

ORAL ARGUMENT NOT YET SCHEDULED

No. 21-1130
(Consolidated with Nos. 21-1131, 21-1141)

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

INTELLIGENT TRANSPORTATION SOCIETY OF AMERICA AND THE
AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS,
Appellants-Petitioners

v.

FEDERAL COMMUNICATIONS COMMISSION AND
THE UNITED STATES OF AMERICA,
Appellee-Respondents

On Appeal from an Order of the Federal Communications Commission

***AMICI CURIAE* BRIEF OF THE AMERICAN TRAFFIC SAFETY
SERVICES ASSOCIATION, AMERICAN HIGHWAY USERS ALLIANCE,
INSTITUTE OF TRANSPORTATION ENGINEERS, MOTHERS AGAINST
DRUNK DRIVING AND NATIONAL SAFETY COUNCIL
IN SUPPORT OF APPELLANTS SEEKING REVERSAL**

Julie B. Kulovits
TENENBAUM LAW GROUP PLLC
1101 K Street, NW, Suite 700
Washington, DC 20005
(202) 221-8006

jkulovits@TenenbaumLegal.com

*Counsel for the American Traffic Safety Services Association,
American Highway Users Alliance, Institute of Transportation Engineers,
Mothers Against Drunk Driving, and the National Safety Council*

CORPORATE DISCLOSURE STATEMENTS

Pursuant to Rules 29(a)(4)(A) and 26.1 of the Federal Rules of Appellate Procedure as well as Rule 26.1 of the rules for the Federal Appellate Circuit for the District of Columbia¹, parties to this *amici curiae* brief state as follows:

American Traffic Safety Services Association is a nonprofit membership association representing the roadway safety infrastructure industry with a focus on reducing roadway fatalities to zero through training, advocacy, and sharing of best practices. It does not have any parent companies, and no publicly-held companies have a 10% or greater ownership interest in the association.

American Highway Users Association is a nonprofit 501(c)(6) organization serving as the united voice of the transportation community to promote safe, uncongested highways and enhanced freedom of mobility. The American Highway Users Alliance does not have any parent companies, and no publicly-held companies have a 10% or greater ownership interest in the association.

¹ Pursuant to D.C. Cir. Rule 29(b), the parties' corporate disclosure statements were also filed concurrently with their notices of intent to participate as *amici*. See American Traffic Safety Services Association Notice of Intent to Participate as *Amicus Curiae*, Doc. No. 1909957; American Highway Users Alliance Notice of Intent to Participate as *Amicus Curiae*, Doc No. 1910947; Institute of Transportation Engineers Notice of Intent to Participate as *Amicus Curiae*, Doc No. 1910892; Mothers Against Drunk Driving Notice of Intent to Participate as *Amicus Curiae*, Doc. No. 1910893; and National Safety Council Notice of Intent to Participate as *Amicus Curiae*, Doc. No. 1910894.

Institute of Transportation Engineers is a nonprofit membership association of transportation professionals who work to improve mobility and safety for all transportation system users and help build smart and livable communities. The Institute of Transportation Engineers does not have any parent companies, and no publicly-held companies have a 10% or greater ownership interest in the association.

Mothers Against Drunk Driving is a nonprofit organization with a mission, *inter alia*, to end drunk driving and fight drugged driving. In pursuit of these objectives, MADD participates actively in public and private studies, legislative initiatives, advocacy efforts, and law-enforcement programs aimed at reducing the incidence of alcohol-related roadway tragedies. MADD does not have any parent companies, and no publicly-held companies have a 10% or greater ownership interest in the organization.

National Safety Council is the nation's leading nonprofit safety advocate and has been for over 100 years. The National Safety Council does not have any parent companies, and no publicly-held companies have a 10% or greater ownership interest in the association.

Respectfully Submitted,

/s/ Julie B. Kulovits

Julie B. Kulovits

TENENBAUM LAW GROUP PLLC

1101 K Street, NW, Suite 700

Washington, DC 20005

(202) 221-8006

jkulovits@TenenbaumLegal.com

Counsel for the American

Traffic Safety Services Association,

American Highway Users Alliance,

Institute of Transportation Engineers,

Mothers Against Drunk Driving,

and the National Safety Council

August 20, 2021

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), the American Traffic Safety Services Association, American Highway Users Alliance, Institute of Transportation Engineers, Mothers Against Drunk Driving and the National Safety Council all certify as follows:

I. PARTIES AND AMICI

Appellant-Petitioners: The Intelligent Transportation Society of America (Nos. 21-1130; 21-1131), American Association of State Highway and Transportation Officials (Nos. 21-1130; 21-1131), and the Amateur Radio Emergency Data Network (No. 21-1141) are the Appellant-Petitioners in this matter.

Appellee-Respondents: The Federal Communications Commission (No. 21-1131) and the United States of America (Nos. 21-1130; 21-1141) are the Appellee-Respondents in this matter.

Intervenors for Appellant-Petitioners: In addition to its role as an Appellant-Petitioner (No. 21-1141), the Amateur Radio Emergency Data Network is appearing in certain of the cases (Nos. 21-1130; 21-1131) as an Intervenor on behalf of the Appellant-Petitioners. Continental Automotive Systems is also appearing as an Intervenor on behalf of Appellant-Petitioners.

Intervenors for Appellee-Respondents: The Internet & Television

Association, the Wi-Fi Alliance, and the 5G Automotive Association are appearing as Intervenors on behalf of the Appellees-Respondents.

Amici: The parties to this brief (American Traffic Safety Services Association, American Highway Users Alliance, Institute of Transportation Engineers, Mothers Against Drunk Driving and the National Safety Council) are appearing as *amici* in support of the Petitioner-Appellants. CTIA – The Wireless Association filed a notice of intent to participate as *amicus* on August 13, 2021.

II. RULING UNDER REVIEW

The consolidated actions under review (Nos. 21-1130; 21-1131; 21-1141) challenge an order of the Federal Communications Commission captioned as follows: *Use of the 5.850-5.925 GHz Band*, First Report and Order, Further Notice of Proposed Rulemaking, and Order of Proposed Modification, 35 F.C.C.R. 13440 (2020) (“Order”), published in the Federal Register on May 3, 2021. *See* 86 Fed. Reg. 23281 (May 3, 2021).

III. RELATED CASES

Other than the consolidated cases, the parties to this brief are not aware of any other related cases pertaining to this appeal.

Respectfully Submitted,

/s/ Julie B. Kulovits

Julie B. Kulovits

TENENBAUM LAW GROUP PLLC

1101 K Street, NW, Suite 700

Washington, DC 20005

(202) 221-8006

jkulovits@TenenbaumLegal.com

Counsel for the American

Traffic Safety Services Association,

American Highway Users Alliance,

Institute of Transportation Engineers,

Mothers Against Drunk Driving,

and the National Safety Council

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	x
GLOSSARY OF ABBREVIATIONS	xii
STATUTES AND REGULATIONS	1
RULE 29 STATEMENT OF IDENTITY, INTEREST, AUTHORITY, AUTHORSHIP, AND FINANCIAL CONTRIBUTION	2
INTRODUCTION AND SUMMARY	5
ARGUMENT	6
I. Traffic Crashes have a Devastating Impact on our Society that Can be Prevented through the Continued Use of Intelligent Transportation System Technologies within the Safety Band....	6
A. Traffic Crashes Account for a Significant Number of Fatalities, Injuries and Economic Losses Each Year.....	6
B. Traffic Crashes are Not a “Way of Life” that Must be Accepted in Modern Society but Can Be Prevented.....	8
C. The Development of Intelligent Transportation Systems is Critical to the Prevention of Traffic Crashes.....	9
D. ITS Technologies within the Safety Band are being Deployed and Advancing.....	11
II. Congress has Prioritized Traffic Safety and the Development of ITS as a Priority Solution; the FCC’s Decision to Significantly Reduce the Size of the Safety Band is Contrary to this Congressional Intent.....	13
A. Congress has Recognized the Importance of ITS in Addressing the Consequences of Traffic Crashes.....	13

B. The Judgment Congress Delegated to the Department of
Transportation Regarding the ITS program was Usurped by
the FCC..... 16

C. Full Use of the Safety Band is Necessary to Move these Life-
Saving Innovations Forward..... 20

CONCLUSION..... 25

CERTIFICATE OF SERVICE..... 27

CERTIFICATE OF COMPLIANCE..... 28

TABLE OF AUTHORITIES

Cases	Page
<i>Dist. Hosp. Partners, L.P. v. Burwell</i> , 786 F.3d 46 (D.C. Cir. 2015).....	19
* <i>Epic Sys. Corp. v. Lewis</i> , 138 S. Ct. 1612 (2018).....	16
* <i>FDA v. Brown & Williamson Tobacco Corp.</i> , 529 U.S. 120 (2000).....	16
<i>Nat’l Lifeline Ass’n v. FCC</i> , 921 F.3d 1102 (D.C. Cir. 2019).....	25
Statutes	
23 U.S.C. § 501.....	9
*23 U.S.C § 514.....	15
*23 U.S.C. § 515.....	15
Pub. L. No. 102-240, 105 Stat. 1914 (1991).....	14
Pub. L. No. 105-178, 112 Stat. 107 (1998).....	15, 16
Pub. L. No. 109-59, 119 1144 (2005).....	14
Pub. L. No. 112-141, 126 Stat. 405 (2012)	14
Pub. L. No. 114-94, 129 Stat. 1312 (2015).....	14
Regulations	
86 Fed. Reg. 23281 (May 3, 2021).....	vi

Administrative Agency Decisions

Amendment of Parts 2 & 90 of the Commission’s Rules to Allocate the 5.850-5.925 GHz Band, Report and Order, 14 F.C.C.R. 18221 (1999).... 16, 17

Amendment of the Commission’s Rules to Allocate the 5.850-5.925 GHz Band, Report and Order, 19 F.C.C.R. 2458 (2004)..... 7, 8

Use of the 5.850-5.925 GHz Band, First Report and Order, Further Notice of Proposed Rulemaking, and Order of Proposed Modification, 35 F.C.C.R. 13440 (2020) (“Order”)..... vi, 17

Other Authorities

Infrastructure Investment and Jobs Act, H.R. 3684 (117th Congress) (2021)..... 14

Authorities upon which the amici parties chiefly rely upon are marked with asterisks.

GLOSSARY OF ABBREVIATIONS

ATSSA	American Traffic Safety Services Association
AHUA	American Highway Users Alliance
AAI	Alliance for Automotive Innovation
4G LTE	Fourth (4th) Generation Long-Term Evolution
5G	Fifth (5th) Generation
C-V2X	Cellular Vehicle-to-Everything Communications
DOT	United States Department of Transportation
DSRC	Dedicated Short Range Communications
FCC or Commission	Federal Communications Commission
GHz	Gigahertz
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation Systems
MADD	Mothers Against Drunk Driving
MHz	Megahertz
mph	Miles per hour
NHTSA	National Highway Traffic Safety Administration
NSC	National Safety Council
NTIA	National Telecommunications and Information Administration
NTSB	National Transportation Safety Board

Safety Band or 5.9 GHz Band	The 5.850-5.925 GHz radiofrequency band
TEA-21	Transportation Equity Act for the 21st Century, Pub. L. No. 105-178, 112 Stat. 107 (1998)
V2I	Vehicle-to-Infrastructure Communications
V2P	Vehicle-to-Pedestrian Communications
V2V	Vehicle-to-Vehicle Communications
V2X	Vehicle-to-Everything Communications

STATUTES AND REGULATIONS

All pertinent statutes are included in Petitioners' brief (as part of the Statutory Addendum).

**RULE 29 STATEMENT OF IDENTITY, INTEREST, AUTHORITY,
AUTHORSHIP, AND FINANCIAL CONTRIBUTION**

Pursuant to Fed. R. App. Proc. 29(a)(4)(D) and Fed. R. App. Proc. 29(a)(4)(E), the American Traffic Safety Services Association (“ATSSA”), American Highway Users Alliance (“AHUA”), Institute of Transportation Engineers (“ITE”), Mothers Against Drunk Driving (“MADD”) and the National Safety Council (“NSC”) state as follows:

This appeal concerns the propriety of the Order of the Federal Communications Commission (“FCC”) to reallocate a dedicated 75-megahertz band of radiofrequency spectrum known as the “5.9 GHz band” or “Safety Band.” The Safety Band was first allocated in 1999 as part of a statutory directive in the Transportation Equity Act for the 21st Century and has since been reserved for intelligent transportation systems (“ITS”) that enable vehicles to communicate with each other along with roadway infrastructure and other nearby devices to improve roadway safety and efficiency. With the FCC’s Order, the vast majority of the Safety Band will no longer be reserved for and dedicated to these roadway safety-related uses but will instead be rededicated to unlicensed Wi-Fi operations.

ATSSA, AHUA, ITE, MADD and NSC are nonprofit organizations and associations that are authoritative and leading voices in the field of roadway safety. Each has an interest in this appeal as its members and stakeholders have been at the

forefront of the roadway safety technologies intended for operation within the Safety Band that are at the heart of this appeal. ATSSA, AHUA, ITE, MADD and NSC, additionally, all have concerns on the detrimental impact the Order will have on roadway safety efforts.

ATSSA, AHUA, ITE, MADD and NSC are authorized to file this brief pursuant to D.C. Circuit Rule 29(b) as all parties have consented to this *amici* participation. ATSSA filed its notice of intent to participate as *amicus* on August 11, 2021. *See* ATSSA Notice of Intent to Participate as *Amicus Curiae*, Doc. No. 1909957. AHUA, ITE, MADD, and NSC each filed a notice of intent to participate as *amicus* on August 20, 2021. *See* AHUA Notice of Intent to Participate as *Amicus Curiae*, Doc No. 1910947; ITE Notice of Intent to Participate as *Amicus Curiae*, Doc No. 1910892; MADD Notice of Intent to Participate as *Amicus Curiae*, Doc. No. 1910893; NSC Notice of Intent to Participate as *Amicus Curiae*, Doc. No. 1910894.

No counsel for any party to this case authored this brief in whole or in part; no party or party's counsel contributed money to fund the preparation or submission of this brief; and no other person other than the *amici* listed above, their members or counsel contributed money to fund preparing or submitting the brief.

Respectfully Submitted,

/s/ Julie B. Kulovits

Julie B. Kulovits

TENENBAUMLAW GROUP PLLC

1101 K Street, NW, Suite 700

Washington, DC 20005

(202) 221-8006

jkulovits@TenenbaumLegal.com

Counsel for the American

Traffic Safety Services Association,

American Highway Users Alliance,

Institute of Transportation Engineers,

Mothers Against Drunk Driving,

and the National Safety Council

INTRODUCTION AND SUMMARY

Before this Court are some of the nation's most preeminent experts dedicated to the cause of roadway safety – the American Traffic Safety Services Association, American Highway Users Association, Institute of Transportation Engineers, Mothers Against Drunk Driving and the National Safety Council. The parties appear as *amici* before this Court to sound a loud and clear alarm: the FCC's Order removing the majority of the Safety Band will have significant and detrimental safety consequences. These *amici* are not alone in their concern. In fact, to the contrary, the chorus of those concerned includes a wide variety of federal, state, and local entities and other safety-related stakeholders. These stakeholders include authoritative voices such as the United States Department of Transportation, the National Transportation Safety Board, departments of transportation of every state in the nation (in addition to the District of Columbia and Puerto Rico), and nearly all the commenters in the underlying administrative proceedings that had experience working with the Safety Band including automakers, first responders, and academia.

The primary concern, and the one addressed in this *amici* brief, relates to the portion of the Order which permanently reallocates more than sixty percent of a band of spectrum dedicated to transportation safety. This band, otherwise known as the “5.9 GHz band” or “Safety Band,” is a critical component for safety-related innovations that are part of a realistic and achievable goal to significantly reduce,

and potentially eliminate, traffic crashes and their related fatalities, deaths, and costs. Although Congress has recognized the priority of this goal and the critical role the technologies that are at issue in this appeal have in achieving that goal, the FCC has disregarded these concerns in order to make way for more unlicensed Wi-Fi operations that primarily benefit items of consumer convenience – e.g., smart toasters and Wi-Fi enabled washing machines.

In making its decision, the FCC failed to properly account for the vast amount of safety-related information and thwarted the investments and progress that has been made in this arena. The FCC Order conflicts with the intentions of Congress that must supersede here and is otherwise arbitrary and capricious. For the reasons below, as well as those outlined in Petitioners' brief, the FCC's Order concerning the reallocation of the Safety Band must be reversed.

ARGUMENT

I. Traffic Crashes have a Devastating Impact on our Society that Can be Prevented through the Continued Use of Intelligent Transportation System Technologies within the Safety Band.

A. Traffic Crashes Account for a Significant Number of Fatalities, Injuries and Economic Losses Each Year.

According to the National Highway Traffic Safety Administration (“NHTSA”) nearly 6,500,000 police-reported traffic crashes occur each year in the United States. The consequences these events have on our society are simply

staggering. Each year, traffic crashes result in nearly 40,000 deaths, or an equivalent of over 100 lives each day. *See* Comments of the American Traffic Safety Services Association, ET Dkt 19-138 (filed March 2, 2020), at p. 1 (“ATSSA Comments”), JA __; *see also* National Safety Council, *2018 Marks Third Straight Year that Motor Vehicle Deaths are Estimated to Have Reached 40,000* (Feb 13, 2019), available at <https://www.nsc.org/in-the-newsroom/2018-marks-third-straight-year-that-motor-vehicle-deaths-are-estimated-to-have-reached-40-000> (last visited Aug. 16, 2021), JA __. The after-effects of traffic crashes, however, go well-beyond fatalities. Recent statistics show that an additional 2.7 million individuals are injured in such crashes. *See* ATSSA Comments, at p. 1, JA __; *see also* National Highway Traffic Safety Administration, *Traffic Safety Facts*, (Sept. 2019), available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812794>, JA __.

Traffic crashes and their related fatalities and injuries are a significant burden on the economy. NHSTA estimates that traffic crashes result in annual economic harm of approximately \$300 billion in direct costs and losses of over \$800 billion each year when loss of life, injuries, and other quality-of-life factors are considered. *See* Letter from Charles Cooper, NTIA, ET Dkt 19-138 (filed Mar. 13, 2020), at Attachment, DOT Letter and Supplementary Technical Comments (“DOT March 9, 2020 Submission”), at p. 1, JA __. The health care costs related to these events constitute “a greater share of the Nation’s health care costs than any other cause of

illness injury.” *See Amendment of the Commission’s Rules to Allocate the 5.850-5.925 GHz Band*, Report and Order, 19 F.C.C.R. 2458, ¶ 2 (2004).

B. Traffic Crashes are Not a “Way of Life” that Must be Accepted in Modern Society but Can Be Prevented.

Significantly, however, traffic crashes are not a foregone conclusion and do not (nor should not) be accepted as a “way of life” in the modern era. To the contrary, approximately 94% of traffic crashes involve human decisions, errors and choices that are potentially avoidable. *See* ATSSA Comments, at p. 1, JA __; *see also* Comments of the Alliance for Automotive Innovation, ET Docket No. 19-138, at p. 7 (filed March 9, 2020) (“AAI Comments”), JA __.

The Department of Transportation has concluded that by simply providing drivers with timely warnings of roadway hazards, the number and severity of traffic crashes could be significantly reduced. *See* DOT March 9, 2020 Submission, at p. 19, JA __ (“The Department has consistently stated that [certain aspects of ITS] technologies have the potential to address approximately 80 percent of unimpaired light vehicle crashes.”); *see also Critical Reasons for Crashes Investigated in the National Motor Vehicle Crash Causation Survey*, National Highway Traffic Safety Administration (Feb. 2015), <https://crashstats.nhtsa.dot.gov/api/public/view/publication/812115>, JA __.

C. The Development of Intelligent Transportation Systems is Critical to the Prevention of Traffic Crashes.

The development of intelligent transportation systems (“ITS”) plays a critical role in correcting the human error-related causes at the heart of the vast majority of traffic crashes. *See* ATSSA Comments, at p. 1, JA __. ITS is defined as the “electronics, photonics, communications, or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.” 23 U.S.C. § 501(5). Practically what this means is that ITS uses technologies that enable vehicles to communicate either with each other or external roadway infrastructure and pedestrian-held mobile devices to transmit pertinent safety alerts and warnings.²

What makes ITS a unique and particularly powerful tool in preventing vehicle crashes is vehicle-to-everything (V2X) communications, which have the ability to exchange information far beyond the reach of vehicle-only sensor systems. Unlike

² The communications system that allows vehicles to communicate with other vehicles is commonly referred to as “V2V” (or vehicle-to-vehicle). The system that allows vehicles to communicate with infrastructure is known as “V2I” (or vehicle-to-infrastructure). The system that allows vehicles to communicate with mobile devices held by vulnerable road users is known as “V2P” (or vehicle-to-pedestrian). The system known as “V2X” (or vehicle-to-everything) broadly encompasses the communication systems that allow vehicles to communicate with any external source (including other vehicles, infrastructure, pedestrian devices, etc.). All of these communications systems (e.g., V2V, V2I, V2P, V2X) are examples of ITS technologies and operate on the Safety Band.

other vehicle safety technologies, the V2X communications components that are part of ITS can sense threats even when not within the technology's "line of sight." *See* DOT March 9, 2020 Submission at pp. 9-11, JA ___. These communications can share information (within a range of 300 meters or greater) concerning the presence and activities of its surroundings (e.g., other vehicles, pedestrians, bicyclists, or inclement weather or road conditions) to detect when such activities create potential for an imminent crash. *See Id.* at p. 9, JA ___. This technology works by broadcasting safety-related message sets at a high rate of speed (every 100 milliseconds), using the dedicated spectrum of the Safety Band so as to minimize errors (e.g., of dropped packets or a partial data exchange).³ *See Id.* Some practical applications of these tools include systems to warn drivers of impending collisions, to suggest actions in congested or unusual conditions, and to provide for future automated vehicle technologies as to what actions might be needed beyond the scope of what a vehicle-

³ The Department of Transportation also outlined several other reasons that make the communications systems that are part of ITS uniquely suited to address vehicle crashes. For example, such communications are **non-networked**, meaning "transmitting devices are able to forego the delay associated with creating a link with a cell tower or Wi-Fi infrastructure to communicate with the receiving device." *See* DOT March 9, 2020 Submission, at p. 10, JA ___. ITS communications systems are also **omnidirectional**, which "allows two equipped vehicles to 'see' each other and exchange critical information – regardless of whether the vehicles are in view, around a corner, or behind a building or even a cornfield." *Id.* ITS signals are also **unaffected by environmental conditions**, such as "rain, fog, snow, or darkness" unlike existing onboard sensors that are a sub-par alternative to V2X. *Id.* Lastly, ITS communications offer significant **security and privacy** protection based on their design of message transmission. *Id.* at p. 11, JA ___.

borne sensor system can detect. *See Id.* at pp. 17-18, JA ___.

D. ITS Technologies within the Safety Band are being Deployed and Advancing.

Currently, over \$2.7 billion has been invested into ITS technologies that utilize the Safety Band. *See* DOT March 9, 2020 Submission, at p. 36, JA ___. Of these investments, over \$1.5 billion is in taxpayer-funded investments that have been made in programs that exist in over half of the states. *See* ATSSA Comments, at p. 3, JA ___. As of March 9, 2020, the Department of Transportation reported that over 123 sites across the nation are utilizing the Safety Band for ITS purposes, a significant growth from just 87 sites in June 2019. *See* DOT March 9, 2020 Submission, at p. 19, JA ___. In particular, ITS technologies are progressing in the areas of traffic signal information, work zone locations, and lane closures to increase safety throughout the United States. *See* ATSSA Comments, at p. 1, JA ___.

The next generation of applications are also already in advanced development stages. These next generation systems can share the vehicle maneuvering data, as well as that of adjacent vehicles, so that automated driving systems can more aptly predict the behavior of ongoing vehicles, whether such vehicles are human-driven or computer-driven. *See* Reply Comments of Continental Automotive Systems in Support of Petition for Reconsideration, ET Dkt. 19-138 (filed Aug. 2, 2021), at p. 2, JA ___. This private-sector development is significant given both the delays from the FCC in finalizing regulations concerning the Safety Band and hesitation caused

by current uncertainty regarding the FCC's intentions with the Safety Band. *See* ATSSA Comments, at p. 1, JA __ (explaining, in response to concerns that development in this arena has been slow, that “[a]lthough [the Safety Band was] first allocated in...1999, licensing and service rules were not issued until...2004 and further amended in 2006”); *see also* DOT March 9, 2020 Submission, at p. 19, JA __ (“[G]rowth in number and scope of deployments has also been halted by the FCC’s temporary filing freeze, which, as of December 19, 2019 has resulted in a very significant number of stalled applications.”).

Several car and truck manufacturers have been developing vehicles with technologies to be used within the Safety Band that will be deployed in upcoming model years. *See, e.g.*, AAI Comments, at pp. 22-23, JA __ (outlining upcoming deployments from Ford, General Motors, Honda, Toyota and Volkswagen). Many state departments of transportation have followed suit, installing roadside V2X technology meant to communicate with these upcoming vehicle systems. For example, the Georgia Department of Transportation has equipped 651 intersections with roadside infrastructure that utilizes dedicated short-range communications (“DSRC”) operating on the Safety Band; it has also initiated a second regional deployment to equip an additional 1,000 intersections, many of which are currently already in construction. *See* Comments of Georgia Department of Transportation, ET Dkt. 19-138 (filed June 1, 2021), at p. 1, JA __. Likewise, the Utah Department

of Transportation currently has 131 intersections and 102 fleet vehicles with V2X equipment installed and has invested \$2.3 million in the deployment of DSRC systems that are to operate within the Safety Band. *See* Comments of Utah Department of Transportation, ET Dkt. 19-138 (filed June 2, 2021), at pp. 1-2, JA ___. Advancements in the software industry with respect to ITS use within the Safety Band have moved forward as well. AAI Comments, at p. 23, JA ___.

Put simply, the FCC's decision to permanently reallocate more than half of the dedicated bandwidth within the Safety Band capsizes these active deployments right as they are poised to take off. *See* Comments of General Motors, LLC, ET Docket No. 19-138 (filed March 9, 2020), at p. 3 ("General Motors Comments"), JA ___ ("[T]he Commission seeks to permanently shift 45 megahertz to unlicensed use...without addressing the reality that this action would wipe out V2X just as the technology is poised to take off.").

II. Congress has Prioritized Traffic Safety and the Development of ITS as a Priority Solution; the FCC's Decision to Significantly Reduce the Size of the Safety Band is Contrary to this Congressional Intent.

A. Congress has Recognized the Importance of ITS in Addressing the Consequences of Traffic Crashes.

Congress has recognized the extreme societal burdens caused by traffic crashes and the promise ITS offers to reduce these burdens. As a result, it has prioritized the development of ITS as the solution to address these issues. As Petitioners point out, Congress' direction regarding ITS has not been sporadic,

inconsistent or wavering. Rather, “[f]or 30 years, Congress has signaled an interest in creating a robust nationwide ITS program...to promote transportation safety and efficiency.” *See* Petitioners’ Brief, Doc No. 1910236, at p. 8. *See, e.g.*, Intermodal Surface Transportation Efficiency Act of 1991, Pub. L. No. 102-240, 105 Stat. 1914 (1991) (first establishing an ITS program); Safe Accountable Flexible Efficient Transportation Act, Pub. L. No. 109-59, 119 1144 (2005) (providing funding and other enhancements to ITS); Moving Ahead for Progress in the 21st Century Act, Pub. L. No. 112-141, 126 Stat. 405, 897-905 (2012) (expanding upon TEA-21’s core goals and purposes relating to ITS); Fixing America’s Surface Transportation Act, Pub. L. No. 114-94, 129 Stat. 1312 (2015) (providing federal funding eligibility for installation of V2I communications equipment); Infrastructure Investment and Jobs Act, H.R. 3684 (117th Congress) § 11107(1)(A) (2021) (increasing to 100% the federal share for costs of vehicle-to-infrastructure communication equipment); § 25005(e) (providing grant funding for “[v]ehicles that send and receive information regarding vehicle movements in the network and use vehicle-to-vehicle and vehicle-to-everything communications to provide advanced and reliable connectivity”).

Congressional leaders have, on a bipartisan basis, raised significant alarm concerning the FCC’s Order. *See* Letter from House Committee on Transportation and Infrastructure, at p. 1-2 (Jan. 22, 2020), JA __ (“As Members of the House Committee on Transportation and Infrastructure, we are alarmed by the [FCC’s]

proposal to reallocate more than half of the 5.9 GHz radio frequency band (or Safety Band) to unlicensed operations, such as Wi-Fi...[t]he FCC’s proposal...jeopardizes the significant transportation safety benefits that the allocation of this Band was meant to foster.”); *see also* Letter from Chair of the House Committee on Transportation and Infrastructure”, at p. 2 (March 18, 2021), JA __ (“The FCC’s decision ignored the safety concerns raised by DOT, bipartisan opposition from 38 Members of Congress, every state Department of Transportation in the nation, and the entire transportation stakeholder community.”).

Congress, most prominently, made its intentions clear in the Transportation Equity Act of the 21st Century (“TEA-21”). Pub. L. No. 105-178, 112 Stat. 107 (1998). Through the TEA-21, Congress provided a comprehensive framework for a nationwide ITS program. One of the specific purposes of this program is to “to ensure a systems approach that includes cooperation among vehicles, infrastructure, and users.” *See* 23 U.S.C § 514(b)(9). One of the stated goals of the ITS program created through TEA-21 is the “achievement of national transportation safety goals, including enhancement of safe operation of motor vehicles and nonmotorized vehicles and improved emergency response to collisions, with particular emphasis on decreasing the number and severity of collisions.” *See* 23 U.S.C. § 514(a)(2).

The oversight and implementation of the TEA-21 rests with the Department of Transportation. *See* 23 U.S.C. § 515(a) (“***[T]he Secretary [of Transportation]***

shall conduct an ongoing intelligent transportation system program...”) (emphasis added). However, having the foresight that the implementation of a successful ITS program would require spectrum needs, the TEA-21 mandated that “the [FCC] shall consider, in consultation with the Secretary [of Transportation], spectrum needs for the operation of intelligent transportation systems.” *See* Pub. L. No. 105-178, 112 Stat. 107, § 5206(f) (1998). The significance of this is that the deference the FCC typically enjoys in its capacity as the arbiter of the spectrum bandwidth is inapplicable here as this matter involves the interpretation of matters within the purview of a different agency, the Department of Transportation. *See Epic Sys. Corp. v. Lewis*, 138 S. Ct. 1612, 1629 (2018) (“[O]n no account might we agree that Congress implicitly delegated to an agency authority to address the meaning of a second statute it does not administer.”); *see also FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 133 (2000) (holding that an agency’s ability to regulate in an area was limited when that area was otherwise addressed by statute as “the meaning of one statute may be affected by other Acts, particularly where Congress has spoken subsequently and more specifically to the topic at hand.”).

B. The Judgment Congress Delegated to the Department of Transportation Regarding the ITS program was Usurped by the FCC.

In initially allocating the spectrum within the Safety Band, the FCC recognized the important safety concerns and the potential that existed for ITS technologies within the spectrum. *See Amendment of Parts 2 & 90 of the*

Commission's Rules to Allocate 5.850-5.925 GHz Band, Report and Order, 14 F.C.C.R. 18221, at ¶ 1.9 (1999) (finding that ITS technologies that would operate within the Safety Band “are a key element in...improving the safety of our nation’s highways”). In doing so, it understood that a full 75 megahertz was necessary to achieve the safety-related objectives and purposes of the Safety Band. *See Id.* (“[A]n allocation of 75 megahertz is needed to provide for future growth and development of a wide array of DSRC applications and to promote investment in ITS technology...it is important to provide sufficient spectrum.”). Importantly, the FCC also recognized that the 75 megahertz of spectrum was necessary to “further the goals of Congress.” *See* Press Release, Federal Communications Commission (Oct. 21, 1999) (emphasis added), available at https://transition.fcc.gov/Bureaus/Engineering_Technology/News_Releases/1999/nret9006.html, JA ___ (“The FCC said providing additional spectrum for ITS services would further the goals of Congress, the Department of Transportation and the ITS industry to improve the efficiency of the U.S. transportation infrastructure and to facilitate the growth of the ITS industry.”) (emphasis added).

The FCC’s decision to change this course in favor of a proposal that is untested and prone to risk is in error as contrary to the vast weight of the safety-related experts, in particular the Department of Transportation. *See generally* Order. The Department of Transportation, which has been charged by Congress with

overseeing the ITS program, has vehemently opposed the reallocation of the Safety Band, and in doing so, outlined a voluminous record of the safety concerns it had with the FCC's proposed decision to do so. *See generally* DOT March 9, 2020 Submission; *see also infra* at Section I (highlighting just some of the safety-related concerns the Department of Transportation conveyed to the FCC). The Department of Transportation remains steadfast in its view that the FCC fails to account for all the relevant factors that have bearing upon its proposal, including the benefits of the Safety Band, the technological maturity, and growth of applications that operate within the Safety Band, and the likelihood of harmful interference that adjacent unlicensed Wi-Fi operations pose to the remnants of the Safety Band that remain. *See* Letter Kathy Smith, NTIA, ET Dkt 19-138 (filed Nov. 9, 2020), at Attachment Letter from Steven Bradbury, General Counsel and acting Deputy Secretary, U.S. Dep't of Transportation to Hon. Ajit Pai, Chairman, FCC (Nov. 6, 2020) ("DOT Nov. 9, 2020 Submission"), at p. 2, JA ___.⁴

⁴ Additionally, as a compromise, the Department of Transportation was undertaking testing to determine whether unlicensed devices and certain ITS-related (e.g., DSRC) technologies could share the bandwidth within the Safety Band to both operate in this space. While the first of three planned studies "showed some promise" in this regard, thus leaving an avenue for the Safety Band to remain for ITS-related purposes, the FCC abandoned Phase 2 and Phase 3 leaving this issue unresolved. *See* Remarks of FCC Chairman Ajit Pai at the National Union Building, Washington, DC (Nov. 20, 2019), at p. 2 (finding that although "[p]reliminary testing showed some promise...further testing would be needed," but acknowledging that would not be done). *See* Letter from Elaine L. Chao, Secretary, U.S. Dep't of Transportation to Hon. Ajit Pai, Chairman, FCC (Nov. 20, 2019), at

The concerns of the Department of Transportation were shared by nearly 90 percent of the commenters with experience working with the Safety Band who have also objected to the FCC's reallocation, along with the unanimous stance of all 50 state departments of transportation. *See also* DOT Nov. 9, 2020 Submission, at Attachment, Letter from Steven Bradbury, General Counsel and acting Deputy Secretary, U.S. Dep't of Transportation to Hon. Ajit Pai, Chairman, FCC (Oct. 8, 2020), at p. 3, JA __ (“The Commission takes this action over the objections of the nearly 90 percent of commenters who filed responses on the docket, and who have been working in the V2X space for decades”); *see* Comments of American Association of State Highway and Transportation Officials, ET Dkt 13-49 (filed Aug. 19, 2019), JA __ (letter from the state departments of transportation of all 50 states, the District of Columbia, and Puerto Rico to reserve the 5.9 GHz band for the “critical purpose” of transportation safety, as doing so “will save lives by creating a

p. 1 (noting the need to complete “Phases 2 and 3 of the DOT’s spectrum sharing research plan”), JA __. The Department of Transportation has explored other options to work with the FCC, including to engage a “broader stakeholder engagement” on these issues, a proposal idea supporting by many of those opposed to the current Order at hand. *See* DOT March 9, 2020 Submission, at p. 3, JA __; *see also* Reply Comments of the Institute of Transportation Engineers, ET Dkt No. 19-139 (filed April 24, 2020), at p. 1 (“US DOT’s suggestion of a negotiated rulemaking process holds promise and we strongly endorse it”). However, these gestures were unaddressed by the FCC, sending a clear signal its lack of regard for the safety-related concerns of the transportation community. *See Dist. Hosp. Partners, L.P. v. Burwell*, 786 F.3d 46, 59 (D.C. Cir. 2015) (finding that an agency action will not be upheld “if it fails to consider significant and viable and obvious alternatives.”).

seamless, cooperative environment that significantly improves the safety of our transportation system”).

C. Full Use of the Safety Band is Necessary to Move these Life-Saving Innovations Forward.

Contrary to the FCC’s order, the full allocation of the Safety Band (i.e., of the entirety of the 75 megahertz) is necessary. The FCC has admitted it “is not an auto safety expert,” and the implementation of ITS is more complicated and complex than the “smart” Wi-Fi enabled consumer products that the FCC seeks to grant into this spectrum. *See* Statement of Hon. Michael O’Rielly, Commissioner, FCC (Nov. 18, 2020), at p. 2, *available at* <https://docs.fcc.gov/public/attachments/FCC-20-164A3.pdf> (describing the Commission as “not an auto safety expert”), JA __.

ITS needs to navigate how to transmit and interpret signals in complicated settings such as: interstates with cars that might be traveling in opposite directions at 55-65 mph translating into closing speeds of 150 mph; interstates that are elevated over other major arterial streets that might not necessarily possess crash concerns despite intersecting signals; and traffic signals one to two blocks away (with overlapping roadside units in between). *See* DOT March 9, 2020 Submission, at p. 26, JA __. Because of this, the Department of Transportation recognized that these characteristics require ITS to be “carefully structured and implemented,” and that the existing structure of the Safety Band did just this. *Id.*, JA __. The Safety Band

is carefully allocated so that it is divided into specific channels that each serve a specific purpose:

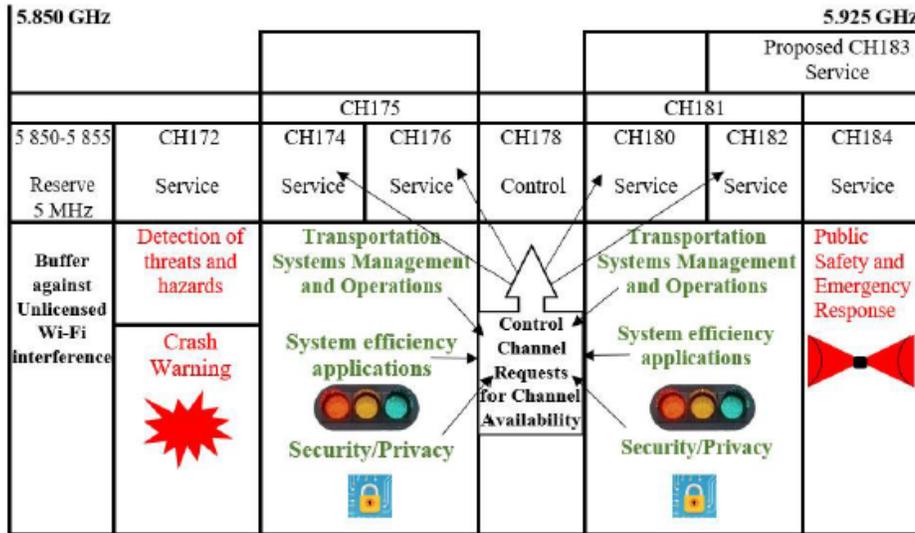


Figure 2: Transportation Spectrum Use in the 75 MHz in the United States²⁶

See *Id.* at p. 14, JA __.

As the Department of Transportation has elaborated, two separate channels are designed – one for crash avoidance (Ch. 172) and public safety (Ch. 182). *Id.* at p. 15, JA __. These channels are carefully placed to ensure optimal performance for these critical life-safety functions. *Id.* For example, the crash avoidance channel is placed adjacent to a 5 megahertz reserve band that acts as a buffer from interference from unlicensed Wi-Fi devices. *Id.* The public safety channel is high-powered “for those times when public safety and emergency response must silence or suppress nearby communications in order to provide priority.” *Id.* The remaining channels can still be used for safety applications, as well as system efficiency and mobility

uses. *Id.* These channels, in fact, are critical to further development of ITS technologies as they are the only location where the next generation 5G Cellular-based V2X communications (or “C-V2X”) can operate. The removal of this dedicated bandwidth within the Safety Band has effectively prohibited the advancement of V2X communication technology from 4G LTE to 5G. *See* Comments of American Honda Motor Co., ET Dkt 19-139 (filed March 9, 2020), at p. 9, JA ___. Lastly, a control channel is set in the middle to help applications navigate any open spectrum so that the spectrum available within the Safety Band can be used and reused. *See* DOT March 9, 2020 Submission, at p. 15, JA ___.

The Department of Transportation has opined that the reallocation proffered by the FCC to reduce this carefully planned Safety Band by 60% will be woefully inadequate to accommodate the developments in ITS. *See* DOT Nov. 9, 2020 Submission, at p. 2, JA ___ (“[T]he Department [of Transportation] disagrees that there is sufficient evidence to demonstrate that 30 MHz will suffice to support a safety-driven ecosystem like the ones in which DOT and others have invested.”). Additionally, the National Transportation Safety Board (“NTSB”), the country’s preeminent crash investigation agency, has provided the stark warning that this reduction will come at the expense and cost of safety. *See* Comments of the National Transportation Safety Board, ET Dkt. 19-138 (filed March 4, 2020), p. 1 (“NTSB Comments”), JA ___. (“The NTSB believes there will be negative safety

consequences from releasing a large part of the spectrum to mainly Wi-Fi devices and limiting safety operations to a smaller part of the spectrum.”). This is in line with the opinions of the other outside experts that have opined on this issue. *See* Reply Comments of Society for Automotive Engineers - Core Technical Committee and Infrastructure Applications Technical Committee, ET Docket No. 19-138 (filed April 27, 2020), at p. 1, JA __ (“Most comments, including those submitted by a broad swath of federal, state, and local departments of transportation...confirm that the full 75 MHz of safety spectrum represents a vital asset in protecting America’s roadways.”).

While the FCC attempts to sell the industry and the Court on the crumbs of spectrum it leaves behind in the Safety Band, the reality is that given the careful allocations and unique needs of the Safety Band, there is concern of whether interference from unlicensed Wi-Fi operations will make the little amount of spectrum that remains usable at all. *See* DOT Nov. 9, 2020 Submission, at p. 2, JA __ (“[U]ntil the Commission resolves concerns about interference from Wi-Fi operations, the actual amount of spectrum available for V2X may be much less than FCC anticipates, or perhaps none at all.”); NTSB Comments, at p. 5, JA __ (“Testing by the DOT shows that the FCC-proposed bandwidth of 30 MHz for transportation safety applications would make V2X applications functionally infeasible.”); *see also* General Motors Comments, at p. 2, JA __ (“Even if the 30 megahertz of

spectrum was sufficient for V2X technologies, and it is not, the lack of basic protections from harmful interference means that this 30 megahertz would be unusable for safety applications.”); Comments of AT&T, ET Docket NO. 19-139 (filed March 9, 2020), at pp. 15-16, JA ___ (“The 45 MHz of spectrum from the 5.9 GHz band would add only a small fraction of bandwidth to this vast inventory of spectrum dedicated to unlicensed use, with commensurate incremental public benefit. But the allocation away from ITS would cripple development of the vehicle safety communications ecosystem and the delivery of automotive safety benefits to the American public.”).

A comparison of the spectrum needs internationally demonstrates the insufficiency of the 30 megahertz the FCC proposes to leave in the Safety Band. As the Department of Transportation has noted, nearly every other developed country has allocated spectrum within the range of 75 megahertz to transportation safety-related purposes. *See* DOT Nov. 9, 2020 Submission, at Attachment, Letter from Steven Bradbury, General Counsel and acting Deputy Secretary, U.S. Dep’t of Transportation to Hon. Ajit Pai, Chairman, FCC (Oct. 8, 2020), at pp. 7-8, JA ___. Additionally, per the Department of Transportation, many of those who have not made these allocations plan to seek “*additional* spectrum, particularly to ensure the ability to pursue 5G new radio V2X as technology evolves.” *Id.*, at p. 7, JA ___.

CONCLUSION

The FCC was in error when it contravened direction from Congress and usurped the judgment of the Department of Transportation on these critical safety-related matters. The Department of Transportation's judgment was sound and in line with the vast traffic safety-related community. In making this rogue judgment call, the FCC's Order failed to ignore these important safety-related aspects of the problem and must be reversed. *See* Petitioner's Brief, Doc. No. 1910236, at pp. 25-34; *see also Nat'l Lifeline Ass'n v. FCC*, 921 F.3d 1102, 1110 (D.C. Cir. 2019) ("Agency action is arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."). For these reasons, the FCC's decision as it concerns the reallocation of the amount of spectrum dedicated to transportation and safety-related purposes be reversed.

Respectfully Submitted,

/s/ Julie B. Kulovits

Julie B. Kulovits
TENENBAUM LAW GROUP PLLC
1101 K Street, NW, Suite 700
Washington, DC 20005

(202) 221-8006

jkulovits@TenenbaumLegal.com

*Counsel for the American
Traffic Safety Services Association,
American Highway Users Alliance,
Institute of Transportation Engineers,
Mothers Against Drunk Driving,
and the National Safety Council*

CERTIFICATE OF SERVICE

I hereby certify that on August 20, 2021, I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the Court's CM/ECF system, which will serve the filing on all participants in the case who are registered CM/ECF users

Respectfully Submitted,

/s/ Julie B. Kulovits

Julie B. Kulovits

TENENBAUM LAW GROUP PLLC

1101 K Street, NW, Suite 700

Washington, DC 20005

(202) 221-8006

jkulovits@TenenbaumLegal.com

Counsel for the American

Traffic Safety Services Association,

American Highway Users Alliance,

Institute of Transportation Engineers,

Mothers Against Drunk Driving,

and the National Safety Council

August 20, 2021

CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. of App. Proc. 29(a)(4)(G) and 32(g)(1), I hereby certify that the foregoing brief complies with the type-volume limitation of Rule 32(a)(7)(B). The brief contains 5572 words, excluding the items excluded from length pursuant to Rule 32(f). The brief also complies with the typeface requirements of Rule 32(a)(5).

Respectfully Submitted,

/s/ Julie B. Kulovits

Julie B. Kulovits

TENENBAUM LAW GROUP PLLC

1101 K Street, NW, Suite 700

Washington, DC 20005

(202) 221-8006

jkulovits@TenenbaumLegal.com

Counsel for the American

Traffic Safety Services Association,

American Highway Users Alliance,

Institute of Transportation Engineers,

Mothers Against Drunk Driving,

and the National Safety Council

August 20, 2021