January 31, 2024

Mr. John Harding
U.S. Department of Transportation
Federal Highway Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: USDOT Draft National Vehicle-to-Everything Deployment Plan

Dear Mr. Harding,

As the nation's leading advocate for the technological modernization of our transportation system by advancing research and deployment of intelligent transportation technology, the Intelligent Transportation Society of America (ITS America) is grateful for the opportunity to provide feedback on the United States Department of Transportation's (USDOT) draft National Vehicle-to-Everything (V2X) Deployment Plan (Plan), titled "Saving Lives with Connectivity: A Plan to Accelerate V2X Deployment." Please find below our initial feedback on the specifics of this proposal.

1. What is your reaction to the plan?

   - ITS America believes that the Plan is a bold, attainable vision for widespread V2X deployment across the United States. We believe that the Plan represents both a crucial milestone in the Department's leadership on V2X adoption, as well as an important roadmap for public and private V2X deployers looking to align their efforts with USDOT's vision and support. Critically, this Plan serves as an essential indicator of much needed regulatory certainty in the V2X space, particularly when combined with the recent inclusion of V2X in the National Roadway Safety Strategy. ITS America believes that the publishing of this plan showcases USDOT's leadership on this issue and is an important step on the road to widespread deployment; a step that is amplified by the meaningful guidance provided for V2X stakeholders throughout this Plan.

- While there are specific areas we believe should be included or further expanded in the final version of this Plan, ITS America is pleased with the actions outlined within the Plan, particularly the infrastructure deployment goals. ITS America published our own [National V2X Deployment Plan](#) in April 2023, and we are pleased to see many of our infrastructure-based suggestions reflected in this USDOT Plan. We have additional suggestions as to how the Plan could encourage the deployment of V2X devices in vehicles, including specifically outlining the ways in which the National Highway Traffic Safety Administration (NHTSA) will engage with the private sector to encourage deployment. While we believe that the plan outlines an achievable vision for V2X deployment within dedicated spectrum, we recommend the Plan be expanded to significantly include Network V2X – a critical V2X medium that is not represented in the current version of this Plan and we have outlined several suggestions for how that can be achieved later in this document. ITS America fully shares USDOT's conviction that V2X represents a vital tool in reducing fatalities on American roads. We understand that the full potential of this life-saving technology will not be reached without USDOT's robust leadership and the finalization of this Plan.

2. What do you like about it?

- The infrastructure deployment goals and milestones articulated by USDOT in this Plan are clear and achievable. We believe that the timetables for V2X deployment within the top 75 Metropolitan areas and the National Highway System are appropriate, ambitious, and attainable. The metrics described by this plan would dramatically upscale V2X infrastructure availability at a rapid pace, positioning V2X technologies to begin quickly improving safety on our nation's roadways. These are balanced milestones which reflect a reasonable path to V2X deployment for communities of varying sizes and circumstances, and we believe that USDOT has been successful in balancing both intersection and

highway deployment goals within this Plan. These metrics will provide a structured framework for measuring progress and ensuring accountability in the implementation of a scaled, national V2X deployment.

- ITS America is fully aligned with the Plan's prioritization of road safety improvement, particularly as it relates to USDOT's larger National Roadway Safety Strategy (NRSS). We support USDOT's recent inclusion of V2X deployment as a component of that strategy and believe that this Plan reflects a significant opportunity to achieve NRSS goals. While there are numerous mobility, efficiency, and sustainability benefits associated with V2X deployment, we agree that the primary benefit will be in helping to reach zero fatalities on U.S. roadways. We commend the Plan's specific inclusion of milestones for applications that focus on vulnerable road users, a critical use case area for V2X which is poised to significantly improve transportation safety outcomes across the board. We encourage USDOT to continue to support the development and deployment of vulnerable road user safety applications in infrastructure and in vehicles, building on the framework established by this Plan.

- The Plan recognizes the importance of collaboration and coordination among various stakeholders, including Federal, state, local, and tribal governments, as well as industry and research organizations. This multi-stakeholder approach is crucial in ensuring a cohesive and unified deployment strategy for V2X technologies across the country. Furthermore, ITS America applauds the manner in which USDOT engaged with the larger V2X stakeholder community during the creation of this plan. The Department's work in hosting numerous V2X summits and in carrying out extensive individual outreach to various groups has helped this Plan reflect the perspectives of a wide range of V2X stakeholders. This process of soliciting additional feedback on the draft version of the Plan is another helpful component of the broader V2X deployment strategy.

3. What is missing or what would you change?

- While this Plan delivers a strong roadmap for deployment of V2X technologies that utilize the 5.9 GHz band, we believe that the Plan should include V2X technologies that operate outside of dedicated spectrum. Network V2X can fulfill numerous important uses, including those related to safety, emergency vehicle operations, work zone alerting, and various information-sharing benefits. Furthermore, Network V2X leverages existing infrastructure deployments that provide reliable coverage to over 99% of Americans, enabling a faster roadmap to V2X deployment, making U.S. roadways safer, faster. Network V2X can also leverage mobile phones to provide alerts and information to drivers, which drivers already hook up to in-vehicle systems. Again, this helps speed integration and adoption of V2X technology, with minimal cost. While the USDOT's Draft Plan suggests that there are interoperability issues with Network V2X, recent roadway demonstrations have indicated the opposite conclusion – that Network V2X will be an interoperable, critical component of our nationwide V2X ecosystem. Network V2X is complementary to Direct V2X and should be included as a named component of USDOT's larger V2X strategy. ITS America's Beyond 5.9 GHz Working Group will soon be releasing a "Beyond 5.9 Deployment Plan" to highlight ways in which spectrum-based and network-based communications can be utilized simultaneously, and we look forward to sharing that final report with the Department.

- ITS America supports the timetable for in-vehicle V2X deployment that has been articulated by this Plan and believes that those deployment goals can be achieved with sufficient regulatory support. We do, however, believe that the Plan should be more specific about the regulatory support that the Department will be providing to encourage V2X deployment in vehicles, particularly as it relates to NHTSA's New Car Assessment Program (NCAP). Absent a V2X mandate, recognition within NCAP's rating system represents one of the strongest tools available to encourage V2X deployment in vehicles at

scale, further establishing consumer awareness about the safety benefits of V2X and bolstering the business case for early V2X adoption. While we are aware that outstanding regulatory uncertainty from the Federal Communication Commission's (FCC) delay in publishing final rules for C-V2X technologies continues to hamper NHTSA's ability to act quickly to include V2X in NCAP, we disagree with the timeline suggested in the Plan. This timeline has NHTSA only beginning to explore V2X's inclusion in NCAP in 2027. USDOT should be working as soon as possible on determining the best path to include V2X in NCAP, so that NHTSA can respond efficiently to any final rules from the FCC on C-V2X.

- The Plan would benefit further by including more goals related to aftermarket installations, particularly for public and commercial fleets. While the integration of V2X technology into new private vehicle models by Original Equipment Manufacturers (OEMs) is a vital long-term strategy, the benefits of V2X can be realized more immediately through aftermarket installations in public and private vehicles and fleets. The Department's plan should include guidance and incentives for aftermarket V2X installations, ensuring that consumers more quickly realize the V2X safety, efficiency, and environmental benefits.

4. What resources do you feel are needed to help scale and deploy V2X technology?

- Additional dedicated funding sources will be a critical component of a successful national V2X deployment. Rather than making states compete for discretionary funds, USDOT should help secure or identify more consistent formula funding for all states that allows states to build and execute their plans. While the V2X Accelerator funds are poised to provide significant deployment support in the short term, stable formula funding sources will be required to achieve the Plan's desired levels of V2X infrastructure deployment.

- V2X deployers would benefit from additional guidance on achieving interoperability, including through defining interoperability on the unit, system, security, and deployment levels. USDOT is well-positioned to provide guidance on how to achieve interoperability between spectrum-based and network-based V2X communications. This guidance should focus on the application of SAE standards for V2X messages and the Security Credentials Management System (SCMS) with other communication methods.

- V2X deployers would benefit from additional clarity on USDOT efforts to encourage the implementation of mature security and privacy measures related to V2X operations writ large. Robust measures must be implemented to protect against cyber threats and ensure data privacy and reliability, especially as data exchange becomes increasingly critical to transportation-related decision-making and system operation.

5. What would you like to see in the short term (next 2-3 years) from other stakeholders, including from USDOT or from the public/private sectors?

- The release of the FCC's Second Report and Order on C-V2X is a critical short-term step to support V2X deployment, and USDOT should continue to work with the FCC and the National Telecommunications and Information Administration (NTIA) to encourage the release of those final rules as soon as possible. USDOT understands this is the critical logjam in the way of establishing true regulatory certainty for V2X deployment, and ITS America is grateful for the Department's longstanding efforts to encourage the conclusion of this lengthy process. We are confident that final rules will allow public and private stakeholders to begin deploying V2X devices in earnest and will facilitate needed additional regulatory support from agencies such as NHTSA. To that point, we would suggest that the timeline for initial OEM commitments to include V2X in new vehicle models be tied to the timing of the FCC's release of final rules for the 5.9 GHz band – these commitments cannot be made in the absence of clear spectrum rules, and there
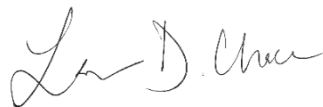
remain concerns around issues such as interference levels that can only be met when the final rules are released. We have no doubt that USDOT is working to rapidly alleviate these concerns, but the Plan should reflect the uncertainty that is inherently associated with further FCC delays on this subject.

- ITS America would also encourage Secretary Buttigieg and other USDOT leaders to continue to demonstrate support for V2X deployment. Secretary Buttigieg's remarks at the third V2X Summit represented a supportive theme that we believe OST should continue in future communications on the topic. We believe that Secretary Buttigieg's support will be a key component of securing political approval for V2X engagement throughout the rest of the Biden Administration, and we are grateful for any efforts by the Department to continue to highlight both the potential and already realized successes of V2X deployment.

- USDOT should work to develop a central national archive which lists operational V2X deployments. That archive should include relevant information on each deployment, including the exact location of roadside unit locations, certification and validation status, the messages being broadcasted, and what applications are being supported. We believe this would be an important tool in helping establish consistent interoperability across deployments and would be a beneficial tool when planning further V2X deployments.

- The V2X ecosystem would benefit from an institutionalized program to educate practitioners on V2X benefits, implementation, interoperability, and other relevant topics. This program should be organized through USDOT with direct support from an organization with relevant V2X experience and V2X stakeholder membership. This program could help contribute towards USDOT's efforts in V2X workforce development, another important need in this space.

ITSA.org   202-484-4847   info@itsa.org

- V2X stakeholders would benefit from an official glossary of V2X terminology and/or a list of necessary equipment for specific V2X use cases. This will give public sector agencies a roadmap to follow and give industry followable guidance. This should not only build on the V2X work already being done by the Department internally, but also should include input from various outside partners.

- ITS America would like to reiterate our above recommendation that USDOT should give greater resources and attention to Network V2X, as it represents a critical component of the larger V2X ecosystem. Many of our members are using Network V2X to deploy V2X solutions today that are enabling better safety outcomes and transportation efficiency, along with numerous other beneficial outcomes. ITS America would like to avoid a siloed approach to support for the deployment of Direct and Network V2X, as the two are deeply related and necessary to achieve the full potential of transportation connectivity.

ITS America remains grateful for the work that USDOT has done to create this Plan, which represents a major step forward towards the successful achievement of national V2X deployment. We look forward to working with USDOT to ultimately implement the strategies within the Plan, and are encouraged by the strong leadership the Department is providing through this effort. If you have any questions about our above recommendations, please feel free to contact ITS America's Senior Director of Policy and Advocacy, Bobby McCurdy, at bmccurdy@itsa.org.

Sincerely,

Laura Chace
President and CEO
ITS America