond to feedback concerning scheduled maintenance and construction activities with other management centers such as traffic, emergency, transit, and rail operations.
Tribal Road Maintenance	MCM Work Activity Coordination	The center shall collect and disseminate asset restriction information 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.
Tribal Road Maintenance	MCM Work Activity Coordination	The center shall exchange information with administrative systems to support the planning and scheduling of maintenance and construction activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
Tribal Road Maintenance	MCM Work Zone Management	The center shall generate new work zone activity schedules for use by maintenance and construction vehicles, maintenance and construction operators, and for information coordination purposes.
Tribal Road Maintenance	MCM Work Zone Management	The center shall control the collection of work zone status information including video images from cameras located in or near the work zone.
Tribal Road Maintenance	MCM Work Zone Management	The center shall disseminate work zone information to other agencies and centers including traffic, transit, emergency management centers, other maintenance centers, traveler information providers, and the media.
Tribal Road Maintenance	MCM Work Zone Management	The center shall control traffic in work zones by providing remote control of dynamic message signs, highway advisory radio systems, gates, and barriers located in or near the work zone.
Tribal Road Maintenance	MCM Work Zone Management	The center shall exchange information with administrative systems to support the planning and scheduling of work zone activities. This information includes: equipment and consumables resupply purchase request status, personnel qualifications including training and special certifications, environmental regulations and rules that may impact maintenance activities, and requests and project requirements from contract administration.
Tribal Road Maintenance Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to control information from the center to allow remote operation of the on-board vehicle systems. These systems include routine maintenance equipment for cutting, repairs, hazard removal, etc.
Tribal Road Maintenance Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
Tribal Road Maintenance Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
Tribal Road Maintenance Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
Tribal Road Maintenance Vehicles	MCV Roadway Maintenance and Construction	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
Tribal Road Maintenance Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall compute the location of the vehicle based on inputs from a vehicle location determination function.
Tribal Road Maintenance Vehicles	MCV Vehicle Location Tracking	The maintenance and construction vehicle shall send the timestamped vehicle location to the controlling center.
Tribal Road Maintenance Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall collect vehicle diagnostics and operating status data from the maintenance vehicle platform including engine temperature, mileage, tire wear, brake wear, belt wear, and other operational status measures as well as the status of maintenance and construction-specific systems on the vehicle.
Tribal Road Maintenance Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall use the diagnostic and status information to support scheduling vehicle maintenance, monitoring safety status, and informing the vehicle operator of the conditions.

Element Name	Equipment Package Name	Requirement
Tribal Road Maintenance Vehicles	MCV Vehicle System Monitoring and Diagnostics	The maintenance and construction vehicle shall send the vehicle diagnostic and safety information to the controlling maintenance center.
Tribal Road Maintenance Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to control information from the center to allow remote operation of the on-board vehicle systems. These systems include winter maintenance equipment for plowing, treating, and anti-icing.
Tribal Road Maintenance Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall monitor materials information including remaining quantity and current application rate of materials on the vehicle.
Tribal Road Maintenance Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall respond to dispatch information from the center, presented to the vehicle operator for acknowledgement and returning status.
Tribal Road Maintenance Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall send operational data to the center including the operational state of the maintenance equipment (e.g., blade up/down, spreader pattern), types and quantities of materials used for construction and maintenance activities, and a record of the actual work performed.
Tribal Road Maintenance Vehicles	MCV Winter Maintenance	The maintenance and construction vehicle shall track the location and status of systems on-board the vehicle.
Tribal Road Maintenance Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall monitor, operate, and control work zone devices located at or alongside the roadway. The devices operated on board the vehicle include driver information devices (e.g. dynamic message signs) and work zone intrusion detection and alert devices.
Tribal Road Maintenance Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall provide an interface for field personnel to input status of their work zone activities.
Tribal Road Maintenance Vehicles	MCV Work Zone Support	The maintenance and construction vehicle shall collect inputs from field personnel and from work zone devices on-board the maintenance and construction vehicle and send them to the controlling center.
Tribal Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall include video and/or audio surveillance of secure areas including facilities (e.g. transit yards) and transportation infrastructure (e.g. bridges, tunnels, interchanges, roadway infrastructure, and transit railways or guideways).
Tribal Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall be remotely controlled by a center.
Tribal Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall provide equipment status and fault indication of surveillance equipment to a center.
Tribal Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall provide raw video or audio data.
Tribal Security Monitoring Field Equipment	Field Secure Area Surveillance	The field element shall remotely process video and audio data and provide an indication of potential incidents or threats to a center.
Tribal Transportation Operations	Collect Traffic Surveillance	The center shall monitor, analyze, and store traffic sensor data (speed, volume, occupancy) collected from field elements under remote control of the center.
Tribal Transportation Operations	Collect Traffic Surveillance	The center shall monitor, analyze, and distribute traffic images from CCTV systems under remote control of the center.
Tribal Transportation Operations	Collect Traffic Surveillance	The center shall distribute road network conditions data (raw or processed) based on collected and analyzed traffic sensor and surveillance data to other centers.
Tribal Transportation Operations	Collect Traffic Surveillance	The center shall respond to control data from center personnel regarding sensor and surveillance data collection, analysis, storage, and distribution.
Tribal Transportation Operations	Collect Traffic Surveillance	The center shall maintain a database of surveillance and sensors and the freeways, surface street and rural roadways, e.g. where they are located, to which part(s) of the network their data applies, the type of data, and the ownership of each link (that is, the agency or entity responsible for collecting and storing surveillance of the link) in the network.
Tribal Transportation Operations	HRI Traffic Management	The center shall remotely control highway-rail intersection (HRI) equipment located in the field.
Tribal Transportation Operations	HRI Traffic Management	The center shall accept collect highway-rail intersection (HRI) advisory or alert data from rail operations centers.
Tribal Transportation Operations	HRI Traffic Management	The center shall collect highway-rail intersection (HRI) equipment operational status and compare against the control information sent by the center.
Tribal Transportation Operations	HRI Traffic Management	The center shall provide the highway-rail intersection (HRI) equipment operational status to rail operations centers.
Tribal Transportation Operations	HRI Traffic Management	The center shall collect incident information related to a highway-rail intersection (HRI), such as intersection blockages or crashes or equipment malfunctions.
Tribal Transportation Operations	HRI Traffic Management	The center shall implement control plans to coordinate signalized intersections around highway-rail intersections (HRI), under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, equipment faults, pedestrian crossings, etc.
Tribal Transportation Operations	MCM Incident Management	The center shall respond to requests from emergency management to provide maintenance and construction resources to implement response plans, assist in clean up, verify an incident, etc. This may also involve coordination with traffic management centers and other maintenance centers.
Tribal Transportation Operations	MCM Incident Management	The center shall exchange road network status assessment information with emergency management and traffic management centers including an 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.
Tribal Transportation Operations	MCM Incident Management	The center shall provide 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.
Tribal Transportation Operations	Rail Operations Coordination	The center shall exchange highway-rail intersection (HRI) information with rail operations centers. This information may include event schedules, requests for information from the Rail Operators, incident notification based on rail operations messages, and priority messages like notifications of a HAZMAT spill, equipment failure, or an intersection blockage.
Tribal Transportation Operations	Rail Operations Coordination	The center shall receive highway-rail intersection (HRI) maintenance schedules, train schedules, and incident notifications from rail operations centers.

Element Name	Equipment Package Name	Requirement
Tribal Transportation Operations	Rail Operations Coordination	The center shall use the rail operations information to develop forecast HRI closure times and durations which may be applied in advanced traffic control strategies or delivered as enhanced traveler information.
Tribal Transportation Operations	TMC Evacuation Support	The center shall support requests from emergency management centers to preempt the current traffic control strategy, activate traffic control and closure systems such as gates and barriers, activate safeguard systems, or use driver information systems to support evacuation traffic control plans.
Tribal Transportation Operations	TMC Evacuation Support	The center shall coordinate information and controls with other traffic management centers.
Tribal Transportation Operations	TMC Evacuation Support	The center shall coordinate execution of evacuation strategies with emergency management centers - including activities such as setting closures and detours, establishing routes, updating areas to be evacuated, timing the process, etc.
Tribal Transportation Operations	TMC Incident Detection	The center shall collect and store traffic flow and image data from the field equipment to detect and verify incidents.
Tribal Transportation Operations	TMC Incident Detection	The center shall receive inputs concerning upcoming events that would effect the traffic network from event promoters, traveler information service providers, and intermodal freight depots.
Tribal Transportation Operations	TMC Incident Detection	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field.
Tribal Transportation Operations	TMC Incident Detection	The center shall provide road network conditions and traffic images to emergency management centers to support the detection, verification, and classification of incidents.
Tribal Transportation Operations	TMC Incident Detection	The center shall provide video and traffic sensor control commands to the field equipment to detect and verify incidents.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall exchange alert information and status with emergency management centers. The information includes notification of a major emergency such as a natural or man-made disaster, civil emergency, or child abduction for distribution to the public. The information may include 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 may also identify specific information that should not be released to the public.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall coordinate planning for incidents with emergency management centers - including pre-planning activities for disaster response, evacuation, and recovery operations.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall support requests from emergency management centers to remotely control sensor and surveillance equipment located in the field, provide special routing for emergency vehicles, and to provide responding emergency vehicles with signal preemption.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall exchange incident and threat information with emergency management centers as well as maintenance and construction centers; including notification of existence of incident and expected severity, location, time and nature of incident.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall respond to requests from emergency management to provide traffic management resources to implement special traffic control measures, assist in clean up, verify an incident, etc. This may also involve coordination with maintenance centers.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall provide road network conditions and traffic images to emergency management centers, maintenance and construction centers, and traveler information service providers.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall exchange road network status assessment information with emergency management and maintenance centers including an 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.
Tribal Transportation Operations	TMC Incident Dispatch Coordination/Communication	The center shall coordinate information and controls with other traffic management centers.
Tribal Transportation Operations	TMC Regional Traffic Control	The center shall exchange traffic information with other traffic management centers, includes incident information, congestion data, traffic data, signal timing plans, and real-time signal control information.
Tribal Transportation Operations	TMC Regional Traffic Control	The center shall exchange traffic control information with other traffic management centers, includes remote monitoring and control of traffic management devices (e.g. signs, sensors, signals, cameras, etc.).
Tribal Transportation Operations	TMC Signal Control	The center shall remotely control traffic signal controllers.
Tribal Transportation Operations	TMC Signal Control	The center shall collect traffic signal controller operational status and compare against the control information sent by the center.
Tribal Transportation Operations	TMC Signal Control	The center shall collect traffic signal controller fault data from the field.
Tribal Transportation Operations	TMC Signal Control	The center shall implement control plans to coordinate signalized intersections, under control of center personnel, based on data from sensors and surveillance monitoring traffic conditions, incidents, emergency vehicle preemptions, the passage of commercial vehicles with unusual loads, equipment faults, pedestrian crossings, etc.
Tribal Transportation Operations	TMC Traffic Information Dissemination	The center shall remotely control dynamic messages signs for dissemination of traffic and other information to drivers.
Tribal Transportation Operations	TMC Traffic Information Dissemination	The center shall collect operational status for the driver information systems equipment (DMS, HAR, etc.).
Tribal Transportation Operations	TMC Traffic Information Dissemination	The center shall collect fault data for the driver information systems equipment (DMS, HAR, etc.) for repair.
Tribal Transportation Operations	TMC Traffic Information Dissemination	The center shall distribute traffic data to maintenance and construction centers, transit centers, emergency management centers, and traveler information providers.
Tribal Transportation Operations	TMC Traffic Information Dissemination	The center shall provide the capability for center personnel to control the nature of the data that is available to non-traffic operations centers and the media.
Tribal Transportation Operations	Traffic Data Collection	The center shall collect traffic management data such as operational data, event logs, etc.
Tribal Transportation Operations	Traffic Data Collection	The center shall assign quality control metrics and meta-data to be stored along with the data. Meta-data may include attributes that describe the source and quality of the data and the conditions surrounding the collection of the data.

Element Name	Equipment Package Name	Requirement
Tribal Transportation Operations	Traffic Data Collection	The center shall receive and respond to requests from ITS Archives for either a catalog of the traffic data or for the data itself.
Tribal Transportation Operations	Traffic Data Collection	The center shall be able to produce sample products of the data available.
Tribal Transportation Operations	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) operational status.
Tribal Transportation Operations	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) operational status.
Tribal Transportation Operations	Traffic Maintenance	The center shall collect and store sensor (traffic, pedestrian, multimodal crossing) fault data and send to the maintenance center for repair.
Tribal Transportation Operations	Traffic Maintenance	The center shall collect and store CCTV surveillance system (traffic, pedestrian) fault data send to the maintenance center for repair.
Tribal Transportation Operations	Traffic Maintenance	The center shall exchange data with maintenance centers concerning the reporting of faulty equipment and the schedule/status of their repair. Information exchanged includes details of new equipment faults, and clearances when the faults are cleared.