

Category	Applications	Documents
	<ul style="list-style-type: none"> • Red-Light Violation Warning (RLVW) • Stop Sign Gap Assist (SSGA) • Curve Speed Warning (CSW) 	<ol style="list-style-type: none"> 1. Accelerated Vehicle-to-Infrastructure (V2I) Safety Applications Concept of Operations Document (http://ntl.bts.gov/lib/48000/48500/48523/272C82A5.pdf) 2. Accelerated Vehicle-to-Infrastructure (V2I) Safety Applications System Requirements Document (http://ntl.bts.gov/lib/48000/48500/48522/67B3E4C4.pdf)
V2I Safety	<ul style="list-style-type: none"> • Spot Weather Information Warning (SWIW) • Reduced Speed Zone Warning (RSZW) 	<ol style="list-style-type: none"> 1. Vehicle-to-Infrastructure (V2I) Safety Applications Concept of Operations Document (http://ntl.bts.gov/lib/48000/48500/48527/ED89E720.pdf) 2. Vehicle-to-Infrastructure (V2I) Safety Applications System Requirements Document (http://ntl.bts.gov/lib/48000/48500/48526/E6E64D50.pdf)
	<ul style="list-style-type: none"> • Pedestrian in Signalized Crosswalk Warning (Transit) 	<ol style="list-style-type: none"> 1. Transit Safety Retrofit Package Development TRP Concept of Operations (FHWA-JPO-14-117) 2. Transit Safety Retrofit Package (TRP) Applications Requirements (FHWA-JPO-14-118) 3. Transit Safety Retrofit Package (TRP) Architecture and Design Specifications (FHWA-JPO-14-119)
V2V Safety	<ul style="list-style-type: none"> • Emergency Electronic Brake Lights (EEBL) • Forward Collision Warning (FCW) • Intersection Movement Assist (IMA) • Left Turn Assist (LTA) • Blind Spot/Lane Change Warning (BSW/LCW) • Do Not Pass Warning (DNPW) 	<ol style="list-style-type: none"> 1. USDOT Connected Vehicle Research Program Vehicle-to-Vehicle Safety Application Research Plan (http://www.nhtsa.gov/DOT/NHTSA/NVS/Crash%20Avoidance/Technical%20Publications/2011/811373.pdf) 2. Vehicle-to-Vehicle Communications: Readiness of V2V Technology for Application (http://www.nhtsa.gov/staticfiles/rulemaking/pdf/V2V/Readiness-of-V2V-Technology-for-Application-812014.pdf) 3. Vehicle Safety Communications – Applications (VSC-A) Final Report (http://www.nhtsa.gov/DOT/NHTSA/NVS/Crash%20Avoidance/Technical%20Publications/2011/811492A.pdf)

List of CV Application System Engineering Documents

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	<ul style="list-style-type: none"> • Vehicle Turning Right in Front of Bus Warning 	<ol style="list-style-type: none"> 1. Transit Safety Retrofit Package Development TRP Concept of Operations (FHWA-JPO-14-117) 2. Transit Safety Retrofit Package (TRP) Applications Requirements (FHWA-JPO-14-118) 3. Transit Safety Retrofit Package (TRP) Architecture and Design Specifications (FHWA-JPO-14-119)
Mobility	<p>EnableATIS</p> <ul style="list-style-type: none"> • Enable Advanced Traveler Information System (EnableATIS) 	<ol style="list-style-type: none"> 1. Vision and Operational Concept for Enabling Advanced Traveler Information Services Operational Concept (http://ntl.bts.gov/lib/45000/45900/45929/Final_Package_FHWA-JPO-12-052_508.pdf) 2. Vision and Operational Concept for Enabling Advanced Traveler Information Services - Market Readiness Assessment (http://ntl.bts.gov/lib/45000/45500/45560/FHWA-JPO-12-053.pdf) 3. EnableATIS Strategy Assessment (http://ntl.bts.gov/lib/52000/52600/52622/FHWA-JPO-14-113-v1.pdf)
	<p>MMITSS</p> <ul style="list-style-type: none"> • Intelligent Traffic Signal System (I-SIG) • Transit Signal Priority (TSP) and Freight Signal Priority (FSP) • Mobile Accessible Pedestrian Signal System (PED-SIG) • Emergency Vehicle Preemption (PREEMPT) 	<ol style="list-style-type: none"> 1. MMITSS Final ConOps (http://www.cts.virginia.edu/wp-content/uploads/2014/05/Task2.3_CONOPS_6_Final_Revised.pdf) 2. Multi-Modal Intelligent Traffic Signal System Final System Requirements Document (http://www.cts.virginia.edu/wp-content/uploads/2014/05/Task3_SyRS_4_PostSubmittal_V3.pdf) 3. Multi-Modal Intelligent Traffic Signal System - System Design (http://www.cts.virginia.edu/wp-content/uploads/2014/05/Task4_SystemDesign_3_Revised_v.2.pdf)

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	<p>INFLO</p> <ul style="list-style-type: none"> • Queue Warning (Q-WARN) • Dynamic Speed Harmonization (SPD-HARM) • Cooperative Adaptive Cruise Control (CACC) 	<ol style="list-style-type: none"> 1. Concept Development and Needs Identification for Intelligent Network Flow Optimization (INFLO) Concept of Operations (http://ntl.bts.gov/lib/42000/42300/42325/FHWA-JPO-13-012_Final_Pkg_v2.pdf) 2. Concept Development and Needs Identification for Intelligent Network Flow Optimization (INFLO) Assessment of Relevant Prior and Ongoing Research (http://ntl.bts.gov/lib/48000/48200/48287/52EC069E.pdf) 3. Concept Development and Needs Identification for INFLO: Functional and Performance Requirements, and High-Level Data and Communication Needs (http://ntl.bts.gov/lib/48000/48200/48294/ED9816D5.pdf) 4. Concept Development and Needs Identification for Intelligent Network Flow Optimization (INFLO) Test Readiness Assessment (http://ntl.bts.gov/lib/48000/48200/48290/7005F998.pdf) 5. Report on Detailed Requirements for the INFLO Prototype (Approved by USDOT, waiting for publicity) 6. Report on Architecture Description for the INFLO Prototype (Approved by USDOT, waiting for publicity) 7. Report on Dynamic Speed Harmonization and Queue Warning Algorithm Design (Approved by USDOT, waiting for publicity) 8. System Design Document for the INFLO Prototype (Approved by USDOT, waiting for publicity)

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	<p>R.E.S.C.U.M.E.</p> <ul style="list-style-type: none"> • Incident Scene Pre-Arrival Staging Guidance for Emergency Responders (RESP-STG) • Incident Scene Work Zone Alerts for Drivers and Workers (INC-ZONE) • Emergency Communications for Evacuation (EVAC) 	<ol style="list-style-type: none"> 1. Response, Emergency Staging, Communications, Uniform Management, and Evacuation (R.E.S.C.U.M.E.) Concept of Operations (http://ntl.bts.gov/lib/48000/48500/48520/66C294FF.pdf) 2. Response, Emergency Staging, Communications, Uniform Management, and Evacuation (R.E.S.C.U.M.E.) Report on Functional and Performance Requirements, and High-Level Data and Communication Needs (http://ntl.bts.gov/lib/48000/48500/48519/32BFD176.pdf) 3. Prototype Development and Demonstration for Response, Emergency Staging, Communications, Uniform Management, and Evacuation (R.E.S.C.U.M.E.) Final Functional and Performance Requirements (Approved by USDOT, waiting for publicity) 4. Prototype Development and Demonstration for Response, Emergency Staging, Communications, Uniform Management, and Evacuation (R.E.S.C.U.M.E.) R.E.S.C.U.M.E. Prototype System Design Document (Approved by USDOT, waiting for publicity)
	<p>IDTO</p> <ul style="list-style-type: none"> • Connection Protection (T-CONNECT) • Dynamic Transit Operations (T-DISP) • Dynamic Ridesharing (D-RIDE) 	<ol style="list-style-type: none"> 1. Integrated Dynamic Transit Operations (IDTO) Concept of Operations (FHWA-JPO-12-083) 2. Report on Functional and Performance Requirements and High-Level Data and Communication Needs for Integrated Dynamic Transit Operations (IDTO) (http://ntl.bts.gov/lib/47000/47200/47273/FHWA-JPO-12-085_Final_Pkg_v2.pdf) 3. Test Readiness Assessment Summary for Integrated Dynamic Transit Operations (IDTO) (FHWA-JPO-12-086) 4. Report on Functional Requirements and Software Architecture for the IDTO Prototype Phase I Demonstration Site (Columbus) (Approved by USDOT, waiting for publicity) 5. System Design and Architecture for the IDTO Prototype Phase I Demonstration Site (Columbus) (Approved by USDOT, waiting for publicity)

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	<p>FRATIS</p> <ul style="list-style-type: none"> • Freight-Specific Dynamic Travel Planning and Performance • Drayage Optimization (DR-OPT) 	<ol style="list-style-type: none"> 1. Freight Advanced Traveler Information System (FRATIS) Concept of Operations (Approved by USDOT, waiting for publicity) 2. Freight Advanced Traveler Information System Functional Requirements (Approved by USDOT, waiting for publicity) 3. FRATIS Concept of Operations – Assess Test Readiness of FRATIS (Task 4) (FHWA-JPO-12-068) 4. Software Architecture Design and Implementation Options for Freight Advanced Traveler Information System (FRATIS) (Approved by USDOT, waiting for publicity) 5. Freight Advanced Traveler Information System (FRATIS) - Dallas Demonstration Plan (Approved by USDOT, waiting for publicity) 6. Final System Design and Architecture for FRATIS Prototype – FRATIS Los Angeles Gateway Project (Approved by USDOT, waiting for publicity) 7. South Florida Freight Advanced Traveler Information System (Approved by USDOT, waiting for publicity) 8. Prototype Development and Small-Scale Demonstrations for FRATIS - Los Angeles Gateway Freight Advanced Traveler Information System (Approved by USDOT, waiting for publicity)
<p>Road Weather</p>	<ul style="list-style-type: none"> • Enhanced Maintenance Decision Support System (MDSS) • Weather-Responsive Traffic Management (WxTINFO) • Motorist Advisories and Warnings • Information and Routing Support for Emergency Responders 	<ol style="list-style-type: none"> 1. Concept of Operations for Road Weather Connected Vehicle Applications (http://ntl.bts.gov/lib/47000/47300/47330/74CD2020.pdf)
	<ul style="list-style-type: none"> • Vehicle Data Translator (VDT) 	

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Environment	<ul style="list-style-type: none"> • Eco-Approach and Departure at Signalized Intersections • Eco-Traffic Signal Timing • Eco-Traffic Signal Priority • Connected Eco-Driving • Wireless Inductive Charging 	<ol style="list-style-type: none"> 1. Applications for the Environment: Real-Time Information Synthesis (AERIS) Eco-Signal Operations: Operational Concept (http://ntl.bts.gov/lib/51000/51400/51429/FINAL_Eco-Signal_Operations_ConOps_01-2014.pdf)
	<ul style="list-style-type: none"> • Eco-Lanes Management • Eco-Speed Harmonization • Eco-Cooperative Adaptive Cruise Control • Eco-Ramp Metering 	<ol style="list-style-type: none"> 1. Applications for the Environment: Real-Time Information Synthesis (AERIS) - Eco-Lanes: Operational Concept (http://ntl.bts.gov/lib/51000/51700/51774/114.pdf)
	<ul style="list-style-type: none"> • Low Emissions Zone Management 	<ol style="list-style-type: none"> 1. Applications for the Environment: Real-Time Information Synthesis (AERIS) Low Emissions Zones: Operational Concept (http://ntl.bts.gov/lib/52000/52700/52755/FINAL_Low_Emissions_Zones_ConOps_01-2014.pdf)
	<ul style="list-style-type: none"> • Eco-Traveler Information Applications • AFV Charging / Fueling Information • Eco-Smart Parking • Dynamic Eco-Routing (Light Vehicle, Transit, Freight) • Eco-ICM Decision Support System 	<ol style="list-style-type: none"> 1. Descriptions and concepts are available in the presentation decks (http://www.its.dot.gov/aeris/pdf/AERIS_Operational_Scenarios011014.pdf)
Agency Data	<ul style="list-style-type: none"> • Probe-based Pavement Maintenance • Probe-enabled Traffic Monitoring • Vehicle Classification-based Traffic Studies • CV-enabled Turning Movement & Intersection Analysis • CV-enabled Origin-Destination Studies • Work Zone Traveler Information 	<ol style="list-style-type: none"> 1. National Connected Vehicle Field Infrastructure Footprint Analysis Deployment Scenarios (http://stsmo.transportation.org/Documents/Task%206a%20AASHTO_CV_Footprint_Deployment_Scenarios_v2.pdf)

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<p>Smart Roadside</p>	<ul style="list-style-type: none"> • Wireless Inspection • Smart Truck Parking 	<ol style="list-style-type: none"> 1. Smart Roadside Initiative Concept of Operations (Approved by USDOT, waiting for publicity) 2. Smart Roadside Initiative System Requirements Specifications (Approved by USDOT, waiting for publicity) 3. Smart Roadside Initiative Prioritization of Potential SRI Applications (Approved by USDOT, waiting for publicity) 4. Smart Roadside Initiative User Needs: A Summary of Findings (Approved by USDOT, waiting for publicity) 5. Smart Roadside Initiative System Design Document (Approved by USDOT, waiting for publicity) 6. Smart Roadside Initiative System Architecture Design (Approved by USDOT, waiting for publicity) 7. Smart Roadside Initiative Prototype System Integration and Test Plan (Approved by USDOT, waiting for publicity)