

**NOMINATIONS TO THE  
U.S. DEPARTMENT OF TRANSPORTATION,  
THE U.S. DEPARTMENT OF COMMERCE, AND  
THE NATIONAL TRANSPORTATION SAFETY BOARD**

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**HEARING**

BEFORE THE

**COMMITTEE ON COMMERCE,  
SCIENCE, AND TRANSPORTATION  
UNITED STATES SENATE**

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

—————  
JUNE 8, 2017  
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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

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**NOMINATIONS TO THE U.S. DEPARTMENT OF  
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OF COMMERCE, AND THE NATIONAL  
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**THURSDAY, JUNE 8, 2017**

U.S. SENATE,  
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,  
*Washington, DC.*

The Committee met, pursuant to notice, at 10 a.m. in room SR-253, Russell Senate Office Building, Hon. Cory Gardner presiding.

Present: Senators Gardner [presiding], Schatz, Thune, Wicker, Fischer, Johnson, Inhofe, Sullivan, Cruz, Capito, Young, Klobuchar, Peters, and Cortez Masto.

**OPENING STATEMENT OF HON. CORY GARDNER,  
U.S. SENATOR FROM COLORADO**

The CHAIRMAN. At an overwhelming 5'9", I know I'm not quite as intimidating as John Thune in the Chair, so thank you very much for being here today. This hearing will come to order. We are here today to consider nominations for positions within the Department of Transportation, Department of Commerce, and National Transportation Safety Board.

I welcome the nominees, Mr. Derek Kan, Mr. David Redl, and Mr. Robert Sumwalt to the Committee today and thank them for their willingness to serve. And I know their families are here, so thank you very much for your family's support and willingness to serve.

Derek Kan.—The Committee has recent experience with Mr. Kan, having considered the nomination for his current position on the Amtrak Board of Directors in 2015. He was reported out of this Committee favorably and confirmed on the Senate floor with bipartisan support on a voice vote on December 15, 2015. I would like to take this opportunity to welcome you and your family here, who I understand drove across the country today just to be here and truly experience our Nation's transportation infrastructure firsthand.

[Laughter.]

The CHAIRMAN. To your family, these buildings belong to you. Make sure they give you a key on the way out.

[Laughter.]

The CHAIRMAN. Mr. Kan previously served as a Policy Adviser to Majority Leader Mitch McConnell, Chief Economist—I've been told nobody will use that against you—Chief Economist for the Senate

Republican Policy Committee as well as the Presidential Management Fellow at the White House Office of Management and Budget. He received his bachelor's degree from the University of Southern California, a Master's of Science from the London School of Economics, and an MBA from the Stanford Graduate School of Business. This endeavor will help you pay off your student loans.

If confirmed, Mr. Kan will be a top policy adviser to Transportation Secretary Elaine Chao as the administration pursues a significant infrastructure package and FAA reauthorization.

David Redl.—Mr. Redl is well known here on Capitol Hill, including since at the House Energy and Commerce Committee, where he served as Chief Counsel on the Communications and Technology Subcommittee, had to put up with a number of members on the Committee in the Senate today. And as a former member of that Committee in the House, I witnessed firsthand Mr. Redl's commitment to working toward bipartisan consensus on telecommunication issues and something near and dear to my heart, how we make sure that these new technological breakthroughs in telecommunications opportunities can see their way into the most rural parts of our country.

I witnessed firsthand the questioning of the previous NTIA Administrator that I carried out on the Eagle Net debacle in my home state of Colorado. So I hope you're not too nervous sitting in that spot today.

[Laughter.]

The CHAIRMAN. Prior to his service on the House Energy and Commerce Committee, Mr. Redl worked as a lawyer in the telecommunications industry advising on regulatory broadband and spectrum issues, among many others. A bachelor's degree from Pennsylvania State University, University Park, and earned his law degree in communications at the Catholic University of America's Columbus School of Law. If confirmed, Mr. Redl will serve as the President's Chief Adviser on Telecommunications and Information Policy.

Mr. Sumwalt has been a member of NTSB for nearly 11 years, and on March 31, 2017, the President announced his intention to reappoint Mr. Sumwalt to serve as a Vice Chair for two years. Mr. Sumwalt currently serves as Acting Chairman of the NTSB.

During this time, he served as Chairman for multiple NTSB hearings and forums and has been a Board member on scene for more than two dozen transportation accidents.

Prior to his tenure at NTSB, Mr. Sumwalt has a long career in aviation, having served as a pilot for U.S. Airways from 1981 to 2004. He followed up by managing the Corporate Flight Department of SCANA, I guess it is, that's how we pronounce it, a major energy company. He has a bachelor's degree from the University of South Carolina, and a Master's of Aeronautical Science specializing in aviation and aerospace safety systems and human factors in aviation systems from Embry-Riddle Aeronautical University. If confirmed, Mr. Sumwalt will continue his service in ensuring that our Nation's transportation and infrastructure systems and make sure that they are among the safest in the world, the safest in the world.

So thank you all for your time today, your commitment to your country today, and your willingness to serve. We look forward to your testimony and to answer any questions that we may have for you. And I'll yield to the Ranking Member for Senator Schatz's opening statement.

**STATEMENT OF HON. BRIAN SCHATZ,  
U.S. SENATOR FROM HAWAII**

Senator SCHATZ. Thank you, Mr. Chairman. This morning we're considering key positions in the Department of Transportation and the Department of Commerce, and we look forward to hearing from the nominees. For the Department of Transportation, we're considering the nomination of Derek Kan for the Under Secretary of Policy. In his questionnaire to this Committee, Mr. Kan identified refreshing and modernizing our transportation infrastructure as one of the Department's top challenges. I agree. Your kids just arrived.

[Laughter.]

Senator SCHATZ. The government must increase its investment in projects that will support the movement of goods and people by land, sea, and air. Mr. Kan, we hope that you will work with this committee on how we make real investments in infrastructure, not just how we make projects more attractive for private financiers. Our nation's transportation challenges include more than just deteriorating infrastructure.

Safety continues to be a serious problem across all sectors, especially on America's highways. Both the Department of Transportation and the NTSB have an important role to play in safety, and we're counting on these agencies to use their authorities and their resources to keep more people safe on the road.

We also look forward to working with Mr. Kan and Mr. Sumwalt to support the development and deployment of autonomous vehicle technology. It's important that as we spur innovation, we continue to make safety our highest priority.

We also consider the nomination today of David Redl to head NTIA at the Department of Commerce. NTIA plays a key role in managing Federal spectrum policy, assisting FirstNet and carrying out its critical mission, helping to update our 911 systems, and helping to represent the United States in international Internet governance matters. As a manager of spectrum used by Federal agencies, NTIA needs to ensure that the Federal Government has access to enough spectrum to meet its needs today and in the future, but it also must respond to consumers and the ever-increasing demand for wireless communications.

Mr. Redl, as we discussed when we met recently, it's critical that NTIA strike the right balance between these needs. It's also important that in any comprehensive spectrum policy, our country continues to create opportunities for additional shared and unlicensed uses.

Finally, if confirmed, you will have a major role in representing the United States in international telecommunications issues. I believe it's imperative that the multistakeholder approach to international Internet governance be protected during this administration. This Committee will be watching NTIA and the administration on all of these fronts.

Thank you to all of the nominees and their families for joining us today.

The CHAIRMAN. Thank you very much. And again welcome to the witnesses. And we'll go ahead and open up at this time for your testimony. We'll begin with Mr. Kan.

**STATEMENT OF DEREK T. KAN, NOMINEE TO BE  
UNDER SECRETARY OF TRANSPORTATION FOR POLICY,  
U.S. DEPARTMENT OF TRANSPORTATION**

Mr. KAN. Thank you, Senator Gardner. Thank you for the opportunity to appear before you today. If I am confirmed, I look forward to working with all of you and your staff to strengthen our Nation's infrastructure.

I am joined today by my wife, Connie, my children, Jordan, Evan, and Avery, and my parents, Scott and Julie, and my sister and brother-in-law, Grace and Kenny Hsu, from Los Angeles.

A recurring memory I have of my childhood is riding in the backseat of my parents' old Oldsmobile. Mom and Dad, who had recently immigrated and were struggling to make ends meet, would shuttle my sister and me around town, and so we spent most of our days sitting in that car fighting traffic around Los Angeles. That was the vehicle by which I began to discover the world, and that was the beginning of my fascination with transportation.

As the Senators mentioned earlier, I started my career out as a program examiner at the White House Office of Management and Budget. It was there I began to learn about the different types of government programs, the regulatory and budget concepts, and, most importantly, the value of public service. I left OMB to join the Senate and spend time working for Senator Kyl, Senator Hutchison, and Senator McConnell.

Since leaving the Senate, I've spent my career in the private sector advising companies, building and managing teams, and operating businesses. Most recently, I was the General Manager of Lyft in South California while also serving on the Board of Amtrak. These experiences showed me firsthand how to manage a fast-growing enterprise and effectively operate a business.

I am fascinated by both passenger and freight transportation. Transportation makes possible the reunion of beloved family and friends, the epic adventures which shape and sometimes define our lives, and, of course, the commerce and trade which drives our economy. Transportation is one of the most critical components of infrastructure on which a society operates, yet over the past few decades we are beginning to see the consequences of an aging infrastructure and experiencing the fragility of our current system.

President Trump and Secretary Chao have begun to lay out the administration's transportation priorities: number one, ensuring safety and security as the most important objectives; number two, rebuilding our nation's infrastructure; and number three, embracing new technologies that will lead us into the future. Rarely in our nation's history have we had so much technological innovation and opportunity to transform our nation's infrastructure. As one industry leader has put it, we will see more change in the next 5 years in transportation than we have seen in the past 50 years.

And so we are now at an inflection point when it comes to transportation. New technologies, data analytics, new manufacturing techniques, and innovative solutions are being deployed around the world. Yet before us are some core fundamental questions around transportation policy, such as, one, the role of the Federal Government, and how do you balance Federal Government with local support? Number two, the allocation of Federal resources between urban and rural areas so that nobody is left behind. And three, economic and environmental stewardship. And four, the financing and permitting of transportation infrastructure projects. Together, I believe we can address these complex policy questions, rebuild our nation's infrastructure, and usher in new technologies.

Finally, in my visits with each of you, many of you asked that I visit your respective states. These requests have ranged from visiting a rail along the Gulf ports to streets on Honolulu, to the Colorado passenger rail, and I-470, which, Senator Gardner, I know that you worked tirelessly and received a loan just 2 weeks ago for that project.

I commit fully to visit each of your states to get an in-depth look with you and to work together with you and your staff to build the world's safest, most efficient transportation system. In fact, on my way to this hearing, I spent about 18 days driving on 4,000 miles of our interstate highway, driving my family, these three munchkins, across the country. It seemed fitting that I should embrace and experience much of the nation's infrastructure up close as we spend the next few years really solving some of these big challenges.

Thank you again for the opportunity to appear before you today. I am happy to take any questions.

[The prepared statement and biographical information of Mr. Kan follow:]

PREPARED STATEMENT OF DEREK T. KAN, NOMINEE FOR UNDER SECRETARY OF  
TRANSPORTATION FOR POLICY, U.S. DEPARTMENT OF TRANSPORTATION

Thank you for the opportunity to appear before you today. If I am confirmed, I look forward to working with all of you and your staff to strengthen our Nation's transportation system.

I am joined today by my wife, Connie Kan, my children, Jordan, Evan, and Avery, my parents, Scott and Julie Kan, and my sister and brother-in-law, Grace Kan and Kennie Hsu.

A recurring memory I have of my childhood is riding in the backseat of my parents' old blue Oldsmobile. Mom and Dad, who had recently immigrated and were struggling to make ends meet in America, would shuttle my sister and me around town. So, we spent many hours sitting in that car and fighting traffic around Los Angeles. That was the vehicle by which I began to discover the world and that was the beginning of my fascination with transportation.

I started my career as a Program Examiner at the White House Office of Management and Budget. It was there I learned about different types of government programs, regulatory and budget concepts, and, most importantly, the value of public service. I left OMB to join the Senate, and spent time working for Senator Jon Kyl, Senator Hutchison, and Senator McConnell.

Since leaving the Senate, I have spent my career in the private sector advising companies, building and managing teams, and operating businesses. I most recently was the General Manager of Lyft in Southern California while also serving on the Board of Amtrak. These experiences showed me firsthand how to manage a fast-growing enterprise and effectively operate a business.

I am fascinated by both passenger and freight transportation. Transportation makes possible the reunion of beloved family and friends, the epic adventures which shape, and sometimes define, our lives, and, of course, the commerce and trade

which drives our economy. Transportation is one of the most critical components of infrastructure on which a society operates. Yet over the past few decades, we are beginning to see an aging infrastructure and experience the fragility of our current transportation system.

President Trump and Secretary Chao have begun to lay out the Administration's transportation priorities: 1) ensuring safety and security as the most important objectives, 2) rebuilding our Nation's infrastructure, and 3) embracing new technologies that will lead us into the future. Rarely in our Nation's history have we had so much technological innovation and opportunity to transform our Nation's infrastructure. As one industry leader recently pointed out, we will likely see more changes with automobiles in the next five years than we have seen in the last fifty.

We are now at an inflection point when it comes to transportation. New technologies and data analytics, new manufacturing techniques, and innovative solutions are being deployed around the world. Yet, before us are some core fundamental questions around transportation policy such as 1) the role of the Federal Government in critical, but local projects, 2) the allocation of Federal resources between urban and rural areas so that nobody is left behind, 3) economic and environmental stewardship, and 4) the financing and permitting of transportation infrastructure projects. Together, we can address these complex policy questions, rebuild our Nation's infrastructure, ensure the safety and security of our transportation system, and usher in new technologies.

Finally, in my visits with the members of this committee, many of you have asked that I visit your respective states. These requests range from visiting a light rail system to a rural airport to an unfinished highway to a crumbling bridge. If confirmed, I commit to visit your states and work with you to build the world's safest and most efficient transportation system.

Thank you again for the opportunity to appear before you today. I am happy to take any questions.

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#### A. BIOGRAPHICAL INFORMATION

1. Name (Include any former names or nicknames used): Derek Tai-Ching Kan.
2. Position to which nominated: Under Secretary of Transportation for Policy, U.S. Department of Transportation.
3. Date of Nomination: May, 2017.
4. Address (List current place of residence and office addresses):  
Residence: Information not released to the public.
5. Date and Place of Birth: August 15, 1978; Los Angeles, CA.
6. Provide the name, position, and place of employment for your spouse (if married) and the names and ages of your children (including stepchildren and children by a previous marriage).  
Spouse: Connie Kan.
7. List all college and graduate degrees. Provide year and school attended.  
University of Southern California, B.S. Business Administration, 1999  
London School of Economics, Diploma in Economics, 2001  
London School of Economics, M.Sc. Economic History, 2004  
Stanford Graduate School of Business, MBA, 2012
8. List all post-undergraduate employment, and highlight all management-level jobs held and any non-managerial jobs that relate to the position for which you are nominated.
  - White House Office of Management and Budget, Program Examiner (2004–06)
  - U.S. Senate Republican Policy Committee, Chief Economist/Policy Advisor (2006–07)
  - U.S. Senate, Office of the Republican Leader (2008–10)
  - Bain & Company, Consultant (2012–14)
  - GenapSys Inc., Director of Strategy (2014–15)
  - Story and Heart, Advisor (2015–16)
  - GLG Research, Consultant (2016–17)
  - Amtrak, Board Member (2015 to Present)
  - Lyft, General Manager—Southern California (2015 to Present)

9. Attach a copy of your resumé.

A copy is attached.

10. List any advisory, consultative, honorary, or other part-time service or positions with Federal, State, or local governments, other than those listed above, within the last ten years. None

11. List all positions held as an officer, director, trustee, partner, proprietor, agent, representative, or consultant of any corporation, company, firm, partnership, or other business, enterprise, educational, or other institution within the last ten years.

Board Member, Amtrak (2015 to present)

General Manager, Lyft (2015 to present)

Consultant, GLG Research (2016–17)

Advisory Board Member, Los Angeles County Auto Show (2016–17)

Advisor, Story and Heart (2015–16)

Director of Strategy, GenapSys (2014–15)

Board Member, Environmental Defense Action Fund (2013–14)

12. Please list each membership you have had during the past ten years or currently hold with any civic, social, charitable, educational, political, professional, fraternal benevolent or religious organization, private club or other membership organization. Include dates of membership and any positions you have held with any organization. Please note whether any such club or organization restricts membership on the basis of sex, race, color, religion, national origin, age, or handicap.

Advisory Board Member, Los Angeles County Auto Show, 2016–2017

Member, Pacific Council on International Policy, 2010 to present

Board Member, Environmental Defense Action Fund, 2013–2014

Board Member, Great Commission Community Church, 2007–2010

13. Have you ever been a candidate for and/or held a public office (elected, non-elected, or appointed)? If so, indicate whether any campaign has any outstanding debt, the amount, and whether you are personally liable for that debt. No

14. Itemize all political contributions to any individual, campaign organization, political party, political action committee, or similar entity of \$500 or more for the past ten years. Also list all offices you have held with, and services rendered to, a state or national political party or election committee during the same period. None

15. List all scholarships, fellowships, honorary degrees, honorary society memberships, military medals, and any other special recognition for outstanding service or achievements.

Arjay Miller Scholar, Stanford Graduate School of Business, June 2012

Harvey Fellowship, September 2011

16. Please list each book, article, column, or publication you have authored, individually or with others. Also list any speeches that you have given on topics relevant to the position for which you have been nominated. Do not attach copies of these publications unless otherwise instructed.

*TARP Without Strings*, American Enterprise Institute

17. Please identify each instance in which you have testified orally or in writing before Congress in a governmental or non-governmental capacity and specify the date and subject matter of each testimony. None

18. Given the current mission, major programs, and major operational objectives of the department/agency to which you have been nominated, what in your background or employment experience do you believe affirmatively qualifies you for appointment to the position for which you have been nominated, and why do you wish to serve in that position?

I wish to serve because I believe I have both a passion for public service and background to help the Department of Transportation. My previous background includes time at OMB where I worked with agencies to develop strategic plans and budgets as well as time as a Senate staffer working on budget, appropriations, and other economic matters. More recently, I spent much of my time at Bain and Amtrak driving financial and operational excellence. One exciting developing in the transportation space includes the emergence of new technologies and services. I believe my time at Lyft positions me well to help develop policies that continue to encourage safety while not stifling innovation.

19. What do you believe are your responsibilities, if confirmed, to ensure that the department/agency has proper management and accounting controls, and what experience do you have in managing a large organization?

The mission of the Department of Transportation is to serve the United States by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future. As set by statute, the responsibilities of the Under Secretary is to provide leadership in the development of policy for the Department, supervise the policy activities of Assistant Secretaries with primary responsibility for aviation, international, and other transportation policy development and carry out other powers and duties prescribed by the Secretary. I have experience in managing a large organization starting from my time at OMB and more recently at Bain, Amtrak, and Lyft.

20. What do you believe to be the top three challenges facing the department/agency, and why?

- Maintaining a high level of safety and safety regulation: One of the critical components of DOT's is to regulate safety. Policies and programs must be developed so as to ensure all forms of transportation in this country as operated at a safe and efficient level.
- Effectively using taxpayer resources: The Federal Government has faced persistent deficits. As a result, the Department of Transportation, like all other agencies, must ensure that each taxpayer dollar is spent wisely. Moreover, DOT must eliminate waste, fraud, and abuse to ensure good stewardship of Federal resources.
- Refreshing and modernizing our transportation infrastructure: Across the country, we have aging infrastructure where bridges, roads, and other key infrastructure have not been sufficiently maintained or upgraded. Without a massive refresh, our infrastructure will impair economic productivity.

#### B. POTENTIAL CONFLICTS OF INTEREST

1. Describe all financial arrangements, deferred compensation agreements, and other continuing dealings with business associates, clients, or customers. Please include information related to retirement accounts.

I currently receive a salary from Lyft for my position as General Manager. As part of my compensation package with Lyft, I also own restricted stock units in Lyft, and I will receive a severance payment from Lyft. I also currently receive board fees from Amtrak for my position as a Board member, as well as occasional fees from GLG Research for my position as a Consultant. If confirmed, I will resign from these positions.

I hold vested stock options with GenapSys, my former employer; I received these as part of my compensation package when I was employed there as Director of Strategy. If confirmed, I will retain these stock options. I also have a 401(k) plan retirement from my former employer, Bain & Company, which is housed with Vanguard and invested in a diversified mutual fund; neither I nor Bain makes any further contributions to the plan. If confirmed, I will retain my 401(k) plan from Bain. I have a TSP account from my previous government service; if confirmed, I will retain my TSP account.

2. Do you have any commitments or agreements, formal or informal, to maintain employment, affiliation, or practice with any business, association or other organization during your appointment? If so, please explain. No

3. Indicate any investments, obligations, liabilities, or other relationships which could involve potential conflicts of interest in the position to which you have been nominated.

In connection with the nomination process, I have consulted with the Office of Government Ethics and the Department of Transportation's Designated Ethics Official to identify potential conflicts of interest. Any potential conflicts of interest will be resolved with the terms of an ethics agreement that I have entered into with DOT's designated Agency Ethics Official and that has been provided to this Committee. I am not aware of any other potential conflicts of interest.

4. Describe any business relationship, dealing, or financial transaction which you have had during the last ten years, whether for yourself, on behalf of a client, or acting as an agent, that could in any way constitute or result in a possible conflict of interest in the position to which you have been nominated.

In connection with the nomination process, I have consulted with the Office of Government Ethics and the Department of Transportation's Designated Ethics Official to identify potential conflicts of interest. Any potential conflicts of interest will be resolved with the terms of an ethics agreement that I have entered into with DOT's designated Agency Ethics Official and that has been provided to this Committee. I am not aware of any other potential conflicts of interest.

5. Describe any activity during the past ten years in which you have been engaged for the purpose of directly or indirectly influencing the passage, defeat, or modification of any legislation or affecting the administration and execution of law or public policy.

As a Congressional staffer, I influenced the legislative process by advising Senators, drafting amendments, and negotiating legislation.

6. Explain how you will resolve any potential conflict of interest, including any that may be disclosed by your responses to the above items.

In connection with the nomination process, I have consulted with the Office of Government Ethics and the Department of Transportation's Designated Ethics Official to identify potential conflicts of interest. Any potential conflicts of interest will be resolved with the terms of an ethics agreement that I have entered into with DOT's designated Agency Ethics Official and that has been provided to this Committee. I am not aware of any other potential conflicts of interest.

#### C. LEGAL MATTERS

1. Have you ever been disciplined or cited for a breach of ethics, professional misconduct, or retaliation by, or been the subject of a complaint to any court, administrative agency, the Office of Special Counsel, professional association, disciplinary committee, or other professional group? If yes:

- a. Provide the name of agency, association, committee, or group;
- b. Provide the date the citation, disciplinary action, complaint, or personnel action was issued or initiated;
- c. Describe the citation, disciplinary action, complaint, or personnel action;
- d. Provide the results of the citation, disciplinary action, complaint, or personnel action.

No

2. Have you ever been investigated, arrested, charged, or held by any Federal, State, or other law enforcement authority of any Federal, State, county, or municipal entity, other than for a minor traffic offense? If so, please explain. No

3. Have you or any business or nonprofit of which you are or were an officer ever been involved as a party in an administrative agency proceeding, criminal proceeding, or civil litigation? If so, please explain.

No. My current and former employers have been involved in litigation and administrative proceedings as part of their normal business dealings, but I was and am not an officer of those businesses and have not been named as a party in those actions.

4. Have you ever been convicted (including pleas of guilty or *nolo contendere*) of any criminal violation other than a minor traffic offense? If so, please explain. No

5. Have you ever been accused, formally or informally, of sexual harassment or discrimination on the basis of sex, race, religion, or any other basis? If so, please explain. No

6. Please advise the Committee of any additional information, favorable or unfavorable, which you feel should be disclosed in connection with your nomination. None

#### D. RELATIONSHIP WITH COMMITTEE

1. Will you ensure that your department/agency complies with deadlines for information set by congressional committees? Yes

2. Will you ensure that your department/agency does whatever it can to protect congressional witnesses and whistle blowers from reprisal for their testimony and disclosures? Yes

3. Will you cooperate in providing the Committee with requested witnesses including technical experts and career employees, with firsthand knowledge of matters of interest to the Committee? Yes

4. Are you willing to appear and testify before any duly constituted committee of the Congress on such occasions as you may be reasonably requested to do so? Yes

## RESUMÉ OF DEREK TAI-CHING KAN

**Experience****Lyft Inc**—Los Angeles, CA*General Manager; 2015–Current*

- Have P&L ownership over all SoCal operations, growing region to become largest market within Lyft
- Increased rides 5x, increased market share by 250 percent while reducing CPAs and moving market to profitability
- Grew team from 0 to 50 in twelve months and created new operating model and org structure

**Amtrak**—Washington, DC*Board Member; Current*

- Unanimously confirmed by U.S. Senate; member of Finance and Marketing Committees
- Selected new CEO and assisted with transition to new leadership
- Actively managed executive team to improve strategy and operational performance

**Genapsys**—Redwood City, CA*Director of Strategy; 2014–2015*

- Developed operating model; led fundraising efforts and developed go to market strategy for product launch

**Bain & Company**—Los Angeles, CA*Consultant; 2012–2014*

- Designed operating model, strategy, and operational improvement plan for nation's largest electrical utility
- Developed operating model and org structure for \$1 billion consumer electronics company
- Integrated two global sales forces and developed implementation plan for \$10 billion life sciences company

**McKinsey & Company**—Los Angeles, CA*Summer Associate*

- Evaluated leverage buyout opportunities and advised deal team on the competitiveness of target industry

**Elliott Management**—New York, New York*Advisor; 2010–2011*

- Analyzed and developed financial model for a \$50 million hedged long/short equity investment
- Advised portfolio managers on implementation of financial regulatory reform and tax changes

**U.S. Senate Office of the Republican Leader**—Washington, D.C.*Policy Advisor; 2008–2010*

- Advised Senators on all economic-related matters, including Highway Trust Fund solvency, new funding mechanisms for DOT, budget process reform, appropriations, and capital markets legislation
- Helped negotiate Emergency Economic Stabilization Act of 2008 (TARP) and Economic Stimulus Act of 2008
- Analyzed financial regulatory system and negotiated comprehensive financial regulatory reform (Dodd-Frank)
- Negotiated and developed communications strategy for 2008 auto bailout proposal

**U.S. Senate Republican Policy Committee**—Washington, D.C.*Chief Economist; 2006–2007*

- Published policy papers on capital markets competitiveness, private equity industry, subprime mortgage market, credit rating industry reform, Highway Trust Funds, and Federal budget process reform

- Advised Senators on legislation, regulatory developments and general trends related to the U.S. economy, Federal budget, banking, housing, and pension issues

**White House Office of Management and Budget**—Washington, D.C.

*Presidential Management Fellow*; 2004–2006

- Assisted the President and his executive team with management, policy development, and budget execution
- Worked with agencies to implement the President’s Management Agenda
- Managed and reorganized VA’s \$2.1 billion information technology portfolio

**Eli Lilly & Company**—Los Angeles, CA

*Sales Specialist*; 2002–2003

- Awarded highest sales achievement honor for performance in the top 1 percent of entire company

**KPMG, Structured Finance Group**—Los Angeles, CA

*Associate*; 2001

- Developed financial models to project cash flow and develop sensitivity analysis of asset-backed securities

**Education**

**Stanford Graduate School of Business** Stanford, CA

*Master of Business Administration* 2010–2012

Arjay Miller Scholar (Top 10 percent)

**London School of Economics and Political Science** London, United Kingdom

*Masters of Science, Economic History* with Merit 2003–2004

*Graduate Diploma, Economics* 1999–2001

**University of Southern California** Los Angeles, CA

*Bachelor of Science, Business Administration* 1996–1999

**Memberships**

Los Angeles Auto Show, Advisory Board, 2015–2017

Pacific Council on International Relations, Member, 2011–2015

Great Commission Community Church, Board Member, 2007–2010

Environmental Defense Action Fund, 2013–2014

The CHAIRMAN. Thank you, Mr. Kan. And I’m just curious if the streets of Honolulu are the first ones you’ll be visiting?

[Laughter.]

The CHAIRMAN. Mr. Redl, please proceed. Thank you.

**STATEMENT OF DAVID J. REDL, NOMINEE TO BE ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, U.S. DEPARTMENT OF COMMERCE**

Mr. REDL. Thank you, Senator. Mr. Chairman, Senator Schatz, and members of the Committee, thank you for the opportunity to appear today and for scheduling the hearing.

My name is David Redl, and I’m the President’s nominee to be Assistant Secretary of Commerce for Communication and Information, and Administrator of NTIA.

I would like to start by thanking President Trump and Secretary Ross for this honor. The communications and information sectors are the backbone of modern commerce, and as principal adviser to the President on telecommunications, NTIA plays an integral role in preserving our Nation’s leadership in these sectors. Whether it’s broadband deployment, the digital economy, or managing our government spectrum resources, NTIA is at the forefront of preserving and advancing our information economy.

I would also like to thank my family, who is here today. I'm joined by my mother, Susan Redl; my father, David Redl; my mother-in-law, Maria Smith; my wife of nearly 10 years, Amy Redl; and our son, who on his first day of summer vacation is wearing a tie—

[Laughter.]

Mr. REDL.—Benjamin Redl. He'll be turning 6 next week, and he's very excited.

My family did everything they could to make sure a young man with a fascination for technology had the tools to succeed. When I turned 5 years old, my family got me an IBM PC jr. It had a whopping 128k of memory, a 5¼-inch floppy drive, DOS 3.2, and cartridges, and I was hooked. From then on, I wanted to work on anything electronic, whether it was helping my mother, Sue, process the family business's accounts receivable on a Monroe accounting machine with magnetic-stripe ledgers and a cassette drive or helping with the avionics from the right seat of my dad's Beechcraft Bonanza, I wanted in.

As I got older, my dad instilled in me a curiosity that drives me to this day. My father, also David Redl, is a man who wants to know how things work. He's a man who likes to take things apart, right down to the nuts and bolts. In his case, literally, the family business is automotive recycling.

You could also say that working in technology runs in the family. My grandfather, John Roberts, spent his career as an employee of IBM, including working on the Apollo program in the 1960s at Cape Canaveral.

Technology has always fascinated me, and its understanding and its inner workings have become my career, so I mean it with absolute sincerity when I say it's an honor to sit before you today.

For the last six years, I've had the privilege of working as a member of the professional staff of the House Committee on Energy and Commerce. Under the leadership of Chairmen Fred Upton and Greg Walden, I dedicated my time on Capitol Hill to working closely with my colleagues, both Republican and Democratic, to find bipartisan solutions to contemporary telecommunications issues. We didn't agree on everything, but by focusing on the things we could agree on, the vast majority of our bills passed the House of Representatives by large bipartisan margins.

In that spirit, I would like to offer a short list of commitments on which I hope there is bipartisan consensus. If confirmed, I'll work with Congress and the administration to ensure that the needs of our nation's government spectrum users are balanced with the continuing need for additional licensed and unlicensed commercial spectrum. I will advance policies to improve access to broadband for all Americans. I'll work to advance the U.S. digital economy. And I'll work to ensure that the Internet remains a driver of free speech, free market commerce, and economic opportunity.

Mr. Chairman, the staff of NTIA are the unsung heroes of the U.S. digital economy. They're experts working for the American people in a small government agency all but unknown outside the Beltway. And like my father, they're people that revel in the nuts and bolts. It would be a privilege to have the chance to lead them.

Again, thank you for holding this hearing. I look forward to any questions the Committee may have.

[The prepared statement and biographical information of Mr. Redl follow:]

PREPARED STATEMENT OF DAVID J. REDL, NOMINEE TO BE ASSISTANT SECRETARY OF COMMERCE FOR COMMUNICATIONS AND INFORMATION, U.S. DEPARTMENT OF COMMERCE

Mr. Chairman, Ranking Member Nelson, and Members of the Committee,

Thank you for the opportunity to appear before you today and for scheduling this hearing. My name is David Redl and I am honored to be the President's nominee to be Assistant Secretary of Commerce for Communications and Information and the Administrator of NTIA.

I'd like to start by thanking President Trump and Secretary Ross for the honor of this nomination. The communications and information sectors are the backbone of modern commerce and as principal advisor to the President on telecommunications, NTIA plays an integral role in preserving our Nation's leadership in these sectors. Whether it's broadband deployment, the digital economy, or managing our government spectrum resources, NTIA is at the forefront of preserving and advancing our information economy.

For the past six years, I have had the privilege of working as a member of the professional staff of the House Committee on Energy and Commerce. Under the leadership of Chairmen Fred Upton and Greg Walden, I dedicated much of my time on Capitol Hill to working closely with my colleagues, both Republican and Democratic, on a number of telecommunications issues, among them improving the availability and use of spectrum.

Spectrum is the invisible infrastructure of our digital economy, and it enables our increasingly mobile society. Despite the good work that has been done to make more spectrum available, demand continues to grow as smart cities, connected cars, and 5G wireless technologies become closer to widespread deployment. Among NTIA's responsibilities is management of the Federal Government spectrum. Improving the performance of government spectrum systems, providing incentives for government agencies to make better use of spectrum, and promoting spectrum research and development have been critical to the digital economy and will continue to be important for NTIA. The recent changes made by Congress to the Spectrum Relocation Fund are already driving Federal agencies to reach for new efficiencies, but the work on this front is far from over. If confirmed, I will work to continue to improve government spectrum efficiency and make additional spectrum available to fuel our Nation's licensed and unlicensed wireless needs.

In addition to working to expand the spectrum available for broadband, NTIA plays a critical role in working to ensure no American is left out of our digital society. The unfortunate reality is that there continue to be Americans for whom access to basic broadband is lacking, particularly

in rural areas. Recently, Transportation Secretary Elaine Chao testified before the Senate Committee on Environment and Public Works that the Trump Administration's infrastructure initiative will include broadband infrastructure. As the President's principal advisor on communications policy, NTIA will play a role in developing the Administration's approach. And rightly so. The staff of NTIA have decades of experience in what works—and what doesn't—when it comes to promoting private sector investment in broadband networks. If confirmed, I will work with the talented professionals at NTIA to drive investment in rural America to bring the economic opportunity of broadband to the unserved parts of our country.

Finally, I'd like to discuss the important work that NTIA does to promote the U.S. digital economy. That work takes many forms. NTIA is the United States' representative on the Internet Corporation for Assigned Names and Numbers' Government Advisory Committee where it works to ensure the Internet remains an engine for global communication and commerce; NTIA engages industry and the public in multistakeholder groups to address issues of privacy and the Internet of Things; and, NTIA works to protect the Internet and Internet users through its policy work on cybersecurity.

This work is critical to preserving the Internet as an engine of free speech and free-market commerce, and to protecting Americans online. The multistakeholder process NTIA has employed holds the potential to bring a fresh approach to communications policy challenges and new levels of engagement with the Internet community. This same approach can also further NTIA's work on cybersecurity. The Presi-

dent's recent Executive Order on the topic recognizes the Department of Commerce's role in cybersecurity and NTIA's approach has the potential to provide a new voice to the commercial Internet and its users in this important discussion.

The NTIA's approach to policy, engagement, and its role as the President's "principal adviser on telecommunications policies pertaining to the Nation's economic and technological advancement," make NTIA uniquely qualified to tackle the communications challenges of the twenty-first century. If confirmed, I will work with the men and women of the NTIA to expand broadband availability, preserve the Internet as a driver for economic growth, promote the U.S. digital economy, and to drive investment in the broadband networks that comprise the global Internet.

Again, I thank President Trump and Secretary Ross for the honor of this nomination and I look forward to answering any questions for the Committee.

#### A. BIOGRAPHICAL INFORMATION

1. Name (Include any former names or nicknames used): David John Redl.
2. Position to which nominated: Assistant Secretary for Communications and Information, Department of Commerce and Administrator of the National Telecommunications and Information Administration.
3. Date of Nomination: 5/18/2017.
4. Address (List current place of residence and office addresses):  
Residence: Information not provided to the public.  
Office: 2125 Rayburn House Office Building, Washington, D.C. 20515.
5. Date and Place of Birth: February 1, 1981; Rhinebeck, NY.
6. Provide the name, position, and place of employment for your spouse (if married) and the names and ages of your children (including stepchildren and children by a previous marriage).  
Amy Luella Redl, Director, Federal Government Relations, Sanofi Inc.
7. List all college and graduate degrees. Provide year and school attended.  
B.A., Journalism, Penn State, 2003  
B.A., Political Science, Penn State, 2003  
J.D., Catholic University of America, 2006
8. List all post-undergraduate employment, and highlight all management level jobs held and any non-managerial jobs that relate to the position for which you are nominated.

Employer	Title	Period of Employment
Committee on Energy and Commerce, U.S. House of Representatives	Chief Counsel	July 2013 to present
	Counsel	February 2011–July 2013
CTIA—The Wireless Association	Director, Regulatory Affairs	July 2009–February 2011
	Counsel, Regulatory Affairs	April 2007–June 2009
	Legal Intern	Summer 2005, August 2006–April 2007
Office of Congresswoman Sue Kelly	Intern	Spring 2006
Federal Communications Commission	Legal Intern	Fall 2004; Spring 2005
Arnold & Porter (UK), LLP	Summer Associate	Summer 2004

9. Attach a copy of your resume.  
See Attachment 1.
10. List any advisory, consultative, honorary, or other part-time service or positions with Federal, State, or local governments, other than those listed above, within the last ten years. None.
11. List all positions held as an officer, director, trustee, partner, proprietor, agent, representative, or consultant of any corporation, company, firm, partnership, or other business, enterprise, educational, or other institution within the last ten years.

Pennsylvania Lambda Corp.	Director	2012–2016
	Vice President	2012–2013
	President	2013–2015
	Vice President	2015–2016
Maryland Gamma Corp.	President	2011–2012

12. Please list each membership you have had during the past ten years or currently hold with any civic, social, charitable, educational, political, professional, fraternal, benevolent or religious organization, private club, or other membership organization. Include dates of membership and any positions you have held with any organization. Please note whether any such club or organization restricts membership on the basis of sex, race, color, religion, national origin, age, or handicap.

I am a member of the Phi Kappa Psi Fraternity, a collegiate fraternity of men. I served as a member of the Executive Council of the fraternity from 2001–2003.

I am a member of the Federal Communications Bar Association, the FCBA “is a volunteer organization of attorneys, engineers, consultants, economists, government officials and law students involved in the study, development, interpretation and practice of communications and information technology law and policy.” I have been a member since my time in law school in the early 2000s. To my knowledge, the FCBA does not discriminate on the basis of sex, race, color, religion, national origin, age, or handicap.

I am a member of The Federalist Society for Law and Public Policy Studies. I also serve as a member of the Telecommunications & Electronic Media Practice Group Executive Committee. I have been a member since 2012. To my knowledge, the Federalist Society does not discriminate on the basis of sex, race, color, religion, national origin, age, or handicap.

13. Have you ever been a candidate for and/or held a public office (elected, non-elected, or appointed)? If so, indicate whether any campaign has any outstanding debt, the amount, and whether you are personally liable for that debt. No.

14. Itemize all political contributions to any individual, campaign organization, political party, political action committee, or similar entity of \$500 or more for the past ten years. Also list all offices you have held with, and services rendered to, a state or national political party or election committee during the same period.

The FEC website lists a donation of \$500 to Joseph Pitts (via Friends of Joe Pitts) on 6/30/2014. My wife made this donation from our joint checking account. It should have been attributed to her.

15. List all scholarships, fellowships, honorary degrees, honorary society memberships, military medals, and any other special recognition for outstanding service or achievements.

Bishop’s Scholarship, Catholic University of America, 2003

Scholarship, Kennedy School of Government, Harvard University, 2016

16. Please list each book, article, column, or publication you have authored, individually or with others. Also list any speeches that you have given on topics relevant to the position for which you have been nominated. Do not attach copies of these publications unless otherwise instructed.

As part of my duties for both CTIA—The Wireless Association and the Committee on Energy and Commerce, I have appeared on panels and spoken at events on matters within my job responsibilities. Most recently, I gave a speech in March 2017 at an event hosted by the U.S. Council on International Business on the Energy and Commerce Committee’s priorities.

17. Please identify each instance in which you have testified orally or in writing before Congress in a governmental or non-governmental capacity and specify the date and subject matter of each testimony.

My job responsibilities with the Committee on Energy and Commerce require me to serve as counsel at the witness table from time to time, but I have never been invited to testify before Congress.

18. Given the current mission, major programs, and major operational objectives of the department/agency to which you have been nominated, what in your background or employment experience do you believe affirmatively qualifies you for appointment to the position for which you have been nominated, and why do you wish to serve in that position?

Throughout my career I have worked to promote the availability of broadband, improve spectrum use and efficiency, and promote the innovation and investment that have made the Internet the greatest engine of communications and commerce

the world has ever known. For the last six years, I have been an employee of the Committee on Energy and Commerce in the U.S. House of Representatives and been privileged to serve my country working toward these goals. The responsibilities of the Assistant Secretary of Commerce for Communications and Information would be a continuation of the work that I have done in both the public and private sectors and an opportunity to continue to serve the country.

19. What do you believe are your responsibilities, if confirmed, to ensure that the department/agency has proper management and accounting controls, and what experience do you have in managing a large organization?

If confirmed, I will work to ensure that NTIA promptly addresses deficiencies identified by the GAO and the Inspector General of the Department of Commerce. I believe that my experience with the Committee on Energy and Commerce managing groups of Members and staff, as well as the myriad outside parties that have business before the subcommittee will enable me to lead the agency effectively.

20. What do you believe to be the top three challenges facing the department/agency, and why?

I believe the top three challenges facing NTIA are:

1. Modernizing Federal spectrum systems to maximize spectrum use for Federal and non-Federal users. Spectrum continues to be a finite resource in increasing demand. Left unaddressed, the challenge of balancing mission and commercial demands could impact the Nation's leadership in 5G technology.
2. Improving broadband availability, particularly in rural areas.
3. Effectively addressing the needs of the U.S. digital economy both domestically as the principal adviser to the President on telecommunications policies pertaining to the Nation's economic and technological advancement and internationally in multistakeholder and multinational fora.

#### B. POTENTIAL CONFLICTS OF INTEREST

1. Describe all financial arrangements, deferred compensation agreements, and other continuing dealings with business associates, clients, or customers. Please include information related to retirement accounts. None.

2. Do you have any commitments or agreements, formal or informal, to maintain employment, affiliation, or practice with any business, association or other organization during your appointment? If so, please explain. No.

3. Indicate any investments, obligations, liabilities, or other relationships which could involve potential conflicts of interest in the position to which you have been nominated.

In connection with the nomination process, I have consulted with the Office of Government Ethics and the Department of Commerce's designated agency ethics official to identify any potential conflicts of interest. Any potential conflicts of interest will be resolved in accordance with the terms of my ethics agreement with the Department's designated agency ethics official. I understand that my ethics agreement has been provided to the Committee. I am not aware of any potential conflicts of interest other than those that are the subject of my ethics agreement.

4. Describe any business relationship, dealing, or financial transaction which you have had during the last ten years, whether for yourself, on behalf of a client, or acting as an agent, that could in any way constitute or result in a possible conflict of interest in the position to which you have been nominated. None.

5. Describe any activity during the past ten years in which you have been engaged for the purpose of directly or indirectly influencing the passage, defeat, or modification of any legislation or affecting the administration and execution of law or public policy.

From 2008 to 2009 I was a registered lobbyist for my employer, CTIA—The Wireless Association. My work focused on telecommunications regulation and legislation consistent with CTIA's lobbying disclosure filings.

As an employee for the Committee on Energy and Commerce, my job responsibilities include working directly on the drafting and disposition of legislation and the oversight of agencies within the jurisdiction of the Subcommittee on Communications and Technology.

6. Explain how you will resolve any potential conflict of interest, including any that may be disclosed by your responses to the above items.

Any potential conflicts of interest will be resolved in accordance with the terms of my ethics agreement with the Department's designated agency ethics official. I understand that my ethics agreement has been provided to the Committee. I am not aware of any potential conflicts of interest other than those that are the subject of my ethics agreement.

## C. LEGAL MATTERS

1. Have you ever been disciplined or cited for a breach of ethics, professional misconduct, or retaliation by, or been the subject of a complaint to, any court, administrative agency, the Office of Special Counsel, professional association, disciplinary committee, or other professional group? If yes:

- a. Provide the name of agency, association, committee, or group;
- b. Provide the date the citation, disciplinary action, complaint, or personnel action was issued or initiated;
- c. Describe the citation, disciplinary action, complaint, or personnel action;
- d. Provide the results of the citation, disciplinary action, complaint, or personnel action.

No.

2. Have you ever been investigated, arrested, charged, or held by any Federal, State, or other law enforcement authority of any Federal, State, county, or municipal entity, other than for a minor traffic offense? If so, please explain. No.

3. Have you or any business or nonprofit of which you are or were an officer ever been involved as a party in an administrative agency proceeding, criminal proceeding, or civil litigation? If so, please explain. No.

4. Have you ever been convicted (including pleas of guilty or *nolo contendere*) of any criminal violation other than a minor traffic offense? If so, please explain. No.

5. Have you ever been accused, formally or informally, of sexual harassment or discrimination on the basis of sex, race, religion, or any other basis? If so, please explain. No.

6. Please advise the Committee of any additional information, favorable or unfavorable, which you feel should be disclosed in connection with your nomination. None.

## D. RELATIONSHIP WITH COMMITTEE

1. Will you ensure that your department/agency complies with deadlines for information set by congressional committees? Yes.

2. Will you ensure that your department/agency does whatever it can to protect congressional witnesses and whistle blowers from reprisal for their testimony and disclosures? Yes.

3. Will you cooperate in providing the Committee with requested witnesses, including technical experts and career employees, with firsthand knowledge of matters of interest to the Committee? Yes.

4. Are you willing to appear and testify before any duly constituted committee of the Congress on such occasions as you may be reasonably requested to do so? Yes.

## ATTACHMENT 1

## RESUMÉ OF DAVID J. REDL

**Education**

**The Catholic University of America, Columbus School of Law**—Washington, D.C.

- Juris Doctor, May 2006
- Graduate, Institute for Communications Law Studies
- CommLaw Conspectus: Articles Editor, 2006 Symposium Coordinator

**Pennsylvania State University**—University Park, PA

- B.A. Journalism, May 2003; B.A. Political Science, May 2003

**Experience**

**Committee on Energy and Commerce, U.S. House of Representatives**—Washington, D.C.

*Chief Counsel*—July 2013 to Present

*Counsel*—February 2011–July 2013

- Served as primary legal advisor to Chairman Fred Upton and Subcommittee on Communications and Technology Chairman Greg Walden.
- Managed subcommittee staff comprised of a team of lawyers and non-legal professional staff.

- Provided legal and drafting advice to all Members of the Subcommittee on Communications and Technology on matters within the subcommittee's jurisdiction.
- Worked with media and advocacy groups to support Committee policy goals, including media interviews, participation on discussion panels, and drafting op-eds.
- Represented the United States at international conferences, including multiple ICANN conferences and two treaty-level conferences of the U.N. International Telecommunication Union (2012 World Conference on International Telecommunication and 2014 Plenipotentiary Conference).

*Legislative Achievements:*

- Title VI of the Middle Class Tax Relief and Job Creation Act of 2012
  - Required the FCC to auction certain spectrum assets to the public. To date this has resulted in more than \$40b in revenue for the U.S. Government.
  - Authorized spectrum incentive auctions—auctions in which the government shares a portion of proceeds with licensees that volunteer to relinquish their licenses. First auction under this model is set to take place in the first quarter of 2016.
  - Established and funded FirstNet, an independent government agency dedicated to building and operating an interoperable wireless broadband network for public safety entities.
- H. Con. Res. 127/S. Con. Res. 50 (112th Congress)
  - A concurrent resolution expressing the sense of Congress in support of the multistakeholder model of Internet governance. Served as the catalyst for the congressional discussion of additional Internet governance issues, including ICANN and the IANA transition.
- STELA Reauthorization Act of 2014
  - Reauthorization of the laws that govern the carriage of broadcast television on satellite television platforms. Includes both communications law and copyright law provisions.
- Title X of the Bipartisan Budget Act of 2015
  - Generated more than \$4b in revenue from the auction of government spectrum assets. Additionally requires the government to develop plans for the re-allocation of an additional 100 MHz to improve commercial wireless broadband.

**CTIA-The Wireless Association**—Washington, DC  
*Director, Regulatory Affairs* July 2009–February 2011  
*Counsel, Regulatory Affairs* April 2007–June 2009

- Researched and drafted regulatory filings representing the wireless industry in nearly all aspects of regulation. Specific emphasis on spectrum issues, broadband, new technology and regulatory mandates.
- Prepared and presented ex parte presentations to FCC Commissioners, legal advisors and staff.
- Prepared and presented weekly regulatory updates for representatives from member companies.

**CTIA-The Wireless Association**—Washington, DC  
*Legal Intern* Summer 2005, August 2006–April 2007

- Assisted in drafting comments and reply comments in FCC proceedings on universal service
- Prepared presentation materials and participated in ex parte meetings with FCC Commissioners and staff

**Office of Congresswoman Sue Kelly**—Washington, DC  
*Intern* Spring 2006

- Drafted general correspondence on policy issues for use in responding to common questions and concerns
  - n various communications policy matters
- Researched and drafted internal memoranda on current communications policy issues

- Drafted responses to individual constituents' on communications issues

**Federal Communications Commission**—Washington, D.C.

*Legal Intern*, Wireless Telecommunications Bureau Fall 2004; Spring 2005

- Researched and drafted staff orders pertaining to wireless service licensing
- Researched novel wireless broadband service issues

**Arnold & Porter (UK), LLP**—London, England

*Summer Associate* Summer 2004

- Researched impact of European Union telecommunications regulations on existing client properties
- Reviewed client contracts as part of due diligence report

**Security Clearance**

- Active TS/SCI clearance.

The CHAIRMAN. Thank you, Mr. Redl.

And, Benjamin, 6-year-old birthdays are great. They're unlimited sugar.

[Laughter.]

The CHAIRMAN. Mr. Sumwalt, please proceed with your testimony.

**STATEMENT OF ROBERT L. SUMWALT III, NOMINEE TO BE MEMBER OF THE NATIONAL TRANSPORTATION SAFETY BOARD (NTSB) FOR A 5-YEAR TERM EXPIRING DECEMBER 16, 2021, AND TO BE DESIGNATED VICE CHAIRMAN FOR A TERM OF 2 YEARS**

Mr. SUMWALT. Good morning. And thank you, Chairman Gardner, Ranking Member Schatz, and distinguished members of the Committee. I'm honored to appear before you today as you consider my nomination as a member of the National Transportation Safety Board, and I am grateful to President Trump for the confidence he has placed in me through this nomination.

I've been honored to serve on the NTSB for nearly 11 years, where I've served as a member, the Vice Chairman, and now as Acting Chairman. In my most recent role as Acting Chairman, I've placed renewed focus on ensuring that the agency lives our core values of safety, excellence, independence, integrity, diversity and inclusion, and transparency.

During my tenure on the Board, I've been a fierce advocate for improving safety in all modes of transportation, including issues such as teen driver safety, impaired driving, distractions in transportation, and professionalism in aviation. I've testified before Congress regarding rail safety initiatives, including Positive Train Control and the transport of flammable liquids by rail. It has been my duty to serve as the voice of objectivity and reason when deliberating and determining the probable cause of more than 150 transportation accidents. I believe that in order to truly improve safety, we must not simply focus on the obvious human error, but, instead, we must determine the underlying factors that led to the accident.

I've been privileged to serve as Chairman of the Board of Inquiry for a number of high profile investigative hearings, including the 2009 Washington Metropolitan Area Transit Authority, or WMATA, train-to-train collision near the Fort Totten Metro station right here in the District of Columbia. While that investigation

identified technical issues within the train control system, it also uncovered systemic organizational deficiencies, including WMATA's lack of a safety culture, the ineffective safety oversight by WMATA's Board of Directors, and the insufficient regulatory oversight and authority by the Tri-State Oversight Committee.

Although our transportation system generally performs very well, when transportation accidents do occur, it is imperative that we be able to reassure the American public that the government is conducting an honest, competent, thorough, and unbiased investigation. The Board must act with an objective dispassionate eye, calling the facts as we see them, and then conducting a thorough analysis of those facts. Simply investigating the accident alone does not prevent accidents. To accomplish that, we must use our analysis to formulate safety recommendations to government and industry, and we must also follow up on the status of those recommendations. Clearly, the American public and the transportation community depend on the NTSB to fulfill its mission, not only in the wake of an accident, but to also be proactive through the Board's advocacy role and by conducting safety studies.

Additionally, the Board has an important role in assisting victims and their families in the wake of transportation disasters. The NTSB must also keep up with emerging technologies in transportation, which have the potential to certainly improve safety, but they may present challenges as well.

If confirmed, I will continue to support the Board in all of its endeavors. Additionally, if confirmed, I look forward to continuing to work in a professional and collegial fashion with my fellow Board members, the dedicated NTSB staff, and, of course, with this Committee as we work together to enhance transportation safety for us all.

Thank you for your time, and I look forward to answering your questions.

[The prepared statement and biographical information of Mr. Sumwalt follow:]

PREPARED STATEMENT OF ROBERT L. SUMWALT III, NOMINEE TO BE BOARD MEMBER,  
NATIONAL TRANSPORTATION SAFETY BOARD

Thank you, Chairman Thune, Ranking Member Nelson, and distinguished Members of the Committee. I am honored to appear before you today as you consider my nomination as a Member of the National Transportation Safety Board (NTSB). I am grateful to President Trump for the confidence he has placed in me through this nomination.

I've been honored to be on the NTSB for nearly 11 years, where I have served as Member, Vice Chairman, and Acting Chairman.

In my most recent role as Acting Chairman, I have placed renewed focus on ensuring the agency lives our core values of Safety, Excellence, Independence, Integrity, Diversity and Inclusion, and Transparency.

During my tenure on the Board, I have been a fierce advocate for improving safety in all modes of transportation, including issues such as teen driver safety, impaired driving, distractions in transportation, and professionalism in aviation. I have testified before Congress regarding rail safety initiatives, including Positive Train Control and the transport of flammable liquids by rail. It has been my duty to serve as a voice of objectivity and reason when deliberating and determining the probable cause of more than 150 transportation accidents. I believe that to truly improve safety, the investigation must not simply stop at finding the obvious error, but instead, must uncover each underlying factor that led to the accident.

I've been privileged to serve as Chairman of the Board of Inquiry for a number of high-profile investigative hearings, including the 2009 Washington Metropolitan

Area Transit Authority (WMATA) train-to-train collision near the Fort Totten Metro Station here in the District of Columbia. While that investigation identified technical failures within the train control system, it also uncovered systemic deficiencies, including WMATA's lack of a safety culture, the ineffective safety oversight by the WMATA Board of Directors, and the insufficient regulatory oversight and authority by the Tri-State Oversight Committee.

Although our transportation system generally performs very well, when transportation accidents do occur, it is imperative that we be able to reassure the American public that the Federal Government is conducting an honest, competent, thorough, and unbiased investigation. The Board must act with an objective, dispassionate eye, calling the facts as we see them, and then conducting a thorough analysis of those facts. But simply investigating the accident, alone, doesn't prevent accidents; to accomplish that, we must use our analysis to formulate safety recommendations to government and industry. We must also follow up and track the status of those recommendations.

Clearly, the American public and the transportation community depend on the NTSB to fulfill its mission, not only in the wake of an accident, but also to be proactive through the Board's advocacy role and by conducting safety studies. Additionally, the NTSB has an important role in assisting victims and their families in the wake of transportation disasters. The NTSB must also keep up with emerging technologies in transportation, which have the potential to dramatically improve safety, but may present challenges, as well.

If confirmed, I will continue to support the Board in all its endeavors.

Mr. Chairman, if confirmed, I look forward to continuing to work in a professional and collegial fashion with my fellow Board Members, the dedicated NTSB staff, and this Committee, to enhance transportation safety for all.

Thank you for your time and I look forward to answering your questions.

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#### A. BIOGRAPHICAL INFORMATION

1. Name (Include any former names or nicknames used): Robert Llewellyn Sumwalt III.

2. Position to which nominated: Board Member, National Transportation Safety Board.

3. Date of Nomination: May 10, 2017.

4. Address (List current place of residence and office addresses):

Residence: Information not released to the public.

Office: National Transportation Safety Board, 490 L'Enfant Plaza, Washington, D.C. 20594

5. Date and Place of Birth: June 30, 1956; Columbia, SC.

6. Provide the name, position, and place of employment for your spouse (if married) and the names and ages of your children (including stepchildren and children by a previous marriage).

Anne Macdonald Sumwalt (spouse) Sales Associate

Kaylyn Mackenzie Sumwalt (daughter) Age 22

7. List all college and graduate degrees. Provide year and school attended.

Bachelor of Science, 1979

Business Administration

University of South Carolina

Master of Aeronautical Science) 2014

Aviation/Aerospace Safety Systems and Human Factors in Aviation Systems

Embry-Riddle Aeronautical University

8. List all post-undergraduate employment, and highlight all management level jobs held and any non-managerial jobs that relate to the position for which you are nominated.

National Transportation Safety Board

Incumbent NTSB Board Member

August 2006 to present

SCANA Corporation

Manager of Aviation

November 2004–August 2006

(Managing corporate flight department for a Fortune 500 company)

U.S. Airways  
 Airline Pilot  
 February 1981–November 2004  
 Assigned to Corporate Safety Department on temporary assignment, 1997–2004  
 Aviation consultant  
 1991–2006  
 Self employed while working as an airline pilot and aviation department manager.

9. Attach a copy of your resume.  
 Resume is attached.

10. List any advisory, consultative, honorary, or other part time service or positions with Federal State, or local government, other than those listed above, within the last ten years. None

11. List all positions held as an officer, director, trustee, partner, proprietor, agent, representative, or consultant of any corporation, company, firm, partnership, or other business, enterprise, educational, or other institution within the last ten years. None

12. Please list each membership you have had during the past ten years or currently hold with any civic, social, charitable, educational, political, professional, fraternal, benevolent or religious organization, private club, or other membership organization. Include dates of membership and any positions you have held with any organization. Please note whether any such club or organization restricts membership on the basis of sex, race, color, religion, national origin, age, or handicap.

*Note:* None of these organizations restrict membership on the basis of sex, race, color, religion, national origin, age or handicap.

Academie de L'Air et de L'Espace  
 Foreign Associate Member  
 2014 to present

Aircraft Owners and Pilots Association  
 Member  
 2005 to present

Columbia Ball  
 Member  
 Approximately 1995–2014

Cotillion Ball  
 Member  
 Approximately 2003–2014

Eastminster Presbyterian Church  
 Member  
 1995 to present

Forest Lake Club  
 Member  
 1981–2010

International Society of Air Safety Investigators  
 Member  
 Approximately 1995 to present

Royal Aeronautical Society  
 Fellow  
 2014 to present

University of South Carolina Alumni Association  
 Member  
 Approximately 1980 to present

13. Have you ever been a candidate for and/or held a public office (elected, non-elected, or appointed)? If so, indicate whether any campaign has any outstanding debt, the amount, and whether you are personally liable for that debt. No

14. Itemize all political contributions to any individual, campaign organization, political party, political action committee, or similar entity of \$500 or more for the past ten years. Also list all offices you have held with, and services rendered to, a state or national political party or election committee during the same period.

I have not given any political contributions exceeding \$500 in the past ten years. Additionally, I have held no offices for, nor rendered any services to, any state or national political party or election committee during the past ten years.

15. List all scholarships, fellowships, honorary degrees, honorary society memberships, military medals, and any other special recognition for outstanding service or achievements.

Cecile S. Hatfield Award for Excellence in Aviation, 2017  
 Bombardier Safety Standdown Award, 2016  
 Fellow, Royal Aeronautical Society, 2014  
 Association of Air Medical Services Public Service Award, 2010  
 South Carolina Aviation Hall of Fame, 2009  
 Professional Pilot Magazine Aviation Safety Advocate of the Year, 2009  
 ALPA Air Safety Award, 2004  
 Flight Safety Foundation's Laura Taber Barbour Air Safety Award, 2003

16. Please list each book, article, column, or publication you have authored, individually or with others. Also list any speeches that you have given on topics relevant to the position for which you have been nominated. Do not attach copies of these publications unless otherwise instructed.

*Congressional and Legislative Testimony*

Testimony before the Joint Committee on the Judiciary, 189th General Court, The Commonwealth of Massachusetts, on House bill 1187, Primary enforcement seat belt legislation, Boston, MA (November 18, 2015).

Testimony before the Subcommittee on Railroads, Pipelines, and Hazardous Materials Committee on Transportation and Infrastructure, United States House of Representatives, Hearing on oversight of Passenger and Freight Rail Safety, Washington, D.C. (February 26, 2014).

Testimony Before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, United States House of Representatives, Hearing on the Oversight of Helicopter Medical Services, Washington, D.C. (February 24, 2009).

Testimony Before the U.S. House of Representatives, Subcommittee on Aviation, Committee on Transportation and Infrastructure, Hearing on Runway Safety, Washington, D.C. (February 13, 2008).

Testimony Before the U.S. Senate, Committee on Commerce, Science and Transportation, Subcommittee on Surface Transportation and Merchant Marine, Infrastructure, Safety, and Security, Rail Safety Legislation (May 22, 2007).

Testimony Before the U.S. House of Representatives Committee on Transportation and Infrastructure, Subcommittee on Railroads, Pipelines and Hazardous Materials, Washington, D.C. (January 30, 2007).

Testimony Before Illinois Task Force on Graduated Driver Licensing, Chicago, IL (October 11, 2006).

Testimony Before Commerce, Science, and Transportation Committee of the United States Senate, Opening Statement of Senate Confirmation Hearing (July 27, 2006).

*Published Books or Book Chapters*

Sumwalt, R.L. (2016). Foreword, in Schultz, J., Fielkow, B. *Leading people safely: How to win on the business battlefield*. Minneapolis: North Loop Books.

Sumwalt, R.L. (2015). The role of the NTSB, in Blumen et al. (Eds.) *Principles and Direction of Air Medical Transport, 2nd edition*. Salt Lake City: Air Medical Physician Association.

Sumwalt, R.L., & Lemos, K.A. (2010). The accident investigators perspective, in Kanki, B., Helmreich, R., & Anca, J. (Eds.) *Crew Resource Management, 2nd Edition*. San Diego: Academic Press.

Sumwalt, R.L. (2002). Aircraft accident and incident investigation, in *The Standard Handbook for Aeronautical and Astronautical Engineers*. New York: McGraw Hill.

Walters, J.M., & Sumwalt, R.L. (2000). *Aircraft Accident Analysis: Final Reports*. New York: McGraw Hill.

Schwab, A., & Sumwalt, R.L. (1990). *The Terminal Checklist Book*. Alexandria, VA: Queensmith Publications.

*Articles, Columns, Publications*

Sumwalt, R.L. (2016). A unique perspective: Moving from the Airbus left seat to the NTSB board seat. *Safety Preflight*. American Airlines flight safety publication. April, 2016.

- Sumwalt, R.L. (2016). Call to action asks air med operators to voluntarily adopt NTSB recommended practices, training and new equipment. *Professional Pilot Magazine*. February, 2016.
- Sumwalt, R.L. (2015). The Gulfstream IV operator had all the appearance of a good operation but the flightcrew lacked cockpit discipline. *Professional Pilot Magazine*. November, 2015.
- Sumwalt, R.L. (2015). The effect of national culture on crew resource management. *Vectors*. Fall issue.
- Sumwalt, R., Cross, D., & Lessard, D. (2015). Examining breakdowns in pilot monitoring of the aircraft flight path. *International Journal of Aviation, Aeronautics, and Aerospace*, 2(3).
- Sumwalt, R.L. (2015). NTSB places public helicopter safety on its 2015 Most Wanted List. *Professional Pilot Magazine*. February 2015.
- Sumwalt, R.L. (2015). Public helicopter safety on NTSB 2015 Most Wanted List. *Rotor*. Winter 2015.
- Sumwalt, R.L. (2015). Challenges remain in public helicopter safety: Crash mistakes and mindsets. *Air Beat*. January/February 2015.
- Sumwalt, R.L. (2014). You, me and NTSB: Setting the record straight. *Professional Pilot Magazine*. February 2015.
- Sumwalt, R.L. (2013). Safety management systems are proving their value in fixed-wing and helo flight ops. *Professional Pilot Magazine*. May 2013.
- Sumwalt, R.L. & Dalton, S.L. (2012). Navigating the course to a true safety culture. *Marine Technology*. April 2013.
- Sumwalt, R.L. (2011, September 27). A message to the HEMS community. Association of Air Medical Services web page.
- Sumwalt, R.L. "NTSB Most Wanted List." *Professional Pilot Magazine*. August, 2011.
- Sumwalt, R.L. "Equipment, Training and Infrastructure—Three Keys to Improving HEMS Safety." *Professional Pilot Magazine*. October, 2010.
- Sumwalt, R.L. "Helicopter EMS: Life-saving Changes Needed for a Life-Saving Industry." OpEd piece in *The State*. September 26, 2010.
- Sumwalt, R.L. "NTSB Studies Helicopter EMS Safety, Acts to Improve it." *Professional Pilot Magazine*. January 2010.
- Sumwalt, R.L. "Professionalism Means Doing the Right Things—Even When no one is Watching." *Professional Pilot Magazine*. January 2008.
- Sumwalt, R.L. "Do You Have a Safety Culture?" *AeroSafety World*. July 2007.
- Sumwalt, R. L. "Get Habitual Drinking Drivers off South Carolina's Highways." Op Ed piece in *The State*. November, 2006.
- Sumwalt, R.L., & Boyer, R.D., "Applying Operational Risk Management in Corporate Flight Operations." In *Proceedings from the 51st annual Flight Safety Foundation/National Business Aviation Association Corporate Aviation Safety Seminar (CASS)*, May 9–11, 2006. Phoenix, AZ.
- Sumwalt, R.L. "Accident Analysis: Failure to Monitor Airspeed Leads to Loss of Control." *Professional Pilot Magazine*. November 2005.
- Sumwalt, R.L., "Enhancing Flight-crew Monitoring Skills Can Increase Corporate Aviation Safety." In *Proceedings from the 49th annual Flight Safety Foundation/National Business Aviation Association Corporate Aviation Safety Seminar (CASS)*, April 27–29, 2004. Tucson, Arizona.
- Walters, J.M., & Sumwalt, R.L. "Accident Analysis: Aspen CFIT Accident." *Professional Pilot Magazine*. October 2003.
- Sumwalt, R.L. "Airplane Upset Recovery Training: A Line Pilot's Perspective." *Flight Safety Digest*. July August 2003.
- Sumwalt, R.L., Thomas, R.J., & Dismukes, R.K. "The Last Line of Defense Against Aviation Accidents." Viewpoint Editorial in *Aviation Week and Space Technology*. August 25, 2003.
- Sumwalt, R.L. "Cockpit Monitoring." *Professional Pilot Magazine*. August 2003.
- Sumwalt, R.L., & O'Neill, J. "Runway Changes: Managing the Threat." *Safety On Line*. Spring, 2003.
- Sumwalt, R.L., Thomas, R.J., & Romeo, C. "Newly implemented line Operations Safety Audit produces valuable data for air carrier." *ICAO Journal*. Number 1, 2003. Volume 58.

- Sumwalt, R.L., & Walters, J.M. "Accident Analysis: Missing the Runway Completely." *Professional Pilot Magazine*. January 2003.
- Sumwalt, R.L., "Setting the FCU Improperly Can lead to an Unauthorized Open Descent." *Safety On Line*. Winter, 2003.
- Sumwalt, R.L., Thomas, R.J., & Dismukes, R.K. "Enhancing Flight-crew Monitoring Skills Can Increase Flight Safety." In *Proceedings from the Joint Meeting of the 55th annual FSF International Air Safety Seminar (IASS), 32nd IFA International Conference*. November 4–7, 2002. Dublin, Ireland.
- Sumwalt, R.L., "How to Set Up a LOSA—U.S. Airways Experience." Chapter 4 in *ICAO Line Operations Safety Audit (LOSA) Manual*. ICAO Document 9803 AN/761. First Edition—2002.
- Sumwalt, R.L. and Walters, J.M. "Accident Analysis: Lear 35A vanishes from radar near LEB." *Professional Pilot Magazine*. June 2002.
- Sumwalt, R.L., & Thomas, R.J. "Findings from the U.S. Airways Line Operations Safety Audit (LOSA)." *Safety On Line*. Spring 2002.
- Sumwalt, R.L., & Walters, J.M. "Accident Analysis: Falcon 900 overrun. Hyannis, MA, March 17, 2000." *Professional Pilot Magazine*. April 2002.
- Sumwalt, R.L. "Error management gives pilots weapons against taxiway and runway problems." *Professional Pilot Magazine*. January 2002.
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- Sumwalt, R.L., & Walters, J.M. "Accident Analysis: Nothing good comes from an unstabilized approach." *Professional Pilot Magazine*. March 2001.
- Walters, J.M., & Sumwalt, R.L. "Accident Analysis: Revisiting the steps that can lead to disaster." *Professional Pilot Magazine*. December 2000.
- Walters, J.M., & Sumwalt, R.L. "Accident Analysis: On HOU to IAH, First Approach was Bad, Second was Fatal." *Professional Pilot Magazine*. March 2000.
- Sumwalt, R.L., & Thomas, R.J. "Enhancing Safety Through Error Management." In *Proceedings from the Joint Meeting of the 52nd annual FSF International Air Safety Seminar (IASS), 29th IFA International Conference*. November 8–11, 1999. Rio de Janeiro, Brazil.
- Sumwalt, R.L. "Enhancing Flight-crew Monitoring Skills Can Increase Flight Safety." *Flight Safety Digest*. March 1999.
- Sumwalt, R.L. "Enhancing Safety Through Error Management." *US Airways SAFETY ON LINE*. March 1999.
- Sumwalt, R.L. "The Wrong Stuff: Troubled Cockpit Interpersonal Relations Can Affect Safety." *Professional Pilot Magazine*. February 1999.
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- Sumwalt, R.L. "Integrating Human Factors into Aircraft Accident Investigations." *ISASI Forum*. June–August 1998. International Society of Air Safety Investigators.
- Sumwalt, R.L. "Closing the Gap on CFIT." *Professional Pilot Magazine*. January 1998.
- Sumwalt, R.L. "Can You Throw Another Log on the Fire: Be Careful What You Say." *US Airways SAFETY ON LINE*. December 1997.
- Sumwalt, R.L., Morrison, R.F., Watson, A. and Taube, E. "What ASRS Data Tell About Inadequate Flight Crew Monitoring." In *Proceedings of the Ninth International Symposium on Aviation Psychology*, Columbus, Ohio. April, 1997. (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
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- Sumwalt, R.L. "Finding Fault." *Professional Pilot Magazine*. February 1997.
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- Sumwalt, R.L. "Altitude Awareness Programs Can Reduce Altitude Deviations." *Fight Safety Digest*. December, 1995.
- Sumwalt, R.L. "ASRS Incident Data Reveal Details of Flight-crew Performance During Aircraft Malfunctions." *Fight Safety Digest*. October, 1995.
- Sumwalt, R.L. "The Quest for Aviation Safety's Holy Grail: Finding Underlying Causes of Accidents and Incidents, or, If You Really Want to Improve Aviation Safety, You Must First Identify Systemic Problems." In *Proceedings of Workshop on Accident and Incident Human Factors*. FAA, June 1995.
- Mancuso, V., & Sumwalt, R.L. *Human Factors Evaluation: Runway Collision Between TWA Flight 427 and Superior Aviation Cessna 441, STL Airport, November 22, 1994*. Air Line Pilots Association, May 1995.
- Sumwalt, R.L. "Coping with Tiredness—Fatigue Part 2." *Professional Pilot Magazine*. May 1995.
- Sumwalt, R.L. "Flying Alert—Fatigue, Part 1." *Professional Pilot Magazine*. April 1995.
- Sumwalt, R.L., & Watson, A. "What ASRS Incident Data Tell About Flight Crew Performance During Aircraft Malfunctions." In *Proceedings of the Eighth International Symposium on Aviation Psychology, Columbus, Ohio*. April, 1995.) (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
- Sumwalt, R.L., & Cox, J.M. "Aircraft Incident Report. Controlled Flight Into Terrain: American West Flight 754, DFW Airport, December 8, 1993." Air Line Pilots Association. September 1994.
- Sumwalt, R.L. "Accident and Incident Reports Show Importance of 'Sterile Cockpit' Compliance." *Fight Safety Digest*. July 1994.
- Sumwalt, R.L. "Crew Resource Management for All Operators." *ASRS Callback*. July 1994. (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
- Sumwalt, R.L. "There's No Such Thing as a Little Ice." *Professional Pilot Magazine*. January 1994.
- Sumwalt, R.L. "Watch Your Altitude." *ASRS Callback*. December 1993. (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
- Sumwalt, R.L. "Incident Reports Highlight Problems Involving Air Carrier Ground Deicing/Anti-icing." *Fight Safety Foundation Airport Operations*. September/October 1993.
- Sumwalt, R.L. "The Sterile Cockpit." *ASRS Directline*. June 1993. (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
- Sumwalt, R.L. "Aircraft Ground Deicing Problems: Recommendations from Analysis of ASRS Incident Data." In *Proceedings of SAE Aircraft Ground Deicing Conference*, Salt Lake City, Utah, June 1993.
- Sumwalt, R.L. "ASRS Problems Involving Air Carrier Ground Deicing/Anti-icing." In *Proceedings of the Seventh International Symposium on Aviation Psychology*, Columbus, Ohio. April, 1993. (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
- Sumwalt, R.L. "Ground Deicing Problems in Air Carrier Operations." *ASRS Callback*. February 1993. (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
- Sumwalt, R.L. "Rejected Take-off Considerations for Fokker 100 and F28." Fokker Aircraft *Wing tips*. December 1992.
- Sumwalt, R.L. "Preventing Pilot-caused Runway Incursions." *Professional Pilot Magazine*. December, 1992.
- Sumwalt, R.L. "Accident Investigation School Teaches How to Find Probable Cause." An inside look at the NTSB's accident investigation school *Professional Pilot Magazine*. October, 1992.
- Sumwalt, R.L. "Leadership on the Flightdeck Reflects Training." *Professional Pilot Magazine*. June 1992.
- Sumwalt, R.L. "Taxi!" *ASRS Directline*. Summer 1992. (This paper prepared under subcontract for NASA's Aviation Safety Reporting System.)
- Sumwalt, R.L. "NTSB's John Lauber Digs for Probable Cause." *Professional Pilot Magazine*. January 1992.

- Sumwalt, R.L. "Weather or Not to Go." *Professional Pilot Magazine*. January 1992.
- Sumwalt, R.L. "Be Prepared to Abort: Rejected Takeoffs, Part Two." *Professional Pilot Magazine*. December 1991.
- Sumwalt, R.L. "Rejected Takeoffs, Part One." *Professional Pilot Magazine*. November 1991.
- Sumwalt, R.L. "The Importance of Proper Aviation Weather Dissemination to Pilots: An Airline Captain's Perspective." In *Proceedings of the Fourth International Symposium on Aviation Weather Systems*, Paris, France. June 1991.
- Sumwalt, R.L. "Eliminating Pilot-Caused Altitude Deviations: A Human Factors Approach." In *Proceedings of the Sixth International Symposium on Aviation Psychology*, Columbus, OH. May 1991.
- Sumwalt, R.L. "Checking the Checklist," *Professional Pilot Magazine*. March 1991.
- Sumwalt, R.L. "Altitude Callouts: Who, When and Why." *Airwaves*. February 1991.
- Sumwalt, R.L. "Flightcrew Interactions," *Professional Pilot Magazine*. November 1990.
- Sumwalt, R.L. "Altitude Awareness," *Professional Pilot Magazine*. September 1990.
- Sumwalt, R.L. "Gulfstream 4 Phase 2 Flightcheck," *Professional Pilot Magazine*. February 1990.
- Sumwalt, R.L. "Piaggio P180 Avanti Flightcheck," *Professional Pilot Magazine*. July 1989.
- Sumwalt, R.L. "Slippery When Wet," *Professional Pilot Magazine*. March 1989.
- Sumwalt, R.L. "Stop! More Efficiently," *Professional Pilot Magazine*. September 1988.
- Sumwalt, R.L. "The Cat's Eye (FLIR Technology to Enhance Instrument Landings)," *Professional Pilot Magazine*. September 1988.
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- Sumwalt, R.L. "Advanced Avionics: The New Generation," *Professional Pilot Magazine*. May 1988.
- Sumwalt, R.L. "Fokker 100 Flightcheck," *Professional Pilot Magazine*. March 1988.
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- Sumwalt, R.L. "Category 3 Operations," *Piedmont Airlines 8737 Flight Crew Training Manual*. September 1987.
- Sumwalt, R.L. "TCAS Growing Pains," *Professional Pilot Magazine*. April 1987.
- Sumwalt, R.L. "Improving Stopping Efficiency," *Piedmont Airlines Operations Update*. December 1986.
- Sumwalt, R.L. "Improving Pilot Interpretation of Airborne Weather Radar," *Professional Pilot Magazine*. June 1986.
- Sumwalt, R.L. "F28 Flightcheck," *Professional Pilot Magazine*. March 1986.
- Sumwalt, R.L. "Low Visibility Operations," *Professional Pilot Magazine*. February, 1986.
- Sumwalt, R.L. "Deadly Persuader: Low Altitude Windshear," *Professional Pilot Magazine*. October, 1985.
- Sumwalt, R.L. "Fuel Management Guide for Pilots," *Piedmont Airlines Route Manual*. August 1985.
- Sumwalt, R.L. "Flying By the Book," *Professional Pilot Magazine*. May 1985.
- Sumwalt, R.L. "Descent Techniques for Fuel Efficiency," *Piedmont Airlines Operations Update*. Piedmont Airlines. March 1985.
- Sumwalt, R.L. "Fuel Conservation," *Piedmont Airlines Operations Update*. December, 1984.

#### *Speeches and Presentations*

May 9, 2017—Presentation to the NorCal Business Aviation Association—Meeting your customers' safety expectations. Mountain View, CA

April 25, 2017—Board Meeting Opening and Closing Statements: Aircraft Accident Report—Collision with Terrain, Promech Air, Inc., de Havilland DHC-3, N270PA, Ketchikan, Alaska, June 25, 2015

March 31, 2017—Presentation on Leadership to the American Studies Program, Washington, D.C.

March 7, 2017—Presentation to the Air Charter Safety Foundation, NTSB Training Center, Ashburn, VA

February 14, 2017—Presentation to the Wichita Aero Club, Wichita, KS

January 24, 2017—Presentation to the NBAA Safety Committee Annual Risk Assessment Meeting, Fort Lauderdale, FL

January 12, 2017—Presentation on the critical importance of flight path monitoring at Atlas Air WW, Miami, FL

December 12, 2016—Presentation to the FAA Chief Counsel’s December All Hands meeting, Washington, D.C.

December 9, 2016 Opening and Closing Statements—NTSB Investigative Hearing: Accident Involving Heart of Texas Balloons near Lockhart, TX. Hearing conducted in Washington, D.C.

December 1, 2016—Presentation at the NTSB Training Center’s “Investigating Human Fatigue Factors” course, NTSB Training Center, Ashburn, VA

November 14, 2016—Speech to students in the American Studies Program, Washington, D.C.

November 9, 2016—Presentation to Middle Tennessee State University, Murfreesboro, TN

October 31, 2016—Presentation to National Business Aviation Association Emergency Response Seminar, Orlando, FL

October 27, 2016—Presentation to the Railway Tie Association’s Annual Symposium and Technical Conference. Bonita Springs, Florida

October 19, 2016—Presentation to the AQP Working Group conference, Dallas, TX

October 17, 2016—Dinner speech for Flight Safety International’s “Best of the Best” celebration, Grapevine, TX

October 14, 2016—Presentation at the University of North Texas’ Aviation Logistics Program, Denton, TX

October 12, 2016—Web presentation to the Kent State Student Chapter of American Association of Airport Executives (AAAE): Improving Safety Through Accident Investigation.

October 6, 2016—Keynote speech on professionalism at the 2016 Mid-Atlantic Safety Standdown in New Castle, Delaware.

September 29, 2016—Presentation to Bombardier Safety Standdown: “Ten Years of Learning with The NTSB” in Wichita, Kansas.

September 27, 2016—“Your company plane just crashed: Are you prepared to deal with the NTSB?” Workshop presentation at the Bombardier Safety Standdown, Wichita, Kansas.

September 22, 2016—Presentation to the Safety Leadership Symposium & Workshop, Houston, Texas.

September 9, 2016—Presentation to Boeing North Charleston Employees about making safety a core value.

September 1, 2016—Presentation to North Texas Business Aviation Safety Show Down.

August 18, 2016—“Improving Safety Through Accident Investigation” presentation to the Atlanta Aero Club, Atlanta, Georgia.

July 23, 2016—Presentation at Jack Henry Safety Day 2016 in Monett, Missouri: “Are your customers getting what they expect?”

July 23, 2016—Presentation at Jack Henry Safety Day 2016 in Monett, Missouri: “Case studies of two aircraft accidents.”

July 13, 2016—Roundtable discussion: “A Dialogue on What’s Next in Rail Tank Car Safety.”

June 28, 2016—Presentation to Westchester Aviation Association’s annual safety standdown.

June 21, 2016—NTSB Forum: “PI REPs: Pay it Forward . . . Because Weather for One is Weather for None.”

June 8, 2016—Safety Leadership: Presentation to the International Association of Missionary Aviation.

June 2, 2016—Speech to the Academie de l’Air et d’Espace on aircraft automation. Toulouse, France.

May 10, 2016—Commencement address to the Embry-Riddle Aeronautical University commencement, Daytona Beach, Florida.

May 6, 2016—Crisis communications presentation to the Flight Safety Foundation’s Business Aviation Safety Summit.

April 29, 2016—Presentation to the International Air and Transportation Safety Bar Association’s Spring Conference, Washington, D.C.

April 28, 2016—Presentation to the Twin Cessna Flyers organization at the annual convention in Charleston, South Carolina.

April 27, 2016—Presentation to the Carolinas Aviation Professionals Association’s Regional Safety Seminar in Charlotte, North Carolina.

April 22, 2016—Presentation at Vaughn College in New York, New York.

April 14, 2016—Presentation at NTSB Training Course for Junta de Investigacion de Accidentes de Aviacion Civil (JIAAC), Buenos Aires, Argentina.

April 6, 2016—Webinar on distractions in transportation, with National Safety Council.

March 30, 2016—Presentation to JetBlue instructor pilots on the importance of standardization.

March 11, 2016—Presentation to Hardwood Manufacturers Association National Conference about creating a positive safety culture, Fort Worth, Texas.

March 8, 2016—Presentation to employees of Koppers Inc., about creating a future of safety.

February 26, 2016—Presentation on the SpaceShip Two investigation to the American Bar Association’s Forum on Air and Space Law, Washington, D.C.

February 3, 2016—Presentation on Crisis Communications at the Airline Symposium, McLean, Virginia.

January 22, 2016—Presentation to Embry-Riddle Aviation Law & Insurance Symposium in Orlando, Florida.

January 19, 2016—Interview on CBS Baltimore “Baltimore Barristers” with Alex Bush.

January 16, 2016—Presentation on a case study of the Bedford, Massachusetts G–IV crash at A31R Conference in Arizona.

January 16, 2016—Presentation about ways to improve aviation emergency response at A31R Conference in Arizona.

January 11, 2016—Presentation to TRB Task Force on Transit Safety.

January 7, 2016—Presentation to the University Aviation Association.

November 11, 2015—Webinar presentation: “Improving Safety Through Accident Investigation” at ERAU Worldwide.

November 2, 2015—Presentation on crisis communications to Flight Safety Foundation International Air Safety Summit in Miami, FL

October 20, 2015—Presentation to JetBlue Executive Leadership in New York City

October 13, 2015—Presentation to the Patriot Rail’s Leadership Workshop in Jacksonville, FL

October 8, 2015—Workshop on Safety Culture, at the Bombardier Safety Standdown, Wichita, KS

October 7, 2015—Presentation to the Bombardier Safety Standdown, Wichita, KS

September 29, 2015—Investigating Fatigue in Transportation Accidents: A Board Member’s Perspective, NTSB Training Center, Ashburn, VA

September 14, 2015—Presentation to Michigan State University Railway Management Program, Washington, D.C.

September 10, 2015—Luncheon Speech, Short Line Safety Institute Forum, Washington, D.C.

August 26, 2015—Presentation to SC Aerospace Conference, Columbia, SC

July 30, 2015—Keynote Address at the Flight Safety Foundation 3rd Annual Dinner, Washington, D.C.

July 22, 2015—Remarks at the Air Line Pilots Association, International (ALPA) “Keep America Flying: A Flight Plan for Safe and Fair Skies” Safety Forum, Washington, D.C.

June 17, 2015—Presentation to American Express Safety Standdown, Newburgh, NY

May 20, 2015—Presentation to Sky Regional Airlines, Toronto, Canada

May 12, 2015—Presentation to Northeast Aviation Safety Roundtable at the Flight Safety Foundation’s Business Aviation Safety Summit in Weston, FL

May 6, 2015—Speech to Stanford University engineering on organizational accidents & risk management, Stanford, CA

May 2, 2015—Commencement Address to the Embry-Riddle Aeronautical University Worldwide Campus, Daytona Beach, FL

April 24, 2015—Presentation at the College of Aeronautics at Vaughn College, New York, NY

April 23, 2015—Presentation to Chicago Area Business Aviation Association, Glenview, IL

April 21, 2015—Keynote Speech at the FAA International Rotorcraft Safety Conference, Hurst, TX

March 31, 2015—Roundtable: Disconnect from Deadly Distractions—Opening Statement

March 23, 2015—Presentation to NBAA International Operators Conference, San Antonio, TX

March 18, 2015—Presentation to the Aviation Law Enforcement Association (ALEA) Midwest Regional Safety Seminar in Chicago, IL

March 10, 2015—Presentation to Air Charter Safety Foundation at NTSB Training Center, Ashburn, VA

February 13, 2015—Speech to Columbia, SC Rotary Club

January 30, 2015—Panel Discussion of New Realities in International Aviation, Orlando, FL

January 16, 2015—Keynote address to the Aviation, Aeronautics, Aerospace International Research (A3IR) Conference, Phoenix, AZ

January 16, 2015—Presentation to the Aviation, Aeronautics, Aerospace International Research (A3IR) Conference on breakdowns in flight path monitoring & flight path deviations, Phoenix, AZ

January 14, 2015—Presentation to students visiting from Southern Illinois University, Washington, D.C.

October 20, 2014—Presentation to National Business Aviation Association’s Emergency Response Planning Workshop, Orlando, FL

October 16, 2014—Keynote Speaker at LifeFlight Eagle Safety Symposium, Kansas City, MO

October 9, 2014—Presentation to Bombardier Safety Standdown, Wichita, KS

October 8, 2014—Presentation to United Airlines Leadership Safety Summit, Denver, CO

September 25, 2014—Presentation to the Bristow Group operations leadership team at the NTSB Training Center, Ashburn, VA

September 15, 2014—Presentation to the 2nd Annual VA Distracted Driving Summit, Richmond, VA

September 5, 2014—Presentation to the Cincinnati Business Aviation Symposium, Cincinnati, OH

August 11, 2014—Controlled Flight Into Terrain (CFIT) The problem that never went away. Presentation to Bombardier Safety Standdown, Sao Paulo, Brazil

July 27, 2014—The Crash of Asiana Flight 214. Presentation to Aviation Section of American Association of Justice, Baltimore, MD

July 24, 2014—Presentation to the Lawyer Pilot Bar Association in Albuquerque, NM

June 6, 2014—Presentation The NTSB’s Approach to Accident Investigation to the Junta de Investigación de Accidentes de Aviación Civil, Buenos Aires, Argentina

May 29, 2014—Presentation on the critical role of safety leadership, Houston’s Transportation Safety Day, Houston, TX

May 29, 2014—Presentation on the Anatomy of an NTSB Investigation, Houston's Transportation Safety Day, Houston, TX  
 May 21, 2014—Accident Investigation Orientation for Rail Professionals, NTSB Training Center, Ashburn, VA  
 May 12, 2014—Luncheon speech at Annual Meeting of Aerospace Medical Association, San Diego, CA  
 May 2, 2014—Speech at the 261st Anniversary of the Winyah Indigo Society, Georgetown, SC  
 April 30, 2014—Presentation to Duke Energy Aviation Safety Seminar, Charlotte, NC  
 April 17, 2014—Presentation to the 59th annual Business Aviation Safety Summit in San Diego, CA  
 April 2, 2014—The impact of hands-free cell phone use, presentation at National Safety Council webinar on distraction  
 March 18, 2014—Presentation to the Regional Airlines Association Symposium in Orlando, Florida  
 March 5, 2014—Presentation to the Air Charter Safety Foundation at the NTSB Training Center, Ashburn, VA  
 February 27, 2014—Keynote to the International Helicopter Safety Symposium banquet, Anaheim, CA  
 February 27, 2014—Keynote to the International Helicopter Safety Symposium banquet, Anaheim, CA  
 February 8, 2014—Presentation to Inspection Authorization Renewal Seminar, Hickory, NC  
 February 4, 2014—Presentation on aviation professionalism to the Aviation Institute at the University of Nebraska, Omaha, NE  
 February 4, 2014—Presentation to Nebraska Business Aviation Association, Omaha, NE  
 January 18, 2014—Presentation to FAA Wings Seminar, Phoenix, AZ  
 January 17, 2014—Keynote presentation to Aerospace International Research (A3IR) Conference, Phoenix, AZ  
 January 14, 2014—Presentation to Southeastern Aviation Safety Roundtable on Enhancing Crew Monitoring and Cross-checking, Huntersville, NC  
 January 12, 2014—TRB Human Factors luncheon Speaker, Washington, D.C.  
 January 10, 2014—Presentation to the University Aviation Association, Washington, D.C.  
 December 6, 2013—Presentation on safety culture at Embry-Riddle President's Safety Education Day, Daytona Beach, FL  
 December 5, 2013—Presentation to the Embry Riddle student chapter of ISASI about the mission of the NTSB, Daytona Beach, FL  
 November 14, 2013—ALTA Airlines Leaders Forum in Cancun, Mexico  
 November 11, 2013—Presentation to the Patriot Rail Leadership Conference in Jacksonville, FL  
 October 31, 2013—Presentation at the Flight Safety Foundation International Air Safety Summit in Washington, D.C.  
 September 27, 2013—Presentation on creating a healthy safety culture to Embry-Riddle Aeronautical University's Prescott campus, Prescott, AZ  
 September 16, 2013—Presentation on Standard Operating Procedures to Southern California Aviation Association  
 September 16, 2013—Presentation on Working with the NTSB to Southern California Aviation Association  
 August 8, 2013—Presentation to International Business Class, Wichita State University  
 August 7, 2013—Presentation to the Wichita Aero Club, Wichita, KS  
 July 17, 2013—Presentation to the ALPA 59th Air Safety Forum, Washington, D.C.  
 June 25, 2013—Keynote address to Fourth Pan American Safety Summit, San Jose, Costa Rica  
 May 23, 2013—Presentation to the Southwest Airlines Flight Operations Spring Symposium

May 16, 2013—Presentation to the Washington Area National Business Aviation Association, Ashburn, VA

May 5, 2013—Presentation to Aviation Insurance Association, Orlando, FL

April 15, 2013—Presentation to Bombardier’s Safety Standdown about creating a positive safety culture, Shanghai, China

April 4, 2013—Presentation to Pacific Northwest Business Aviation Association (PNBAA), Seattle, WA

April 4, 2013—Presentation to Pacific Northwest Business Aviation Association (PNBAA), Seattle, WA

March 4, 2013—Presentation to HEU–EXPO, Las Vegas, NV

February 13, 2013—Presentation to the South Carolina Aviation Association about working with the NTSB after an accident, Myrtle Beach, SC

February 7, 2013—Inadequate Monitoring and Cross-checking—How do we make vast improvements?, Atlanta, GA

January 24, 2013—Presentation to Patriot Rail Operations Team Leadership Workshop, Jacksonville, FL

January 14, 2013—Presentation to the Transportation Research Board on Human, Organizational, and Cultural Factors in Accidents

January 13, 2013—Presentation to the Transportation Research Board Human Factors Workshop on Automation, Washington, D.C.

January 13, 2013—Presentation to the Transportation Research Board Human Factors Workshop on Safety Data, Washington, D.C.

December 10, 2012—Telecon presentation to Steel River Infrastructure Partners on role of leadership in preventing organizational accidents

December 7, 2012—Luncheon Remarks for International Air and Transportation Safety Bar Association, Washington, D.C.

December 3, 2012—Keynote Remarks for National Organizations for Youth Safety (NOYS)—Teen Distracted Driving Prevention Summit, Washington, D.C.

November 27, 2012—Presentation to U.S. Air Force’s Safety Center, Albuquerque, NM

November 7, 2012—Presentation on Inadequate Monitoring and Cross-checking “The Problem that Never Went Away” Human Factors industry roundtable, Irving, TX

October 29, 2012—Presentation on Threat and Error Management at NBAA’s Single Pilot Safety Standdown in Orlando, FL

October 24, 2012—Presentation on how to create the right kind of safety culture, Railway Tie Assn Symposium in Tampa, FL

October 23, 2012—Presentation on Understanding the Critical Role of Leadership in Preventing Organizational Accidents, at CPUC Safety Leadership Conference, Los Angeles, CA

October 18, 2012—Luncheon Remarks Before American Bar Association Tort Trial & Insurance Practice Section, Aviation and Space Law Committee, Washington, D.C.

October 8, 2012—Safety Management Systems workshop at Bombardier Safety Standdown in Wichita, KS

August 26, 2012—Presentation to Flight Safety Foundation in Alexandria, VA, on working with the NTSB after an accident occurs

August 20, 2012—Presentation to Boeing Training and Flight Services personnel in Seattle on adherence to standard op procedures, Seattle, WA

August 8, 2012—Presentation to Avantair employees on the importance of adhering to standard ops procedures, Clearwater, FL

July 11, 2012—Presentation to the M&N Aviation Safety Standdown, Englewood, CO

June 26, 2012—California Public Utilities Commission (CPUC) Safety leadership Conference in San Francisco, CA

June 26, 2012—California Public Utilities Commission (CPUC) Safety leadership Conference in San Francisco, CA

June 12, 2012—Pilot and ATC professionalism presentation to Beaver County Community College

May 8, 2012—Remarks for Launch of Global Youth Traffic Safety Month, Washington, D.C.

May 7, 2012—Remarks to NTSB Youth Open House, Washington, D.C.

May 3, 2012—Remarks to To the International Society of Air Safety Investigators, Mid Atlantic Regional Chapter IMARC, Washington, D.C.

April 26, 2012—Presentation to the Chicago Area Business Aviation Association conference, Chicago, IL

April 25, 2012—Remarks at Meharry—State Farm Alliance Teen Safe Driving Champion Award Presentation and ThinkFast Program, Blythewood, South Carolina

April 19, 2012—Presentation at Flight Safety’s Corporate Aviation Safety Seminar in San Antonio, TX

April 17, 2012—Presentation to Purdue University on Professionalism in Aviation, West Lafayette, IN

April 4, 2012—Presentation to the Volpe Center’s Roundtable on Automation and the Human, Cambridge, MA

March 29, 2012—Presentation to Embry-Riddle Aeronautical University, Daytona Beach, FL

March 20, 2012—Presentation at the SCRRA seminar, Los Angeles, CA

March 8, 2012—Presentation at the Veriforce 2012 Annual Contractor Safety and Training Conference

March 1, 2012—Presentation at the 24th Annual European Air Safety Seminar (EASS) of the Flight Safety Foundation (FSF), Dublin, Ireland

November 11, 2011—Presentation to the 2011 Interstate Natural Gas Association of America (INGAA) Foundation Annual Meeting, San Diego, CA

November 9, 2011—Presentation at the Fifth International Helicopter Safety Symposium, Fort Worth, TX

October 26, 2011—A Practical Look at Establishing a Safety Culture, presented to the Bombardier 15th Annual Safety Standdown, Wichita, KS

October 26, 2011—Address on SMS to the Bombardier 15th Annual Safety Standdown, Wichita, KS

October 26, 2011—Address to the Bombardier 15th Annual Safety Standdown: Raising the Bar on Pilot Professionalism, Wichita, KS

October 17, 2011—September 28, 2011—Keynote address to General Aviation Air Safety Investigator Workshop, Wichita, KS

August 23, 2011—Luncheon keynote address to the American Association of Motor Vehicle Administrators Annual International Conference, Milwaukee, WI

June 28, 2011—Keynote address to University of Southern California/MetroLink Safety Conference, Los Angeles, CA

June 21, 2011—Presentation at the Airborne Law Enforcement Law Enforcement Association Conference, New Orleans, LA

June 7, 2011—Remarks to the American Waterways Operators Safety Costal Committee Summer Meeting, Las Vegas, NV

May 10, 2011—Opening Remarks at the Truck and Bus Safety Forum, Washington, D.C.

May 5, 2011—Remarks to the Chicago Area Business Aviation Association’s Annual Safety Stand-Down, St. Charles, IL

May 4, 2011—Remarks to the Society of Chest Pain Centers 14th Congress, Miami, FL

April 20, 2011—Remarks at Flight Safety Foundation’s 56th Annual Corporate Aviation Safety Seminar 2011, San Diego, CA

March 30, 2011—Remarks to the University of North Dakota John D. Odegard School of Aerospace Sciences’ Spring Aviation Safety Seminar, Grand Forks, ND

March 26, 2011—Remarks at South Carolina Aviation Safety Council 2011 Safety Fly-In, Rock Hill, SC

March 23, 2011—Remarks to NTSB Training Center Aircraft Accident Investigation for Aviation Professionals (AS 301) Course, Ashburn, VA

January 25, 2011—Remarks before the Transportation Research Board 90th Annual Meeting, Washington, D.C.

January 19, 2011—Remarks to the Dombroff, Gilmore, Jaques, & French 5th Annual 2011 Airline Symposium, McLean, VA

November 16, 2010—Remarks on Eliminating Distractions for Young Drivers, Most Wanted List Press Conference: State Issues, Washington, D.C.

November 12, 2010—Remarks to the Trauma Center Association of America Annual Conference, San Diego, CA

October 13–14, 2010—Public Forum on Fishing Vessel Safety, Washington, D.C.—Chairman’s Opening Remarks, Washington, D.C.

September 21, 2010—Remarks to the Flight Safety Foundation’s Corporate Advisory Committee Workshop, Alexandria, VA

September 18, 2010—Commencement address to the Embry-Riddle Aeronautical University Worldwide Beaufort Teaching Site, Charleston, and Greenville Campus, Charleston, SC

September 9, 2010—Remarks before the Transit Rail Advisory Committee for Safety Meeting, Washington, D.C.

September 1, 2010—Remarks before the Georgia Business Aviation Association’s Annual Safety Day, Marietta, GA

August 24, 2010—Keynote Address for the 2010 Training, Standardization and Compliance Conference, Concord, NC

May 12, 2010—Remarks before the Flight Safety Foundation’s 55th Annual Corporate Aviation Safety Seminar, Tucson, AZ

March 17, 2010—Remarks before the 2010 Association of Air Medical Services Spring Conference, Washington, D.C.

March 2, 2010—Remarks before the NASA Langley Research Center—Colloquium and Sigma Series Lectures, Hampton, VA

February 23–24, 2010—Public Hearing on Collision of Two Washington Metropolitan Area Transit Authority Trains Near Fort Totten Station, Washington, D.C., June 22, 2009—Chairman’s Opening Statement, Washington, D.C.

February 12, 2010—Remarks before the South Carolina Aviation Association’s 32nd Annual Aviation Conference, Myrtle Beach, SC

February 11, 2010—Keynote Address for the South Carolina Aviation Association, Hall of Fame Banquet, Myrtle Beach, SC

January 8, 2010—Remarks before the Embry-Riddle Aeronautical University’s 21st Annual Aviation Law & Insurance Symposium, Orlando, FL

December 10, 2009—Remarks before the Massachusetts Institute of Technology Flying Club, Boston, MA

December 7, 2009—Remarks to the 2nd Annual Gulfstream Safety Standdown, Savannah, GA

December 1, 2009—Remarks to the FAA International Runway Safety Summit, Washington, D.C.

November 3, 2009—Remarks to the Flight Safety Foundation’s 62nd Annual International Air Safety Seminar, Beijing, China

October 21, 2009—Remarks to the National Business Aviation Association’s 62nd Annual Meeting & Convention, Safety Town Hall Meeting, Orlando, FL

October 8, 2009—Remarks to the Flight Safety Foundation Corporate Advisory Committee, Alexandria, VA

October 5, 2009—Remarks to the American College of Emergency Physicians Meeting, Boston, MA

September 29, 2009—Remarks to the Third International Helicopter Safety Symposium, Montreal, Quebec, Canada

September 17, 2009—Remarks to the International Society of Air Safety Investigators (ISASI) 2009 40th Annual Seminar, Orlando, Florida

September 2, 2009—Remarks to the 21st Annual FAA/ATA International Symposium on Human Factors in Maintenance and Ramp Safety, San Diego, CA

July 9, 2009—Remarks to the Lawyer—Pilots Bar Association Golden Anniversary Meeting, Mackinac Island, Michigan

June 23, 2009—Remarks to the PALMATT 2nd Aviation Safety and Risk Management Symposium, Teaneck, NJ

June 11, 2009—Opening Statement For the Public Hearing on U.S. Airways Flight 1549 Airbus A320, N106US, Hudson River, NJ January 15, 2009, Washington, D.C.

June 3, 2009—Remarks to the Federal Interagency Committee on EMS, Arlington, VA

May 20, 2009—Remarks to the Training Committee, Regional Airlines Association Annual Convention, Salt Lake City, UT

May 6, 2009—Remarks to the Advanced Qualification Program Conference, Phoenix, AZ

April 28, 2009—Remarks on Human Error in the Context of Accidents to the Society of Experimental Test Pilots, Flight Test Safety Workshop, Ottawa, Canada

April 28, 2009—Remarks on Threat and Error Management to the Society of Experimental Test Pilots, Flight Test Safety Workshop, Ottawa, Canada

March 18, 2009—Remarks to Flight Safety Foundation's European Aviation Safety Seminar (EASS), Nicosia, Cyprus

March 11, 2009—Remarks to the Association of Air Medical Services Spring Conference, March 11, 2009, Washington, D.C.

March 3, 2009—Remarks to the 2009 Air Charter Safety Foundation Symposium, Ashburn, VA

February 3, 2009—Opening Statement at the Public Hearing the in the Matter of the Issues on Emergency Medical Services, Helicopter Operational Safety, Washington, D.C.

January 22, 2009—Remarks to the 2009 Cessna Safety Stand-down, Wichita, KS

October 29, 2008—Remarks to the Regional Airlines Association's Presidents Council Luncheon, Washington, D.C.

October 22, 2008—Remarks to the 2008 Airports Council International-North America (ACI-NA) Accident Response Workshop, Arlington, VA

October 20, 2008—Remarks to the Air Medical Transport Conference 2008, Minneapolis, MN

October 7, 2008—Remarks to NBAA Safety Town Hall Meeting, Orlando, FL

September 10, 2008—Remarks to the Flight Deck Automation Working Group, Washington, D.C.

August 19, 2008—Remarks to the FAA Air Traffic Organization Leadership Summit, Washington, D.C.

July 31, 2008—Remarks to the Pipeline and Hazardous Materials Safety Administration's Public Workshop for Stakeholders: Transporting Hazardous Materials Safely—the Next 100 Years, July 31, 2008, Washington, D.C.

July 20, 2008—Remarks to the FlightSafety's Senior Leadership Course, Orlando, FL

July 9, 2008—Remarks to the Pipeline and Hazardous Materials Safety Administration, Washington, D.C.

June 26, 2008—Remarks to the Southern Gas Association's Safety and Health Round Table during the Environmental, Safety, and Training Conference, Charlotte, NC

June 19, 2008—Remarks to the South Carolina Electric and Gas Company, Columbia, SC

June 17, 2008—Keynote Remarks to the FAA Aviation Fatigue Management: Partnerships for Solutions Symposium, Vienna, VA

May 28, 2008—Keynote Remarks to the Federal Aviation Administration Shared Vision of Aviation Safety Conference, San Diego, CA

May 22, 2008—Remarks to the Regional Air Cargo carriers Association, 7th Anniversary Spring Conference, Chantilly, VA

May 14, 2008—Remarks to the Nautical Institute Seminar, United States Merchant Marine Academy, Kings Point, New York

May 8, 2008—Remarks of Robert Sumwalt, Vice Chairman to the 27th Annual Conference of the Aviation Law Association of Australia and New Zealand, Sydney, Australia

May 1, 2008—Remarks to the International Society of Air Safety Investigators, Mid Atlantic Regional Chapter, Washington, D.C.

April 17, 2008—Remarks to the 2008 International Boating and Water Safety Summit, San Diego, CA

April 9, 2008—Remarks to Embry-Riddle Aeronautical University, Daytona Beach, FL

February 28, 2008—Remarks to the National Business Aviation Association 2008 Leadership Conference, San Antonio, TX

February 21, 2008—Remarks to the SMU Air Law Symposium, Dallas, TX

February 19, 2008—Remarks to the Air Charter Safety Foundation, Alexandria, VA

February 8, 2008—Remarks to the South Carolina Aviation Association, Hilton Head, SC

January 14, 2008—Opening Remarks to the Southeastern Transportation Center Student Breakfast during the Transportation Research Board of the National Academies' 87th Annual Meeting, Washington, D.C.

January 9, 2008—Remarks to the University Aviation Association, Washington, D.C.

December 6, 2007—Opening Remarks to the Aviation Directors Roundtable, Washington, D.C.

November 6, 2007—Open•mg Remarks Before the NATA Aviation Business Roundtable, Washington, D.C.

October 15, 2007—Opening Remarks Before the Airline Dispatchers Federation Safety Symposium, Houston, TX

September 19, 2007—Opening Remarks Before the General Aviation Air Safety Investigators (GAASI) 2007 Advanced Technical Workshop, Wichita, Kansas

September 6, 2007—Remarks to 19th FAA/ATA International Symposium Human Factors in Maintenance and Ramp Safety, Orlando, Florida

August 22, 2007—Remarks to the Chief Aircraft Accident Investigators Programme of Air Accident Investigation Bureau of Singapore and Singapore Aviation Academy, Singapore, Republic of Singapore

August 8, 2007—Remarks to the Air Line Pilots Association, International, 2007 Air Safety & Security Forum, Washington, D.C.

May 23, 2007—Remarks Before the Flight Safety Foundation Board of Governors, Washington, D.C.

May 17, 2007—Remarks to the Regional Air Cargo Carriers Association 5th Anniversary Spring Conference, Scottsdale, AZ

May 12, 2007—Remarks to the National Coalition of Motorcyclists, Charlotte, NC

April 11, 2007—Remarks to the Air Line Pilots Association, International Pilots Assistance Forum, Denver, CO

February 12, 2007—Remarks Before the Columbia (SC) Rotary Club, Columbia, SC

February 2, 2007—Remarks Before the Embry-Riddle Aeronautical University's Eighteenth Annual Aviation Law & Insurance Symposium, Orlando, FL

January 18, 2007—Remarks Before the United Motorcoach Association Motorcoach EXPO 2007, New Orleans, LA

November 18, 2006—Remarks Before the 68th Annual Conference, National Foundation for Women Legislators, Avon, CO

November 10, 2006—Keynote Address for the 30th Anniversary Celebration NASA Aviation Safety Reporting System, San Carlos, CA

November 3, 2006—Introductory Remarks Before the FAA 3rd Annual International Aviation Safety Forum, Chantilly, VA

September 24, 2006—Remarks During his Swearing-In Ceremony, Washington, D.C.

17. Please identify each instance in which you have testified orally or in writing before Congress in a governmental or non-governmental capacity and specify the date and subject matter of each testimony.

February 26, 2014—Testimony before the Subcommittee on Railroads, Pipelines, and Hazardous Materials Committee on Transportation and Infrastructure, United States House of Representatives, Hearing on Oversight of Passenger and Freight Rail Safety, Washington, D.C.

April 22, 2009—Testimony Before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, United States House of Representatives, Hearing on the Oversight of Helicopter Medical Services, Washington, D.C.

February 24, 2009—Testimony Before the Subcommittee on Aviation, Committee on Transportation and Infrastructure., United States House of Rep-

representatives. Hearing on the U.S. Airways Flight 1549 Accident, Washington, D.C.

February 13, 2008—Testimony Before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, United States House of Representatives, Hearing on Runway Safety, Washington, D.C.

May 22, 2007—Testimony Before Committee on Commerce, Science, and Transportation, Subcommittee on Surface Transportation and Merchant Marine, Infrastructure, Safety, and Security, United States Senate, Hearing on Rail Safety Legislation, Washington, D.C.

January 30, 2007—Testimony Remarks Before the Subcommittee on Railroads, Pipelines and Hazardous Materials, Committee on Transportation and Infrastructure, United States House of Representatives, on safety of U.S. Railroads. Washington, D.C.

July 27, 2006—Testimony before the Committee on Commerce, Science, and Transportation, United States Senate. Confirmation Hearing for consideration to become NTSB Board Member, Washington, D.C.

18. Given the current mission, major programs, and major operational objectives of the department/agency to which you have been nominated, what in your background or employment experience do you believe affirmatively qualifies you for appointment to the position for which you have been nominated, and why do you wish to serve in that position?

I have a strong background in transportation safety. As a Member of the NTSB for nearly 11 years, I have been a fierce advocate for improving transportation safety and accident investigation processes in all transportation modes. I have been involved with deliberating and determining the probable cause of over 150 transportation accidents, as well as serving as chairman of six NTSB investigative hearings and forums. I have been Board Member on Scene for 28 transportation accidents, which involved conducting over 60 media briefings, interfacing with families of victims, and meeting with elected officials. Additionally, while serving as a Member of the NTSB, I have presented over 250 speeches, as well as testified to Congress and State legislative branches regarding transportation safety issues. Additionally, I have served as Acting Chairman of the agency since March 31, 2017. I have a deep passion for, and commitment to, improving the safety of our Nation's transportation system. I feel that I am making positive contributions and would be honored to continue serving.

19. What do you believe are your responsibilities, if confirmed, to ensure that the department/agency has proper management and accounting controls, and what experience do you have in managing a large organization?

I have served as Acting Chairman of the NTSB since March 31, 2017. I have met with each of the agency's 13 departments to emphasize the need for us live by the agency's values of Safety, Excellence, Independence, Integrity, Diversity and Inclusion, and Transparency. I have also held listening sessions with each of these groups to seek their ideas for how the agency can operate more effectively and efficiently. As Acting Chairman of NTSB, I meet on a regular basis with the Acting Managing Director and the Chief Financial Officer regarding our Management Accountability and Controls (MAC) program. I have charged our management team with developing an action plan-one that requires management accountability-for closing-out risks items that were identified by the agency's Senior Management Oversight Council. I will ensure these items are properly addressed.

From 2004–2006, I led an aviation department for SCANA, a Fortune 500 energy company. There I managed personnel along with ground and flight safety, flight crews, aircraft, unit operations, maintenance, budgeting, and all associated fiduciary matters. Additionally I was responsible for managing the disposition, acquisition, and deployment of multi-million dollar aircraft and support assets, including construction planning for a multi-million dollar aviation facility to house company aircraft and personnel. My duties involved supervising department personnel, including hiring of departmental employees, as well as leading the development of first-ever department strategic plan, flight operations manual, and formulating practices to ensure standardization in critical night and maintenance practices.

20. What do you believe to be the top three challenges facing the department/agency, and why?

Budgetary issues—The current reality of Federal Government is the need to cut budgets and spend wisely. The NTSB is no exception. Like most other agencies, we are challenged with doing more with less.

Maintaining workforce—The NTSB has talented, dedicated employees, many of whom are experts in their respective fields. Many of these employees are ap-

proaching (or have already reached) retirement age. I believe it is vital that we recruit and train workers to replace these experienced employees as they retire or otherwise leave the agency.

Ensuring we maintain our edge—Closely linked to the above two items, I feel it is essential that the NTSB maintain its investigative edge. In order to do that, we need to ensure we have well-trained employees and good equipment. I believe in investing in people by providing training, and I am fearful that, due to budgetary restrictions, we may run into a situation where we don't have enough resources to provide training to maintain that edge. Technology is advancing and the agency needs to be postured to address the investigation needs associated with those changes. Among those advancing technologies are Unmanned Aerial Systems, autonomous vehicles, and commercial space transportation.

#### B. POTENTIAL CONFLICTS OF INTEREST

1. Describe all financial arrangements, deferred compensation agreements, and other continuing dealings with business associates, clients, or customers. Please include information related to retirement accounts.

I am retired from U.S. Airways, for which I served as an airline pilot for approximately 24 years. The retirement/pension to which I should have been entitled is now provided and handled under the auspices of the Pension Benefit Guaranty Corporation, a governmental agency. I began receiving these retirement benefits effective June 30, 2006 and they will continue until my death. U.S. Airways was acquired by America West in 2005, but the merged airline kept the U.S. Airways name. In 2013, that airline acquired American Airlines and retained the name of American Airlines.

My previous Ethics Agreement dated October 11, 2011 stated that I would not participate in any particular matter that comes before the Board involving specific parties in which U.S. Airways, or any wholly owned subsidiary of U.S. Airways, is or represents a party unless authorization to participate is granted in accordance with the procedures set forth at 5 C.F.R. § 2635.502. Upon consulting with the Office of Government Ethics for my EA dated May 11, 2017, OGE believed it was no longer necessary to specifically mention U.S. Airways since they are no longer a viable entity due to the merger.

2. Do you have any commitments or agreements, formal or informal, to maintain employment, affiliation, or practice with any business, association or other organization during your appointment? If so, please explain. No

3. Indicate any investments, obligations, liabilities, or other relationships which could involve potential conflicts of interest in the position to which you have been nominated. None

4. Describe any business relationship, dealing, or financial transaction which you have had during the last ten years, whether for yourself, on behalf of a client, or acting as an agent, that could in any way constitute or result in a possible conflict of interest in the position to which you have been nominated. None

5. Describe any activity during the past ten years in which you have been engaged for the purpose of directly or indirectly influencing the passage, defeat, or modification of any legislation or affecting the administration and execution of law or public policy. None

6. Explain how you will resolve any potential conflict of interest, including any that may be disclosed by your responses to the above items.

In accordance with my Ethics Agreement dated May 11, 2017, I will not participate personally and substantially in any particular matter in which I know that I have a financial interest directly and predictably affected by the matter, or in which I know that a person whose interests are imputed to me has a financial interest directly and predictably affected by the matter, unless I first obtain a written waiver, pursuant to 18 U.S.C. 208(b)(1), or qualify for a regulatory exemption, pursuant to 18 U.S.C. § 208(b)(2).

Furthermore, I currently hold assorted stocks of transportation-related companies. At the present, the total value of these stocks meet the *de minimis* exemption under 5 C.F.R. § 2640.202, and I will continue to monitor the value of those interests. As outlined in my May 11, 2017, Ethics Agreement, if the aggregate value of interests affected by a particular matter increases and exceeds the *de minimis* threshold, I will not participate personally and substantially in the particular matter that to my knowledge has a direct and predictable effect on the interests, unless I first obtain a written waiver pursuant to 18 U.S.C. § 208(b)(1).

Because my accounts are managed by a brokerage firm, on the same date that my Ethics Agreement was signed (May 11, 2017), in accordance with my EA, I noti-

fied my account manager of the need obtain my prior approval on a case-by case basis for Ule purchase of any assets other than cash, cash equivalents, investment funds that qualify for the exemption at 5 C.F.R. §2640.201 (a), obligations of the United States, or municipal bonds. He has agreed to comply.

#### C. LEGAL MATTERS

1. Have you ever been disciplined or cited for a breach of ethics, professional misconduct, or retaliation by, or been the subject of a complaint to, any court, administrative agency, the Office of Special Counsel, professional association, disciplinary committee, or other professional group? If yes:

- a. Provide the name of agency, association, committee, or group;
- b. Provide the date the citation, disciplinary action, complaint, or personnel action was issued or initiated;
- c. Describe the citation, disciplinary action, complaint, or personnel action;
- d. Provide the results of the citation, disciplinary action, complaint, or personnel action.

No

2. Have you ever been investigated, arrested, charged, or held by any Federal, State, or other law enforcement authority of any Federal, State, county, or municipal entity, other than for a minor traffic offense? If so, please explain. No

3. Have you or any business or nonprofit of which you are or were an officer ever been involved as a party in an administrative agency proceeding, criminal proceeding, or civil litigation? If so, please explain. No

4. Have you ever been convicted (including pleas of guilty or *nolo contendere*) of any criminal violation other than a minor traffic offense? If so, please explain. No

5. Have you ever been accused, formally or informally, of sexual harassment or discrimination on the basis of sex, race, religion, or any other basis? If so, please explain. No

6. Please advise the Committee of any additional information, favorable or unfavorable, which you feel should be disclosed in connection with your nomination.

There is nothing unfavorable.

As far as favorable information, I would like the Committee to know that I have a longstanding commitment to and passion for improving transportation safety. As I have for nearly 11 years as an NTSB Board Member, if confirmed, I will work diligently to use my knowledge, skills and experience to help improve safety in all modes of transportation safety. My work ethic is unsurpassed.

#### D. RELATIONSHIP WITH COMMITTEE

1. Will you ensure that your department/agency complies with deadlines for information set by congressional committees? Yes

2. Will you ensure that your department/agency does whatever it can to protect congressional witnesses and whistle blowers from reprisal for their testimony and disclosures? Yes

3. Will you cooperate in providing the Committee with requested witnesses, including technical experts and career employees, with firsthand knowledge of matters of interest to the Committee? Yes

4. Are you willing to appear and testify before any duly constituted committee of the Congress on such occasions as you may be reasonably requested to do so? Yes

#### RESUMÉ OF ROBERT L. SUMWALT

*Profile:* Prominent safety executive with a sustained record of leadership and success advancing domestic and international transportation safety. Worked across a range of roles and responsibilities to decisively improve safety performance in large, complex, dynamic transportation organizations in both the private and public sectors.

#### Experience and Achievements

National Transportation Safety Board, Washington, D.C.—2006 to Present  
*Acting Chairman, Vice Chairman and Board Member* (Presidential appointee)  
 Nationally recognized transportation safety advocate and accident investigation authority. Responded as part of NTSB's Go-Team to 28 transportation casualties in all modes of transportation. Conducted over 60 on-scene media events including live national television and radio network appearances. Provided individual and collective review of over 150 major transportation investigations to determine accident prob-

able cause and subsequent recommendations to prevent recurrence. Served as Chairman of Board of Inquiry for five high-profile accident public hearings. Presented over 250 speeches to domestic and international audiences. Testified to U.S. Congress on issues involving aviation and surface transportation safety.

SCANA Corporation, Columbia, SC—2004 to 2006

*Manager of Aviation*

Provided strong leadership for operations, personnel, and resources for a Fortune 500 company aviation department, including safety, operations, maintenance, budgeting, and all associated fiduciary matters. Led departmental employees into a cohesive, well-functioning team. Managed disposition, acquisition, and deployment of multi-million dollar aircraft and support assets, including construction planning for a multi-million dollar aviation facility to house company aircraft and personnel. Supervised department personnel, including hiring of departmental employees. Led development of first-ever department strategic plan, flight operations manual, and formulated practices to ensure standardization in critical flight and maintenance practices.

US Airways, Charlotte, NC—1981 to 2004

*Airline Captain*

Experienced airline captain in U.S. domestic and Latin American markets. Served as check airman, instructor pilot and air safety representative. Heavily involved in introducing new jet aircraft into airline service. Over 14,000 flight hours and FAA type ratings in five multi-engine, turbine-powered aircraft.

*Air Safety Representative* 1986 to 2004

Served as Chairman of Air Line Pilots Association's (ALPA) Human Factors and Training Group. Engaged in the development and implementation of several airline safety programs. Served on the U.S. Airways Flight Operations Quality Assurance (FOQA) Monitoring Team. Directed the U.S. Airways Line Operations Safety Audit (LOSA). Contributed heavily in procedural development of the USAir Altitude Awareness Program. Co-founded the ALPA Critical Incident Response Program that remains in place today.

NASA Aviation Safety Reporting System (ASRS)—1991 to 1999

*Aviation Safety Research Consultant*

Conducted aviation safety research as a consultant to the NASA ASRS. Principal Investigator for three ASRS research initiatives and authored articles for ASRS publications.

University of Southern California Aviation Safety Program—2003 to 2006

*Human Factors Instructor*

Developed and presented academic curriculum for a one-week course on "Human Factors in Aviation Safety." Taught the course in the classroom on seventeen occasions on the USC campus, as well as for the U.S. Navy, and internationally in Mexico, Trinidad, and Brazil.

**Publications**

Published over 100 articles and papers in industry magazines and trade journals with a focus on aircraft accident investigation, flight crew procedural issues, human performance, and crew resource management. Coauthored a book profiling aircraft accidents, their cause, and lessons learned.

Coauthored a book chapter on Crew Resource Management, and authored book chapters in two books on effective aircraft accident investigation procedures. Authored foreword in book on safety leadership.

**Awards and Recognition**

Cecile S. Hatfield Award for Excellence in Aviation, 2017

Bombardier Safety Standdown Award, 2016

Fellow, Royal Aeronautical Society, 2014

Foreign Associate Member, Academie de L'Air et de L'Espace, 2014

Association of Air Medical Services Public Service Award, 2010

South Carolina Aviation Hall of Fame, 2009

Professional Pilot Magazine Aviation Safety Advocate of the Year, 2009

ALPA Air Safety Award, 2004

Flight Safety Foundation's Laura Taber Barbour Air Safety Award, 2003

**Education**

*Master of Aeronautical Science* (With Distinction)  
Aviation/Aerospace Safety Systems and Human Factors in Aviation Systems  
Embry-Riddle Aeronautical University, 2014

*Bachelor of Science*  
Business Administration University of South Carolina, 1979  
Testimony, Publications, Speeches and Presentations

The CHAIRMAN. Thank you, Mr. Sumwalt. And we'll begin with questions. And as a reminder, of course, we're dealing with the nomination today of Robert Sumwalt, of South Carolina, to be Member of the National Transportation Safety Board; David Redl, to be Assistant Secretary for Communications and Information, Department of Commerce; and Derek Kan, of California, to be Under Secretary of Transportation for Policy.

Before asking questions, though, I would ask unanimous consent to include in the record letters of support for the nomination of David Redl, from Engine Advocacy and the Consumer Technology Association. Without objection, those will be entered into the record.

[The information referred to follows:]

ENGINE  
June 6, 2017

Hon. JOHN THUNE,  
Chairman,  
Dirksen Senate Office Building,  
Washington, DC.

Hon. BILL NELSON,  
Ranking Member,  
Hart Senate Office Building,  
Washington, DC.

Dear Chairman Thune and Ranking Member Nelson:

Engine wishes to express its strong support for David Redl's nomination to the position of National Telecommunications and Information (NTIA) Administrator.

As a non-profit advocacy and research organization that supports high-growth startups, one of our highest priorities is ensuring that the Internet remains the driver of innovation and economic growth. Many decisions made at the NTIA, including promoting secure communications networks, efficient use of federally held spectrum, and broadband deployment are critical to startups nationwide. From his work in Congress and the wireless industry, Mr. Redl is incredibly qualified to be the top Federal advisor on all telecommunications issues. His experience working with the startup and technology communities over the years will be an asset to the NTIA in crafting policies that help drive the growth of the Internet, startups, and the economy.

We hope the Committee will promptly approve his nomination, and we look forward to working with him in the coming years.

Sincerely,

EVAN ENGSTROM,  
*Executive Director.*

September 26, 2017

Hon. JOHN THUNE,  
Chairman,  
Committee on Commerce, Science and  
Transportation,  
United States Senate,  
Washington, DC.

Hon. BILL NELSON,  
Ranking Member,  
Committee on Commerce, Science, and  
Transportation,  
United States Senate,  
Washington, DC.

Dear Chairman Thune and Ranking Member Nelson:

We write to support the confirmation of David Redl to lead NTIA as Assistant Secretary for Communications and Information at the Department of Commerce.

Not only is Mr. Redl extraordinarily well-qualified to deal with pressing domestic issues including overseeing FirstNet and identifying underutilized government spec-

trum for commercial use, but we are confident in his ability to advise Secretary Ross and President Trump on international telecommunications issues consistent with American interests and free-market principles.

Among other important items that fall within NTIA's international portfolio, Mr. Redl understands the challenges raised by the Obama Administration's poorly-orchestrated transition of the Internet Assigned Numbers Authority function to the Internet Corporation for Assigned Names and Numbers multi-stakeholder process.

We had the opportunity to meet with Mr. Redl recently and we were impressed by his steadfast resolve to protect American interests against the risks of foreign government compromise of Internet governance now that the U.S. Government no longer has direct oversight over IANA. For example, Mr. Redl is committed to actively engaging in the multi-stakeholder process both directly and in cooperation with American companies to advocate both for U.S. economic interests as well as for our Constitutional values, including a strong commitment to First Amendment principles.

Finally, many of us have worked closely with Mr. Redl over the years. Among telecommunications professionals, his reputation is impeccable. He is an excellent choice to head NTIA and should be quickly confirmed.

Sincerely,

PHIL KERPEN,  
*President,*  
American Commitment.

DANIEL SCHNEIDER,  
*EXECUTIVE DIRECTOR,*  
American Conservative Union.

GROVER NORQUIST,  
*President,*  
Americans for Tax Reform.

JEFF MAZZELLA,  
*President,*  
Center for Individual Freedom.

KATIE McAULIFFE,  
*Executive Director,*  
Digital Liberty.

GEORGE LANDRITH,  
*President,*  
Frontiers of Freedom.

ANDREW LANGER,  
*President,*  
Institute for Liberty.

SETON MOTLEY,  
*President,*  
Less Government.

LAWRENCE J. SPIWAK,  
*President,*  
Phoenix Center for Advanced Legal &  
Economic Public Policy Studies.

Cc: Members of the Senate Committee on Commerce, Science and Transportation

The CHAIRMAN. So, Mr. Redl, I'll start with you. If confirmed as NTIA Administrator, you would be tasked with overseeing the Federal Government's significant, significant inventory of spectrum holdings. As data usage rates and technological innovations continue to grow, our commercial spectrum needs are greater than ever, and we need to ensure we have a pipeline in place for both licensed and unlicensed spectrum. Can I get your commitment that you will work with the appropriate stakeholders to identify whether there are underutilized Federal spectrum bands that might be reallocated or repurposed for commercial user sharing?

Mr. REDL. Thanks, Senator. Yes, of course. One of the core jobs that NTIA has is balancing the need for spectrum for government users to meet their very important needs, protecting the country both physically and our economic well-being, and also balancing that with a need for additional spectrum in the commercial sector.

The CHAIRMAN. Thank you. And our international competitors, including Japan and South Korea, are quickly advancing in the telecommunications field to win the race for a widespread 5G deployment. In order that we remain globally competitive and retain our spot as the world's premier wireless innovator, can you commit that if confirmed, you will work with this Committee, the FCC, and others to ensure we keep 5G advancement a top priority for our nation?

Mr. REDL. Yes, Senator.

The CHAIRMAN. Thank you.

Mr. Kan, as you may know, Denver Union Station in my home state was recently renovated with support from the TIFIA and the RRIF program, loan programs, a rare instance of loan programs being used together to finance an innovative project. The FAST Act established the Build America Bureau to streamline and harmonize applications between the programs, increase technical assistance, and improve project delivery, and the Under Secretary plays a key role in overseeing the Bureau. Could you speak to your vision for the Build America Bureau and any plans you might have to improve infrastructure financing with the new FAST Act structure?

Mr. KAN. Yes, Senator. The FAST Act passed this Committee and passed the floor I think about a year and a half ago 83 to 16. It is a great example of the good work that this Committee does and the power of bipartisanship. The Build America Bureau is one of the most important components of the Department of Transportation, and it really tries to solve a key market breakdown where you have sources of capital and uses of capital sometimes not working together.

A large part of the reasons why markets sometimes fail is when you have too much uncertainty in a market, and the Build America Bureau seeks to streamline some of those questions with more efficient permitting, a clear one-stop shop to solve many of these gaps between sources and uses of funding. I commit to work with you and your office to make sure the Build America Bureau continues to optimize allocations spent, and not only seek to attract private capital, but really try to figure out how to bring all stakeholders to the table to deploy capital as efficiently as possible.

The CHAIRMAN. Thank you, Mr. Kan. And I appreciate that focus. In your opening statement, you talked about permitting, and now, of course, talking about permitting, streamlining inefficiencies, and I think that's the target of every committee that I serve on and I hear in the Senate, how we make sure that government is effectively communicating with each other, better streamlining the process, and making permitting more effective.

In the FAST Act, I pushed for the inclusion of a Government Accountability Office study to evaluate the effectiveness of the Federal Railroad Administration, the final rule on quiet zones, including a look at the benefits, costs, and challenges with establishing quiet zones. I understand that the report will be issued in the next few months. Can I get your commitment to carefully review the results of that study and to consider any necessary and appropriate changes to regulations or grant program considerations should the study find any pertinent issues to be addressed?

Mr. KAN. Senator, quiet zones are a very important issue, particularly in urban areas and areas where mass and local transit flow through. I commit to study the issue closely and working with you and your office to understand the products of those recommendations.

The CHAIRMAN. Thank you.

Mr. Sumwalt, in your capacity as a member of the Board at the National Transportation Safety Board, where you've served for the past 11 years, you've got a unique perspective on the challenges the

agency currently faces, and I think in your opening statement, you talked about the factors underlying the accidents that you've investigated. What are your priorities going to be? Lay them out again from your opening statement should you be confirmed.

Mr. SUMWALT. Well, Senator, thank you for the question. We have our Most Wanted List, and there are 10 items on that, and I think each of those items are areas that the Board has determined that we really need to move further along on. So I want to continue to work on each of those issues.

We have some challenges within the agency, three that I'd like to mention: one would be the budgetary issues; another would be maintaining the effective work force; and, finally, ensuring that we maintain our competitive edge. I'll be glad to discuss any of those that you like.

The CHAIRMAN. Thank you. Perhaps we can get into them further.

Senator Schatz.

Senator SCHATZ. Thank you, Mr. Chairman.

Mr. Kan, first a little bit about Hawaii. We're the most isolated, populated place on the planet. We're 2,500 miles from Los Angeles. We're 5,000 miles from the U.S. capital. And we really are different from a transportation infrastructure standpoint. We depend on aviation for our primary private sector economic driver. And, of course, we depend on the shipping industry and maritime infrastructure for fuel, for food, for construction materials, for our basic sustenance.

My question for you, Mr. Kan, is my own judgment about the Department of Transportation is that you have a lot of flexibility within the statute to tailor whatever you can do to an individual state's needs. And all I want is your commitment to work with us, understanding that coming from an island in the Pacific, coming from a place that is far away, that we're going to need to work with you in a way that may be different from all the other states in the continental United States. Do I have that commitment?

Mr. KAN. Yes, sir.

Senator SCHATZ. Thank you very much. I want to talk to you about Safe Streets. Nearly 5,000 people were killed by a car while walking in 2014. Many of these deaths are preventable through highway design that is safer for all. Senator Heller and I are working on a Safe Streets legislation. We made some progress in the FAST Act. I would like to do more. And I would like your commitment to work with us on what can be done administratively just to make our streets safer.

This ought not to be a partisan issue. This ought not to be a question of where you come down on issues that are a little more contentious, smart growth, density, you know, cars versus bikes. All of that stuff I like to set aside. I have my own views about that set of issues, but we ought to come together when it comes to safe routes to school, when it comes to sidewalks, when it comes to crosswalks, and keeping people safe. So do I have your commitment to work with us on Safe Streets?

Mr. KAN. Yes, sir.

Senator SCHATZ. Thank you.

Mr. Redl, I want to talk to you about IoT. There's a working group on this committee and others who care very deeply about the Internet of Things, and it's been a key area of focus for our committee as well as the bipartisan IoT caucus. More and more technologies come online, and therefore it's critical that the government have a consistent approach for encouraging the development and deployment while protecting consumers.

One of the challenges is if you are in the business of, say, developing an app, but let's say it monitors certain health indicators while you are in your car, it's not at all clear under which jurisdiction of the Federal Government you may have to operate. As some of these new technologies come online, if you're a three- or four-person shop with a really good idea and a good technology, in order to scale, unfortunately the next thing you need is a lawyer, not new creative people, new engineers, new business managers.

One of the challenges that we see in the private sector is that although we want to have a light touch from a regulatory standpoint, we do need to provide clarity because all of these statutes that were written that may apply to an IoT technology were written before the IoT existed. Unless we want some of these companies to be operating under 17 different statutory regimes, we're going to have to provide some clarity.

As you probably know, the 2017 Omnibus included report language requiring the Commerce Department to coordinate IoT efforts with other agencies. Do you commit to pulling together an interagency group together to review the policy issues impacting IoT?

Mr. REDL. Senator, I think that's a great point. Technology, and particularly communications and information portions of technology, are pervasive in our economy. They cross across a number of industries, which necessarily, means it crosses over portions of our Federal Government. If I'm confirmed, I absolutely will work with you and your staff and the Committee and all of the folks at the Department of Commerce to try and knock down some of those barriers.

Senator SCHATZ. OK. That's great, and I understand your commitment to working on knocking down barriers, but there is a provision in the 2017 Omnibus that calls on Commerce to pull together an interagency working group. Do I have your commitment to do that?

Mr. REDL. Yes, to work with the rest of the Department of Commerce, yes, sir.

Senator SCHATZ. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Schatz.

Senator Wicker.

**STATEMENT OF HON. ROGER F. WICKER,  
U.S. SENATOR FROM MISSISSIPPI**

Senator WICKER. Mr. Kan, I was struck by Senator Schatz's question. And, you know, Honolulu is such a distant, isolated, and overcrowded place, I think it's commendable that you would be willing to visit such a disadvantaged—

[Laughter.]

Senator WICKER. On the other hand, it's a mere two and half hours down to the Gulf Coast of Mississippi, and perhaps you would like to make that trip first.

[Laughter.]

Senator WICKER. The FAST Act mandated that the FRA convene a working group to evaluate the restoration of inner city passenger rail between New Orleans and Orlando, a corridor that was significantly impacted by Hurricane Katrina, as you know. What will you do to support the restoration of passenger rail along the Gulf Coast, and how will you be the Federal partner to these communities that need to realize the economic benefits of restoring passenger rail?

Mr. KAN. Thank you, Senator. I know that this is a very important rail line that goes through Gulfport, Bay Saint Louis, Pascagoula, and I have studied the rail line, some of the options that exist. Senator, it is a very important issue I know for not only the state of Mississippi but for some of the local states. I look forward to working with you, the Southern Rail Commission, with Amtrak, and with the Department to identify options and opportunities to try to bring back that rail line.

Senator WICKER. OK. Well, I appreciate that assurance. Let me shift to an area where I serve on the Board. That's the Merchant Marine Academy. As you know, the Sea Year was suspended for a while. Commendably, Secretary Chao has reinstated the Sea Year aboard commercial vessels, but there is still much work to be done at this, a very excellent, university.

While vessels participating in the Maritime Security Program are required to host midshipmen for the Sea Year, there is currently no incentive for other vessels to participate in this training program. Will you work with MARAD to address this issue and ensure that midshipmen receive the training they need to serve our merchant mariner workforce?

Mr. KAN. Yes, sir.

Senator WICKER. Thank you very, very much.

Now, Mr. Redl, let me ask you about FirstNet. FirstNet is expected to release its draft state plans to each of the states and territories by the end of this month. These draft plans will detail how FirstNet proposes to deploy the Nationwide Public Safety Broadband Network in those areas. The statute allows states to opt out of FirstNet's plan and build their own radio access network if the states believe they can better accommodate the needs of first responders in their own jurisdiction. Do you believe the opt-out choice in the statute is meant to allow states the true right to opt out of FirstNet and construct their own radio access networks?

Mr. REDL. Senator, I first and foremost hope that when these plans come out later this month that every state will find them to meet the needs of their state and their public safety users. However, as you rightly note, the statute does provide an opt-out, and, yes, it is my belief that the states should be given the opportunity to truly opt out. But the statute also says that it's NTIA's job to make sure that those opt-out plans meet the needs of public safety users. If I'm confirmed, I will absolutely work with each state that wants to opt out to ensure that their opt-out right is recognized and that their public safety users get the network that they need.

Senator WICKER. Do you think the statute allows enough time for states to conduct an adequate review of its communications and coverage needs before choosing to opt-in or opt-out of FirstNet? And explain why.

Mr. REDL. I certainly hope so, Senator. There has been a lot of work done at the state level to date in the lead up to this point. The SLIGP process, the State and Local Implementation Grant Program, provided states with funding to prepare for this decision and to prepare for what their public safety users will need. So I certainly hope that the amount of time they have will be adequate.

Senator WICKER. What does the statute say with regard to time?

Mr. REDL. There's a fixed amount of time that they have, from the time that they receive their plans to review, and if they choose to opt out, then they'll have to opt out I believe it's within 90 days they'll have to opt out, and they will have to submit their plan to the Federal Communications Commission first to see if their plan would be interoperable with FirstNet.

Senator WICKER. With regard to user fees, as Administrator, how will you work to ensure that user fees don't become a cost burden for rural users, such as those in Hawaii and Mississippi?

Mr. REDL. Networks aren't much without users, Senator, and if you've got a network that people can't afford to be on, you lose that network effect. So if confirmed, I will work with FirstNet to make sure that we get as many people on the network as possible.

Senator WICKER. And Colorado.

[Laughter.]

Senator WICKER. Thank you very much. I appreciate it.

The CHAIRMAN. Senator Cruz.

**STATEMENT OF HON. TED CRUZ,  
U.S. SENATOR FROM TEXAS**

Senator CRUZ. Thank you, Mr. Chairman.

Gentlemen, welcome.

I want to start, Mr. Sumwalt, with a question for you. As you know, on July 30th of last year, a commercial balloon crashed in Lockhart, Texas, tragically killed 16 people, including the pilot, Alfred Nichols. And following that crash, a number of facts have become public that are deeply concerning. For example, the balloon's pilot, Mr. Nichols, had a history that included five DWI arrests, three drug offenses, and a medical condition that could disqualify him from being able to operate a commercial balloon. The Austin American-Statesmen has reported that the FAA learned of the pilot's criminal record two years before the Lockhart crash and failed to take any enforcement action against Mr. Nichols.

Further, this crash has also brought to attention that the FAA exempts commercial balloon pilots from having to obtain a medical certificate, and medical certificates are required for nearly all commercial pilots, and may have discovered that Mr. Nichols was prescribed drugs over the year preceding the crash that are listed on the FAA's Do Not Issue—Do Not Fly Guide for Aviation Medical Examiners that would have prevented the issuance of a medical certificate.

Do you think the standards are appropriate for commercial balloon pilots? And what can be done to better protect the flying public?

Mr. SUMWALT. Senator Cruz, thank you for raising this very important issue. I was the Board Member on scene for that tragedy. I met with the family groups. And furthermore, I was privileged to chair the NTSB's investigative hearing of that accident in December. So the issues you have raised have certainly gotten my attention, they've gotten the attention of our investigators. I do not want to prejudice the outcome of the investigation, but I can tell you that it really is alarming that this pilot was able to hang out a shingle and fly people for hire. That's very much of a concern, and I'm confident that our investigation will address those issues. The real trick will be having the FAA follow up on those recommendations. That's going to be the real trick.

Senator CRUZ. Setting aside the precise cause of that crash, which needs to be investigated fairly, do you think there are changes in the rules and regulations going forward that would be wise to consider?

Mr. SUMWALT. Well, I certainly believe, Senator Cruz, that it would be wise for regulatory changes to be made. Again, I don't want to prejudice the investigation, however, it doesn't make sense that somebody can operate a balloon commercially without a medical certificate. To do an air tour in a helicopter or in an airplane, that pilot would have to have a medical, but for the same thing in a balloon, they don't have to. We think there should be similar standards.

Senator CRUZ. Thank you.

Mr. Redl, let's shift to a different topic, which is ICANN. And I know you're familiar with this issue, that in the end of last year, the previous administration allowed the Federal Government's contract with ICANN to expire. Do you think that was a wise and prudent decision?

Mr. REDL. Senator, I think there has been a lot of debate about that. The reality is that we are in the situation we're in. And Secretary Ross, when asked by this Committee what he thought about the decision I think hit the nail on the head, that the administration supports, as you see in the Fiscal 18 budget, and as Congress has said, the multistakeholder model of Internet governance, and that with the situation in front of us, we're going to have to move forward and be a vigorous representative of U.S. interests before ICANN.

Senator CRUZ. OK. I'm going to ask the question again. Do you think it was a wise and prudent decision?

Mr. REDL. You know, we spent a lot of time on Capitol Hill debating that. The reality of the situation was that once the decision was made to announce that it was going to happen, I think it would have been very difficult to put the genie back in the bottle. I have spent a lot of time in my capacity as a congressional staffer working to try to ensure that as we went through that process, the U.S. interests were protected. I feel confident that given the way the process turned out and the changes that were made to the accountability mechanisms at ICANN, that the U.S. is in a position to continue to protect its interests.

Senator CRUZ. Microsoft and Facebook and YouTube, which is owned by Google, all of whom supported President Obama's Internet transition, have signed a Code of Conduct with the European Union to remove so-called hate speech from European countries in less than 24 hours. Do you think these global technology companies have a good record of protecting free speech? And what can be done to protect the First Amendment rights of American citizens?

Mr. REDL. I think the technology companies have a difficult challenge ahead of them trying to do business in multiple jurisdictions across very different sets of laws. I can say confidently that if I'm confirmed and heading NTIA, I will use NTIA's position as an advocate for U.S. interests, including freedom of speech and free market economics.

Senator CRUZ. Well, Mr. Redl, I look forward to continuing this conversation with you because this is an issue of considerable interest to me and I think to a great many Texans. Thank you.

The CHAIRMAN. Thank you, Senator Cruz.

Before I recognize the Senator from Minnesota, I'll have you note, Senator Klobuchar, that Mr. Kan has already committed to visiting Hawaii, Colorado, and Mississippi first, so the Senator—  
[Laughter.]

**STATEMENT OF HON. AMY KLOBUCHAR,  
U.S. SENATOR FROM MINNESOTA**

Senator KLOBUCHAR. Very nice. Hawaii—which? Hawaii, Colorado, Mississippi.

Senator SCHATZ. He can come to my state fourth because you might want to come around January.

Senator KLOBUCHAR. Yes.

[Laughter.]

Senator KLOBUCHAR. But you could come to Minnesota in January for the Super Bowl, Mr. Kan, because that's where it will be. It will not be in any of those other states at that time.

[Laughter.]

Senator KLOBUCHAR. OK. So, Mr. Kan, one of the things that we're talking about a lot in these hallways is infrastructure investment and how important it is. For those of us who have rural states, we have some concern about just the public-private model and what that would mean because we think it wouldn't quite create the incentives we need. Obviously, there are some things we can do with public-private partnerships. Are you willing to work with me and others on this committee to find innovative ways to fund our infrastructure?

Mr. KAN. Yes. Senator, rural transportation patterns are distinct from urban city transportation. You see higher car ownerships, particularly in states such as Minnesota. And I commit to work with you and the members of this Committee to think through, how do we allocate capital efficiently, particularly in rural America?

Senator KLOBUCHAR. And you know we don't have toll roads in Minnesota or North Dakota or Wisconsin or Iowa or Missouri. OK.

Open Skies, going to the skies now. Open Skies agreements are important for U.S. transportation policy for all carriers. I spoke briefly with the Secretary about this the other day. Both Democratic and Republican administrations have pursued these agree-

ments. Right now we are very concerned that recent actions by companies like Norwegian Air International, United Arab Emirates, Qatar, are undermining our Open Skies agreements and hurting our workers. She said that the Department is working on this and will have a decision shortly, but it's really becoming a problem because they are subsidizing their airlines and then they are undercutting us in the competition. It is that simple. What can the Department do, in your mind, to ensure American airline workers are not harmed by unfair competition that is not an even playing field?

Mr. KAN. Senator, this is a very important issue. It is a topic that the Secretary has spoken about. It is an area that will fall under my purview. I commit to quickly, as soon as I am confirmed, to investigate and follow up on the analysis to see if Gulf air carriers and Norwegian Air are inappropriately subsidizing air traffic.

Senator KLOBUCHAR. One of the FAA's—thank you. One of the FAA's most successful government-industry partnerships for, again, a lot of rural areas is the FAA Contract Tower Program, which provides proven cost effective and critical air traffic control safety benefits to 253 smaller airports in the country. Do you agree that contract towers are a vital part of our aviation system?

Mr. KAN. I think contract towers, as well as a lot of other parts of the aviation system, are critical parts. It is a system that is complex with a lot of moving parts. Each of these pieces are very important.

Senator KLOBUCHAR. OK. Thank you.

Mr. Redl, as Co-Chair of the Next Generation 911 Caucus, I know that we need some upgrades to our 911 system, and I've been working on the Next Generation 911 Act with Senator Nelson. Mr. Redl, are you committed to working with the joint 911 Implementation and Coordination Office to advance Next Generation 911?

Mr. REDL. Senator, absolutely. 911 is a critical piece of our public safety infrastructure, and commercial networks have advanced, and FirstNet is getting ready to deploy advanced networks for our first responders. 911 is the connectivity between the two of them. And I certainly look forward to working with the Department of Transportation.

Senator KLOBUCHAR. Thank you. We're also working on the Dig Once concept to help get broadband laid, and so that's something else we can talk about later, so I appreciate that.

Distracted driving, Mr. Sumwalt. In the last 5 decades, traffic fatalities on our roads have been declining. However, data recently released by the National Highway Traffic Safety Administration shows that from 2014 to 2015, there was a 7 percent, which is high, increase in traffic fatalities. We know that the distractions behind the wheel played a major, major role in this. I included a provision, along with Senator Hoeven in the FAST Act, which made it easier for states to get grants. Actually, only the state of Connecticut got a grant one year. This is an encouragement to states to try to upgrade their laws, as a lot of the enforcement is done on a state-by-state basis. Secretary LaHood took this on as a major issue, and we appreciated that. Some of this, we understand not everyone is going to be able to—police officers are going to spend all day looking for distracted drivers, but we do think some of these

operations going on intermittently are a good idea, that upgrading the state laws for both accidents and others, education efforts, are key to this. People just don't seem to understand that when they look at their phone when they're going 65 miles an hour, it is like putting on a blindfold and going the entire length of a football field. So could you comment on your views on this and what you think we should do?

Mr. SUMWALT. Absolutely, Senator Klobuchar, and thank you very much for your interest in this topic. The NTSB has a Most Wanted List. Distractions in transportation is one of those items and has been. We are very concerned about it. I personally have moderated two roundtables on distractions in transportation, primarily the highway mode. You pointed out the distractions, that multitasking doesn't work very well. That's a myth.

And we also agree with the three-legged stool, that it requires education and awareness, it requires laws, and then finally visible enforcement of those laws. So we are concerned about distractions in all modes, and we look forward to working with you and this committee in looking for ways to curb this problem.

Senator KLOBUCHAR. Thank you very much.

The CHAIRMAN. Thank you, Senator.

Senator Sullivan.

**STATEMENT OF HON. DAN SULLIVAN,  
U.S. SENATOR FROM ALASKA**

Senator SULLIVAN. Thank you, Mr. Chairman. And gentlemen, thank you for your desire to serve your nation.

Mr. Redl, I just want to mention that I, too, like Senator Cruz, have some issues on the ICANN matter, and I think a lot of us in the Senate do, so I think it will be important to make sure we understand your views on that.

You know, a lot of us, which is normal in these hearings, want to talk about issues that relate to our states. And in Alaska, aviation and infrastructure and transportation is absolutely critical for us.

So just a few facts about my state. I think there are only 17 other countries in the world that are bigger than Alaska. Unfortunately Senator Cruz has left, but he has heard the line from me before, if you split Alaska in half, Texas would be the third largest state in the country. We have 82 percent of the communities in Alaska are not accessible by road, 82 percent. 251 communities in my state are exclusively accessed by air only, no roads. Over 60 communities in Alaska are covered by the Essential Air Service.

So, Mr. Kan, I want to talk a little bit about these issues. Some people talk about rural. We're extreme rural, as you can kind of understand from those facts.

You and I have talked about this FAA weather policy that has put Alaska in this very difficult dilemma where the FAA has not funded new weather infrastructure in Alaska since the 1990s, and yet is now trying to apply a nationwide standard on practices that would essentially shut down air service to many, many of the communities I just mentioned. Under Secretary Rosen committed to me during his confirmation process to work with us on this issue. You and I have had a long discussion in my office about it. Can I get

your commitment here to continue that discussion in a way that is resolved satisfactorily to my constituents?

Mr. KAN. Senator, I looked into this. Rural aviation is critical. I believe 47,000 jobs in Alaska depend on the aviation industry. 82 percent of the communities are not accessible except through rural transportation. I commit to work with you and your staff on the FAA weather issue to find a path forward that is satisfactorily addressed with by you and your office.

Senator SULLIVAN. Great. I appreciate that. We all want safety, it's critical to my state, but we need to actually be able to fly into these communities, and a one-size-fits-all on air policy does not work in my state for some of the reasons I just mentioned.

Let me talk about another issue. Secretary Chao was in front of this Committee just yesterday. A lot of discussion with regard to the FAA and the Essential Air Service. A lot of people don't remember this, but when there was aviation deregulation, there was concern by the Congress that once airlines were deregulated, they would no longer fly to smaller communities, so they established Essential Air Service to help with some of the communities that I just mentioned. Literally hundreds in my state, hundreds, with no roads to them.

So I need your commitment to work with states like mine and others on the Essential Air Service program to make sure that the promises made during airline deregulation are not now forgotten just because it was a couple of decades ago when we deregulated.

Mr. KAN. Senator, the Essential Air Service program, which I think was created October 1978 during deregulation, is an important program. I understand it serves about 150 rural communities, the plurality of those—

Senator SULLIVAN. Over 60 of which are in my state.

Mr. KAN. Exactly.

Senator SULLIVAN. And this is not just some kind of convenience where, hey, you can either drive to the state or get a flight a few hours later. You can't drive to these communities, hundreds in my state.

By the way, I know you've committed to come to beautiful places like Hawaii, which is beautiful, but so is my state. So I think I already got your commitment to come up, right?

Mr. KAN. Twice.

Senator SULLIVAN. Yes, good.

[Laughter.]

Senator SULLIVAN. Thank you. You can come in the summer, but I recommend the winter, too.

Mr. KAN. Four times.

Senator SULLIVAN. Good. So on Essential Air Service?

Mr. KAN. Yes. I understand it's a very important program, and I look forward to work with you and your office and figure out how we address some of the needs of rural airports.

Senator SULLIVAN. Thank you. One other issue. We're talking a lot about infrastructure, and I think there's a lot of bipartisan support here. Something else we had talked about, we'll be introducing a bill next week, the Rebuild America Now Act. You could have a trillion dollar infrastructure fund, but if we don't fix our broken permitting system, where now on average in America it takes 6

years to permit a bridge, 15 years to permit a runway, a new runway, in the Sea-Tac Airport, the system in terms of infrastructure is going to continue to just face enormous challenges.

Can I get your commitment—I've already got it from Secretary Chao and others—to work with me and this Committee on looking at ways to further refine, streamline, and make more efficient our Federal permitting system, which is broken and inhibits the building of infrastructure that is so desperately needed throughout our country?

Mr. KAN. Senator, you have been a leader on this issue and made significant progress. We have brought down the permitting timelines I think from an average of 72 months now to 44 months. Forty-four months still seems like a very long time. I look forward to work with you and your office to making sure we continue to streamline permitting processes, particularly for key infrastructure projects.

Senator SULLIVAN. Great. Thank you. And I will have additional records—questions for the record, Mr. Chairman.

The CHAIRMAN. Thank you. And did you say to make Texas the third largest state, split Alaska in half? Is that what you said?

Senator SULLIVAN. I said if you split Alaska in half, Texas would be the third largest state in the country.

The CHAIRMAN. Well, I'm pretty certain if you flatten Colorado out, it becomes the fourth, so we might as well just start—

[Laughter.]

Senator SULLIVAN. That's a good one. I haven't heard that one.

[Laughter.]

The CHAIRMAN. Senator Young.

**STATEMENT OF HON. TODD YOUNG,  
U.S. SENATOR FROM INDIANA**

Senator YOUNG. Thank you, Chairman.

Mr. Kan, yesterday I spoke with Secretary Chao regarding the importance of the Capital Investment Grant program to my home state of Indiana, the "Crossroads of America" we like to call ourselves. I was pleased to see the administration recognize the importance of this program in their recent FY18 budget request requesting \$1.2 billion for this transit program. As you prepare to begin your work with Secretary Chao this summer, I want to reiterate the bipartisan support this program has here in Congress and the support it has back home in my Hoosier state.

As the Federal Transit Administration works toward the release of FY19, the annual report, I would urge you to recognize the multitudes of communities across the country, but my home state, at South Bend, Gary, and others that are depending on the viability of this program in coming years.

Mr. KAN. Yes, sir. Having been in Indianapolis just 2 weeks ago, I recognize a lot of the key infrastructure throughout the state. I know that Capital Investment Grants, the CIG program, is an important mechanism. I think as part of this infrastructure process development, policy development, that we are exploring all forms of government programs and what are the most efficient ones to keep and optimize, including the Capital—the CIG program.

Senator YOUNG. I'm encouraged to hear that. Thank you for visiting Indianapolis in preparation for this hearing. I hope you spent a lot of money while you were there.

[Laughter.]

Senator YOUNG. Mr. Redl, a great deal of spectrum is allocated for use by the Federal Government, but that doesn't mean it's always being used by a governmental entity. In the House, I served as Co-Chair of the Electronic Warfare Working Group, something I mentioned to you when we recently visited. I learned a great deal about how the military shares spectrum when their needs are limited by time or geography. That said, the military and other agencies are hesitant to ultimately give up their spectrum for commercial use, typically for understandable reasons. What are your thoughts on what more can be done to provide reasonable protections for ongoing Federal uses without allowing such limited uses to keep nationwide spectrum out of the hands of economically productive commercial activities?

Mr. REDL. Well, Senator, I think the NTIA to date has done an admirable job of trying to understand the needs of the agencies for which they are authorizing spectrum use and finding ways to find new synergies, new efficiencies, to get more spectrum to the commercial space. That being said, those government agencies have essential missions. And we need to make sure that we have a process in place and continue to engage in that process to protect their interests in their missions while still trying to find more space. It's going to take some ingenuitive approaches at this point, we're going to have to be creative. As it turns out, spectrum demand on both sides is going to continue to grow, but it's a challenge that, if confirmed, I look forward to.

Senator YOUNG. And over time, every process can be improved, every bit of dialogue between different governmental entities can be optimized, so I'll look forward to working with you in the future to improve that process.

Can more be done to leverage commercially available services to improve the efficiency, effectiveness, and affordability of the Federal telecom systems?

Mr. REDL. I think so, and I think that's something that I would love to work with you and your staff on looking at. It is a challenge to get in and talk to these agencies and find out how to find synergies, but where we're able to do so, as we have in the past, as a congressional staffer, I worked very deeply on working on the AWS-3 transition and getting our government incumbents to be able to get out of portions of the 1.7 gigahertz band without compromising their missions, and in some cases, that involved looking at whether or not commercial alternatives made sense. I would love to continue working on that.

Senator YOUNG. I will look forward to working with you on that as well. And do you believe there's an opportunity to improve spectrum efficiency through the procurement and management of Federal systems?

Mr. REDL. There's always an opportunity for more efficient use of spectrum, and that's the ongoing challenge and frankly the fun of working in spectrum policy. The technology keeps changing, and it forces you to keep evaluating and figuring out how changes on

both the government-use side and the commercial technology side can be used to make each other better users of spectrum.

Senator YOUNG. Well, I thank you for your service.

And, Mr. Chairman, I yield back the balance of my time.

The CHAIRMAN. Thank you, Senator Young.

And, Senator Peters, the author of the great America Innovation Act, your turn.

**STATEMENT OF HON. GARY PETERS,  
U.S. SENATOR FROM MICHIGAN**

Senator PETERS. From one author to another, thank you so much, Senator Gardner. It was a pleasure to be part of that bipartisan legislation with you. And nice to see you in that chair. So thank you for calling on me.

Very nice to have each of our witnesses here today. Thank you for coming to talk about really some—you're going to have some exciting times ahead of you really when you think about transportation and communications coming together, something that I'm very passionate about, being a Senator from Michigan, and what will be likely the most transformative technology for the auto industry since the first car came off of the assembly line, and that's in self-driving autonomous vehicles that will be linked with communications systems to each other, have all sorts of technology on them to allow very safe operation. And from a safety perspective, we may be able to eventually eliminate most auto crashes at a time when nearly 40,000 people die on our highways. That's obviously a big deal. But we have to make sure that this technology continues to move forward, the innovation moves forward.

I'm particularly pleased that the Chairman of this Committee, Senator Thune, has been very engaged in this issue as well. In fact, the two of us are working on some bipartisan legislation that we hope to introduce shortly. We'll likely be working with all of you when it comes to actually implementing some of these new regulations in order to further the technology that is so remarkable coming down the pike.

So with that, Mr. Kan, I wanted to talk to you a little bit about kind of your view, your vision, of where you see this technology going, how the Department will continue to further it. I was pleased that in the previous administration a facility in my state, in Ypsilanti, the American Center for Mobility, was selected as one of ten validation sites and testing sites.

These sites are going to be critical to bring all of the companies together. These vehicles all have to work together. In different companies, it's a different business model. You have to have a Toyota talking to a Ford while it's on the road, and a Ford to a GM and to a Nissan, and they have to all be tested in one place.

So I'm curious as to your vision for that kind of testing regime, also where you see autonomous vehicles going, and how you plan to be a part of that process?

Mr. KAN. Thank you, Senator Peters, for raising this very, very important issue. I know that you and Senator Thune have been working on this topic for the last three and a half months, and we begin to see some of the needs for this committee and the Congress to step in. I believe there are 70 bills across 30 states dealing with

AV that have either been introduced, acted upon to some extent, and it really highlights the need for a Federal role here. I think the vision of AV is exciting.

It is clear from most folks in Silicon Valley that our children will be sitting in self-driving cars, and their children may be sitting in self-driving flying cars. And, Senator, you and Senator Thune have been really the leaders on balancing this question of, how do we protect safety while not stifling innovation?

Early at a high level it seems like having the right balance of making sure we set some direction without strangling innovation is the key balance, and it sounds like you and Senator Thune are headed down a right path to find that right balance while also not creating an unwieldy patchwork of regulations across the country.

Senator PETERS. Well, if confirmed, I will look forward to working with you on that. It sounds as if you're enthusiastic and excited about the future.

Mr. KAN. Yes.

Senator PETERS. It is about the balance. And we're going to have to figure out this balance for a variety of new technologies as they're coming down the pike that we've got to be concerned about safety and be concerned about some of those core policy issues, but also understand we can't stifle innovation because we are living at the verge of a very exciting time, even if it leads to self-flying cars, as you just mentioned, Mr. Kan, which is certainly an ambitious goal to see going forward.

But part of the ability to achieve this, and, Mr. Redl, you addressed this a little bit with Senator Young's comments, but I would like both of your comments, both Mr. Redl and Mr. Kan, is that in order for this technology to work, we have to share, potentially share, some spectrum. As you know, the 5.9 gigahertz band has been dedicated for short-range communications within the auto industry, vehicle-to-vehicle. There is a process going forward right now to see whether or not that can be shared.

I would hope that I would have both of your commitments to make sure that this is a fair and transparent process that is driven by the facts. Sharing can be an important part of it all, but we have to understand that these technologies related to auto safety, the communications vehicle-to-vehicle using 5.9 gigahertz, is really about saving lives, and that should always be the priority, is to use the spectrum because this is key to this technology being fully utilized and this technology bringing the incredible advances in auto safety that it promises.

So if you could comment briefly on your commitment to making sure this is a fair, transparent process, and only facts will drive the ultimate decision, and also understanding that safety should be paramount.

Mr. REDL. Senator, I completely agree. We should be pushing for transparency at every venture in everything we do related to spectrum. It's critical that as we look particularly at DSRC, we've had over 10 years of time, money, and energy invested into finding ways to make that spectrum work for auto safety, a large chunk of which in the test bed at Ann Arbor. And so I think as we go forward and look at ways to increase use in that band, just like every other band that NTIA looks at, and that the FCC does for that

matter, we need to ensure that those systems that have been planned for and are incumbent are protected as we look at additional uses.

Senator PETERS. Great. Thank you.

Mr. Kan?

Mr. KAN. Yes, you have my commitment.

Senator PETERS. Great. Thank you. Appreciate it.

Mr. Chairman?

The CHAIRMAN. Thank you, Mr. Chairman.

Senator Capito.

**STATEMENT OF HON. SHELLEY MOORE CAPITO,  
U.S. SENATOR FROM WEST VIRGINIA**

Senator CAPITO. Thank you, Mr. Chairman, and thank all of you for coming today and for your willingness to serve. I appreciate that very much.

I am going to talk—I've met all of you, so I appreciate that. One of the things I want to talk about on our nation's infrastructure obviously improve safety for motorists, relieve congestion, and all of these things, but I am extremely interested in how we can increase our high-speed broadband Internet access with an infrastructure package. I think that rural states like mine are particularly challenged. It needs to be available and affordable for all, and it's not. And there are technological challenges, but at the same time, they're not insurmountable. And so I've talked with each one of you individually on this.

And I would like to say to Mr. Redl, first of all, during the stimulus package of 2010, West Virginia received a lot of money in the BTOP program to build out our middle mile network, yet we're still 48th in the country. It was, I would say—I wouldn't say it was an abysmal failure, but there was a lot of wasted money in that program.

So what should we consider, as Congress, for future broadband infrastructure investments? Is a lack of broadband in rural America, as I believe, a common theme that you see? And can you talk more about economic benefits that you see there? And will you work with me to help in this endeavor?

Mr. REDL. Thank you, Senator. We'll start with of course I am looking forward to working with you and your staff—

Senator CAPITO. Good answer.

[Laughter.]

Mr. REDL.—to address rural broadband issues. I grew up in a rural part of New York, which I know most people think of New York and think of Manhattan, but there's a large rural portion upstate. And I saw firsthand as a child as broadband first came to my hometown, what that meant for my family's business. It meant new markets and new opportunities and new economic value. And certainly I think everyone in America should be able to benefit from the economic value of broadband. I agree with you, that BTOP, the program in West Virginia, was a lost opportunity. I think that that program had the best of intentions to bring things out, and it just didn't play out in West Virginia in a way that brought the most value to West Virginians. I spent a fair amount of time in Energy and Commerce working on that challenge, and

if I'm confirmed, I would want to work as part of the administration to look across all the different challenges that are facing each individual state, and particularly rural areas, and try to find individual mechanisms that will help support private sector investment in those places.

Senator CAPITO. Great. Great. And I look forward to working with you.

I wanted to ask Mr. Kan another broadband question, but I'm going to go to Mr. Sumwalt because I want to make sure I have time for this. As we talked about, thank you for coming to my office and meeting with me. And I just want to take this opportunity to thank you and the NTSB for your professionalism in an accident that we had and the investigation that's moving forward in Charleston, West Virginia. I was particularly interested when you told me you started reading accident reports when you were in high school, so this has been a passion of yours for a long time. And I think the way that you've conducted yourself in the past certainly bodes well for the NTSB in the future. So thank you very much. And I look forward to voting for you.

Mr. SUMWALT. Thank you so much.

Senator CAPITO. Thank you.

Mr. Kan, very quickly. You're over in Transportation. I've been pleading with Secretary Chao, and we've written letters to the President to sit with several of my colleagues again on the broadband initiative to have it included in an infrastructure package. How do you see transportation—I think there are some great synergies in transportation and broadband deployment—how do you see those as being hand-in-hand?

Mr. KAN. Thank you, Senator, for this question. It's very important. As we begin to get permits for infrastructure, it's oftentimes easy, as you find right-of-way issues, to address some of the broadband right-of-way issues, and so there are a lot of synergies as you begin to gather permits, file paperwork, figuring out how to lay roads to lay cable right next to them. And therefore especially in rural parts of the country—and I was actually in Morgantown this past weekend to see that it is important as we begin to address rural infrastructure to also think about rural band hand-in-hand.

Senator CAPITO. Well, I look forward to that. I think some of the permitting issues—I talked with the Forest Service yesterday. They could be a good partner there. Obviously, in the West there's a lot of forest, but still in the East there are lots of forests where you've got to go in and around to get to certain areas, and this is an area that they're looking at as well in terms of being helpful, not in the private sector, but for emergency services and for their own internal work.

So I look forward to working with you. I hope that coupling of traditional transportation issues along with the other economic development, particularly broadband, and ease of permitting, and really what makes sense policy, in my view, is continued under your stewardship. Thank you so much.

Mr. KAN. Thank you.

The CHAIRMAN. Thank you, Senator Capito.

And we have now entered the phase of the hearing known as the stalling phase. Ah, very good. Senator Thune, just in time.  
[Laughter.]

**STATEMENT OF HON. JOHN THUNE,  
U.S. SENATOR FROM SOUTH DAKOTA**

Senator THUNE. Thank you, Senator Gardner, thanks for chairing, and thank you all for being here. We appreciate your willingness to serve. It has already been highlighted, we have a distinguished group of very well-qualified nominees before our Committee today, and if confirmed, each of you is going to have an opportunity to serve in a critical position to move the Nation forward. And so I've just got a couple of quick questions, and we'll wrap this up.

But this is for Mr. Kan. The FAST Act required the DOT to develop a comprehensive multimodal freight map that identifies corridors for the movement of goods from origin to destination. Last June, DOT published a notice requesting comments on an interim national multimodal freight network. In response, the South Dakota Department of Transportation, along with most other state DOTs, commented that the interim network was insufficient and suggested additional designations for the network.

So given the importance of an expanded network, I ask for your commitment to consider all the comments from the states on ways that the freight network can better represent the flow of goods within our multimodal system.

Mr. KAN. Absolutely, Senator. Having been in South Dakota just 2 weeks ago, I traversed 400 of the 678 miles of interstate highway along I-90. It is clear that freight plays an important role in South Dakota, as well as the Nation. You have my commitment to incorporating all—a lot of the state input into building that freight map.

Senator THUNE. Great. Thank you. And as Senator Gardner pointed out, that you went past Wall Drug if you did that.

[Laughter.]

Senator THUNE. You also went past my hometown. But we do. We rely heavily on the interstate system, all the Federal highways and both state and local roads, too, getting our goods to the marketplace, agricultural commodities. Of course, during the middle of tourism season, the state is very busy, and especially the middle of the Sturgis Rally, which will be coming up here in a few couple of months.

But, Mr. Redl, the demand for spectrum, and you've probably already been asked about this, but continues to grow with the pace of innovation among both private sector and Federal users. As you know, we can't create more spectrum, so the government is going to have to figure out how to use what we have more efficiently. And so my question is, how do you intend to balance competing demands for spectrum that's already in short supply?

Mr. REDL. Senator Thune, I think that's part and parcel of what NTIA does every day. They've got a great process in place and one that I'd like to expand on to make sure that there is work through the Policy and Planning Steering Group, which meets across the different Federal agencies, as well as the Interagency Radio Advisory Committee, the IRAC, to make sure that agency needs are

met, and, frankly, to bring best practices across all of these agencies to try and find synergies and efficiencies, and that helps us find additional spectrum to bring to the commercial sector.

Senator THUNE. The Spectrum Pipeline Act modified the Spectrum Relocation Fund, the SRF, to help Federal agencies fund key R&D activities which could lead to freeing up more spectrum in the future. Agencies developed R&D plans, which have been submitted to NTIA, and until NTIA approves the plan, OMB can't release any funds. Concerns have been raised that NTIA's review process has slowed so much that SRF funds are not being disbursed as Congress had hoped when enacting the Pipeline Act.

If you're confirmed, will you commit to looking into this issue and ensuring that SRF funds are disbursed in a timely fashion and in accordance with congressional intent?

Mr. REDL. Yes, Senator.

Senator THUNE. Finally, as you know, FirstNet is an independent authority within NTIA tasked with the creation and operation of a Nationwide Interoperable Public Safety Broadband Network. This spring, FirstNet selected AT&T to be its first private partner to build out and operate this network signing a 25-year agreement in which AT&T will spend about \$40 billion to build a high-speed network for the millions of public safety users in all 50 states, 5 U.S. territories, and the District of Columbia, including those serving rural communities and tribal lands.

Should you be confirmed, what will you do as NTIA Administrator to maintain visibility into the operations of FirstNet and to conduct oversight to see that FirstNet remains on time and on budget?

Mr. REDL. Mr. Chairman, the NTIA is, if nothing else, the principal adviser to the President. And FirstNet, as part of the Department of Commerce, also falls under the same rubric. The statute is clear, that NTIA is to work with FirstNet and with the states to make sure that there is deployment particularly in rural areas. I think the idea, and then we've been happy to see, AT&T has said that they will be able to get public safety users on their network as priority users as soon as the end of this year. And the rural benchmarks that are in the Middle Class Tax Relief and Job Creation Act will help make sure that there is build-out to rural areas where we don't already have coverage.

Senator THUNE. Mr. Chairman, I have a question for Mr. Sumwalt, which I'll submit for the record.

But I thank you and I thank all of you for your willingness to serve and for being here today. Thank you.

The CHAIRMAN. Thank you, Mr. Chairman. Thank you.

Senator Cortez Masto.

**STATEMENT OF HON. CATHERINE CORTEZ MASTO,  
U.S. SENATOR FROM NEVADA**

Senator CORTEZ MASTO. Thank you, Mr. Chairman.

And thank you to all of you for your willingness to serve. Let me just say I'm juggling three Committee meetings, so I appreciate your indulgence in letting me come.

Mr. Redl, thank you for coming to visit with me. It was a great conversation, so I'd like to start with you if that's all right. I en-

joyed the conversation, and we talked a little bit about your work experience and allowing me to underscore some of the challenges we deal with in trying to ensure telecommunications technology can reach and effectively work in each corner of my state of Nevada, which is both urban and rural areas.

One of the things we discussed is the intent to continue working in a collaborative fashion across the Federal Government to solve some of the barriers to broadband or wireless deployment and reliability. Can I get a commitment from you to break down bureaucratic silos to getting timely siting of telecommunications technology on public lands, and that your interagency working group will be maintained and work in concert to help us expand rural broadband to places like remote parts of Nevada?

Mr. REDL. Senator, yes, if confirmed, I intend to continue that and to work with my colleagues throughout the Federal Government.

Senator CORTEZ MASTO. Thank you. I appreciate that.

And, Mr. Kan, thank you again for your willingness to step up to the plate and work with us. We have seen upticks in roadway fatalities in recent years as well as continued concerns with some rail safety operations because of the lack of Positive Train Control installed. Obviously, these are indications that we need to continue to be vigilant and stay focused on raising the bar of safety in our country. I believe that's where innovation and technology can be vital. Would you concur?

Mr. KAN. Absolutely, Senator.

Senator CORTEZ MASTO. Can you commit that during your tenure at the Department that you will help advance transportation innovation and safety?

Mr. KAN. Yes, sir. Yes, ma'am.

Senator CORTEZ MASTO. Thank you. And that you will consider and raise concerns when questionable policies like hiring freezes or executive orders hold up necessary safety regulations where people's lives or livelihoods are at stake?

Mr. KAN. Absolutely.

Senator CORTEZ MASTO. Thank you. I appreciate that.

And then to—I know the question is here somewhere. Oh, I thought it was here. Excuse me. Thank you.

Mr. Sumwalt, as you stated in your testimony, you've been at the NTSB since 2006, correct?

Mr. SUMWALT. That's correct.

Senator CORTEZ MASTO. Yes. How many derailments or serious rail incidents do you think you've had to go to and investigate in that span?

Mr. SUMWALT. Entirely too many.

Senator CORTEZ MASTO. Yes, that's what I thought. How many of those have had various causes?

Mr. SUMWALT. Well, we find that there are numerous causes, but we find that Positive Train Control is one very effective mitigation factor, and that's one thing that, of course, has been mandated by the Congress, and we're hoping that it will be implemented sooner than later. We feel that for every day that goes by without PTC, we have a risk of a rail disaster.

Senator CORTEZ MASTO. I think of rail safety, and while we have a very safe industry writ at large, it only takes a small mistake to make a big impact, as you well know. Take, for example, the February 2015 crude bi-rail event in Mount Carbon, West Virginia, or similar event in Oregon from June 2016. These incidents were the result of poor inspections by humans, and yet they caused significant damage because of the fire caused by the nature of the crude oil product that was being shipped. As an NTSB Board member, one who led the investigation into Amtrak 188, would you be a staunch proponent of the installation of Positive Train Control?

Mr. SUMWALT. Absolutely. NTSB has advocated for that since 1970, and we have strongly pushed for that, and unfortunately it took a disaster to have that be required in the Rail Safety Improvement Act of 2008. And so we continue to push for it, and we continue to go to accidents that could have been prevented had it been in place.

Senator CORTEZ MASTO. And I think this has been discussed, but you'd agree that technology like PTC and ECP brakes are incredibly important to raising the bar of safety for rail operations in the country.

Mr. SUMWALT. Indeed.

Senator CORTEZ MASTO. Thank you very much. I appreciate the conversation.

The CHAIRMAN. Thank you, Senator.

And thank you to all the witnesses again and your families for being here, your willingness to serve the country. The hearing record will remain open for 2 weeks. During this time, Senators are asked to submit their questions for the record. Upon receipt, I would ask the witnesses to get their homework done as quickly as possible and return it to the Committee.

Thank you very much for your time today. This hearing is adjourned.

[Whereupon, at 11:20 a.m., the hearing was adjourned.]

## A P P E N D I X

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN THUNE TO  
DEREK T. KAN

*Question 1.* Mr. Kan, should you be confirmed, you will be charged with advising Secretary Elaine Chao on legislative and regulatory initiatives and lead policy development across all modes of the Department of Transportation (DOT). In your questionnaire, you mention that of the many challenges facing the agency, refreshing and modernizing our transportation infrastructure to promote economic productivity is a priority. What approach should DOT take to improving infrastructure and what role do you see public-private partnerships playing as we address infrastructure revitalization?

Answer. If confirmed, I will seek to implement long-term reforms for the regulation, funding, delivery, and maintenance of transportation infrastructure projects. Simply providing more Federal funds, without a strategic approach to infrastructure investment, is not an effective solution to the Nation's infrastructure challenges. Instead, U.S. DOT investments should be targeted to ensure the greatest potential positive impacts on the economy, particularly with respect to leveraging state and local resources. It is important to broaden and expand participation in infrastructure funding so that more projects can be undertaken overall and so that we do not supplant existing state, local, or private funds already dedicated to infrastructure. The private sector can serve an important role in leveraging existing resources for more effective infrastructure development. While public-private partnerships are not a one-size-fits-all approach for all projects, private sector investment and expertise has the potential to bring more efficient procurement methods, innovative design approaches, market discipline, and a lifecycle focus on asset management.

*Question 2.* In the FAST Act, we established the National Surface Transportation and Innovative Finance Bureau, which is intended to serve as a one-stop-shop for States and local governments to receive Federal financing or funding assistance. The President's Fiscal Year (FY) 2018 budget includes a request of \$3 million, which is the same level the Bureau was funded at in the FY 2017 appropriations passed into law this past May. The Executive Director for the Bureau will report to you as the Under Secretary of Transportation Policy should you be confirmed. How will you work with the Bureau to develop creative financing solutions to address infrastructure?

Answer. If confirmed, I will work with the Bureau to develop financing solutions that leverage state, local, and private funds for infrastructure development. The Bureau's TIFIA and RRIF loan programs have proven to be popular tools for the financing of transportation infrastructure, with an existing portfolio of over \$27 billion in loans supporting nearly \$90 billion in overall project value. The Private Activity Bonds (PABs) program has also been an essential component of the financing plans for many public-private partnerships, with over \$11 billion in allocations to date. I would work with the Bureau to broaden the availability and accessibility of such financing tools to more state and local decision-makers.

Furthermore, if confirmed, I will work with the Bureau to develop and promote best practices in innovative finance and P3s and provide extensive technical resources for states, municipalities, and other public and private sector entities that are considering P3s. It is critical to ensure that state and local decision-makers, serving on the front-lines of our national infrastructure challenges, are equipped with cutting-edge resources. This includes P3 toolkit materials, training opportunities, project-specific technical assistance, peer knowledge exchanges, value for money evaluation tools, and other expert resources to support the knowledgeable and responsible implementation of innovative project financing and delivery.

*Question 3.* In your questionnaire you mention that one of your priorities, if confirmed, would be to promote a culture that eliminates waste, fraud, and abuse. In February of this year, the Committee held a hearing at which DOT Inspector General (IG) Scovel testified that DOT continues to face delays in addressing rec-

ommendations to improve pipeline and hazardous material safety issued both by DOT OIG as well as National Transportation Safety Board. If confirmed, what steps would you take to eliminate waste, fraud, and abuse at the agency as well as address the outstanding recommendations made by DOT regarding pipeline and hazardous material safety?

Answer. If confirmed, I will work with PHMSA to address outstanding audit recommendations as well as other problems that are identified.

*Question 4.* Until recently, in addition to your role as a Director on the Amtrak Board of Directors, you also served as a Manager for Lyft, a company which has testified before this committee on the topic of self-driving cars. Should you be confirmed, how will the Department work to integrate emerging technologies such as self-driving vehicles?

Answer. If confirmed, I can assure you that the thoughtful integration of technology into the transportation system to achieve our national goals will be a top priority of mine. I believe this can be done through several different approaches. First, the Department will take an active role in encouraging open communication with the public and key stakeholders to identify where technological improvements can have a beneficial impact on safety, our economy, improving fuel efficiency, enhancing mobility, and reducing congestion. Second, I will work to ensure the Department continues to seek ways to reduce regulatory burdens and other institutional barriers, where possible, to support industry innovations reaching full deployment in the shortest time possible. Third, I will work to streamline internal Departmental reviews and expedite the necessary research and analytical processes to help match the pace of private sector innovations. Lastly, but most importantly, I will ensure that improving transportation safety remains our top priority. The adoption of innovative technologies offers tremendous potential to realize dramatic safety outcomes for our Nation. Encouraging new ideas that deliver safer vehicles will be a near term focus area. However, I will also seek to balance the pace of innovation with proper safety assurances and oversight. The Department will continue to play an active role in ensuring that automated vehicles and other emerging technologies receive the necessary development, validation, and performance testing required to reliably integrate these technologies in a manner that will deliver many benefits, but first and foremost, improve transportation safety.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEB FISCHER TO  
DEREK T. KAN

*Question 1.* Mr. Kan, to ensure the economic security of our country, freight must be able to move smoothly across several modes of transportation. Our intermodal connections are critical for ensuring freight continues to flow. The FAST Act requires a National Strategic Freight Plan, and the Department of Transportation has issued a draft for public comments. During this time I look forward to reviewing additional proposals to address intermodal connections. What do you believe are the best strategies for improving our intermodal connections?

Answer. I agree that the efficiency of goods movement depends on high performing intermodal connections among our road, rail, and waterborne transportation systems. First and last mile connections that connect freight producers and distributors with major rail, port, airport, and intermodal facilities are critical for the timely and reliable movement of freight.

One step that we can take is to more clearly articulate the importance of intermodal connectors as critical links in freight transportation supply chains serving local economies and national and global markets, which can help ensure that improvements for intermodal connections are fully considered in the transportation planning process.

*Question 2.* Mr. Kan, as you know, both rural and urban communities face different infrastructure challenges. What works in one area may not work in another. That's why I am in favor of the formula freight program, which provides each state guaranteed funding for a wide array of urban and rural corridor highway freight projects. Do you believe that the freight program can represent an equitable way to strengthen our infrastructure for both rural and urban communities?

Answer. In the next 30 years, the U.S. economy is expected to double in size and the Nation's population is projected to increase by 68 million people. Driven by this projected economic and population growth, freight movements across all modes are expected to grow by roughly 42 percent by the year 2040. We also recognize that this projected freight growth may affect rural and urban communities differently, and that the Department's freight efforts must ensure that rural communities' unique challenges are addressed.

*Question 3.* Mr. Kan, I am pleased to see the President and Secretary Chao talk about the importance of regulatory reform as a way to address infrastructure investment and freight movement. Federal regulations tend to be prescriptive, where the government dictates how industry will meet a standard. I'm looking at ways we can adopt performance-based standards, which would allow stakeholders to develop innovative methods for achieving a regulatory goal. Do you agree that performance-based standards could facilitate innovative compliance and safety technologies? If so, what modes of transportation or issues do you believe would be best suited for using performance-based standards?

Answer. As I understand it, all the modes within the Department look at the possibility of performance-based standards to ease compliance while maintaining safety. If confirmed, I plan to use performance-based standards wherever possible consistent with maintaining the highest level of safety.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO  
DEREK T. KAN

*Question 1.* President Trump has talked about investing \$1 trillion in our infrastructure. The President's recent budget proposal, however, would slash infrastructure funding. These cuts will hurt many projects in Florida. If confirmed, what would your recommendation be to the President on how to invest in infrastructure?

Answer. It is my understanding that the Department seeks to broaden and expand participation in infrastructure funding so that more projects can be undertaken overall and so that we do not supplant existing state, local, or private funds already dedicated to infrastructure. If confirmed, I will take a holistic approach when considering how best to make national infrastructure investment recommendations to Secretary Chao in support of the President's agenda.

*Question 2.* Do you support direct Federal funding for Amtrak and capital investment grants?

Answer. If confirmed, I will look into Amtrak funding issues and capital investment grants. I think it is important to evaluate Federal funding and capital investment grants in the context of other economic and transportation priorities.

*Question 3.* In 2016, a record 32 panthers were killed by cars in Florida. We are working very hard to bring this endangered species back from the brink of extinction, but that could be wasted effort if we are not able to protect panthers from being hit by vehicles. That's why wildlife crossings are such an important conservation tool for panthers, black bears, and other animals. Do you support funding or resources for wildlife crossings, especially along roads like Alligator Alley (I-75) that would otherwise create habitat fragmentation?

Answer. We should seek to protect wildlife while facilitating efficient transportation, and to use data to set sound policy. If confirmed, I will work with the Federal Highway Administration and other DOT entities working on this issue to develop and support cost-effective strategies to reduce wildlife strikes, habitat loss, and habitat fragmentation.

*Question 4.* There are many important rail projects in Florida that rely on Federal support through funding, financing, and assistance with advancing projects. Further, according to Operation Lifesaver, Florida is one of the worst states for highway-rail grade crossing fatalities.

The FAST Act required the Department of Transportation to convene the Gulf Coast Working Group to evaluate options for restoring Amtrak service in the Gulf Coast region, including along the panhandle of Florida. The report from the working group was due in September 2016. Do you commit to quickly submit this report to Congress?

Answer. If confirmed, I will check on the status of this report and try to expedite its completion.

*Question 5.* The FAST Act included provisions to streamline the RRIF loan process and increase utilization of the program. Will you ensure those provisions are implemented expeditiously?

Answer. Yes, if confirmed, I will work to ensure that those provisions of law are implemented expeditiously with the goal of streamlining the process consistent with protecting the taxpayers' interests. I understand that the Department, through its Build America Bureau, has already been working to streamline the RRIF loan process and increase utilization of the program, in accordance with provisions in the FAST Act.

*Question 6.* What additional steps can the Department take to help applicants move through the RRIF process?

Answer. If confirmed, I will explore ways the Department can help move applicants through the RRIF process more quickly. With the establishment of the Build America Bureau, in accordance with the FAST Act, there has been a focused effort to identify inefficiencies in the RRIF process and to reduce the time required for certain steps.

*Question 7.* The All Aboard Florida project was issued a final environmental impact statement over 18 months ago. The Department has yet to issue a Record of Decision on the project. Will you commit to look into this issue?

Answer. Yes, if confirmed, I will look into this issue.

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RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARIA CANTWELL TO  
DEREK T. KAN

*Question.* Last November, the voters of the Puget Sound Region voted to increase their taxes in order to expand our light rail system to a 116-mile network. The congestion in the Puget Sound Region has almost doubled in just the last five years. In fact, when Sound Transit opened just two new light rail stations in March of 2016, ridership on the system spiked by more than 70 percent. This expansion was made possible through a combination of local funds and Federal funds from DOT.

Looking forward, Sound Transit has been working their way through the FTA pipeline to advance expansions to the cities of Lynnwood in the North and to Federal Way in the South. These projects will create thousands of quality construction jobs. The Lynnwood Extension is in the Engineering phase has a commitment from the FTA for \$1.17 billion and received the first installment of \$100 million in FY 2017 from Congress. The Federal Way Extension is in the Project Development phase of the pipeline and expected to enter the engineering phase in FY 2018.

However, rather than support the commitment by our local communities to transit projects by following the clear statutory requirements of the program, the Administration's budget request is punishing them for that effort, and using these local efforts as a justification for slashing Federal spending on transit.

The Administration's position brings uncertainty to nearly 60 projects in 20 states already in the CIG pipeline. In many regions, including in the Puget Sound, taxpayers agreed to support transit projects with the expectation of a reasonable level of Federal support.

Local support of transit projects is not—as the administration wrongly concluded in the budget submission—a reason to end the very partnership voters relied upon when supporting these expansions.

As you develop policies at the Department of Transportation, will you advance and fund these projects that provide commuters the opportunity to get out of ever-worsening congestion and have significant local financial support?

Answer. If confirmed, I will look into these issues. It is my understanding that the Department is continuing to implement the CIG program in accordance with program provisions as authorized in statute and as appropriated, including advancing projects through the various phases of the program.

It is also my understanding that the Department seeks to broaden and expand participation through the President's infrastructure initiative so that more projects can be undertaken overall and so that we do not supplant existing state, local, or private funds already dedicated to infrastructure. If confirmed, I intend to take a holistic approach when considering how best to make national infrastructure investment recommendations to Secretary Chao.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICHARD BLUMENTHAL TO  
DEREK T. KAN

*Question 1.* President Trump's Plan to Pay for \$1 Trillion in Infrastructure. In late May, the administration released its budget request for 2018. Within the budget is a request for \$200 billion spread out over ten years. That \$200 billion is eclipsed by drastic cuts to other programs. Cuts to transportation—like the TIGER program and Amtrak. Cuts to many other critical programs, like housing and the environment and education and our workforce—cuts that undermine our economy.

Elsewhere in the budget there's talk of tolling, privatizing infrastructure, ending regulations, curtailing litigation, minimizing the Federal role in transportation, and making states pay more—what the administration calls “self-help.” And on top of

this, the administration has thrown its support toward massive tax cuts for the wealthy and corporations.

You will lead policy development at DOT. And you've served on Amtrak's board. President Trump proposed a \$1 trillion infrastructure package. Where would the other \$800 billion come from?

Answer. The Administration is working on a comprehensive proposal to spur additional infrastructure investments, through innovation, incentives for increased local support and more private sector investment, as well as streamline government involvement to deliver infrastructure improvements faster and more cost effectively. The Administration's goal is to seek long-term reforms on how infrastructure projects are regulated, funded, delivered, and maintained.

*Question 2.* Is a cut of approximately \$700 million to Amtrak's budget responsible?

Answer. As I understand it, the cut eliminates Federal support for Amtrak's long distance train services, which have been the primary driver of continual operating losses. The elimination of long-distance subsidies will likely create some level of disruption, particularly in the short-run.

*Question 3.* Is it possible to support tax cuts while also claiming to want a \$1 trillion plan?

Answer. Yes. I believe both policies will lead to increased growth, strengthening our country. More specifically, the President's target of \$1 trillion will be met with a combination of new Federal funding, incentivized non-federal funding, and expedited projects.

*Question 4.* Can you ensure the administration's plan won't just lead to increased costs on consumers?

Answer. If confirmed, I will be very engaged in working to ensure the new infrastructure initiative will not unduly lead to increased costs on consumers.

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RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. BRIAN SCHATZ TO  
DEREK T. KAN

*Question.* White House and the Office of Legal Counsel has recently asked Federal Government agencies to only answer oversight requests from committee chairmen, rather than all members of Congress, including the ranking member. Do you personally commit to responding to oversight requests and letters from minority members of Congress in a timely manner?

Answer. If I am confirmed I plan to respond to Congressional letters in a timely and bipartisan manner, including those from minority members of Congress.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. COREY BOOKER TO  
DEREK T. KAN

*Question 1.* On June 2, 2017, the Federal Motor Carrier Safety Administration announced a withdrawal of the proposal to increase the minimum insurance for trucks and buses. A fatal, multi-vehicle truck accident can cost over \$20 million to compensate families, care for the injured, and pay for the destruction of our Nation's highway infrastructure. However, the requirement to carry at least \$750,000 in minimum insurance for trucks has not been increased in 30 years, and has not been tied to inflation, which has led to taxpayers having to foot the bill in the aftermath of major truck accidents. Can you commit to relook at the minimum insurance issue?

Answer. If confirmed, I will commit to look at the minimum insurance issue, along with others in the Department

*Question 2.* Mr. Kan, as you know, President Trump's budget proposed eliminating bipartisan and highly popular infrastructure programs such as TIGER grants and funding for Amtrak's long distance passenger trains. Do you recognize that cutting Amtrak's long-distance service routes would increase costs and have a devastating impact on state supported routes and the Northeast Corridor?

Answer. Cutting long-distance service routes would likely increase costs in the short-run related to wind down; however, such an approach would likely bring down operating costs in the long-run. There would be an impact to state-supported routes and, to some extent, the Northeast Corridor.

*Question 3.* Will you support Amtrak's long-distance train services?

Answer. If I am confirmed, I will look into Amtrak's long-distance train services. I think it is important to evaluate increased Federal funding for long-distance rail in the context of other economic and transportation priorities. One continual chal-

lenge has been that long-distance passenger rail service has been operating with financial losses, while providing a service to specific communities.

*Question 4.* Mr. Kan, as you know, the TIGER grant program receives strong bipartisan support in Congress and is oversubscribed around the country. Will you advocate the benefits of the TIGER grant program in your role at USDOT?

Answer. The Department takes a holistic approach when considering how best to make national infrastructure investment decisions. The TIGER program has not been formally authorized as part of a long-term surface transportation bill. Many projects funded by TIGER are also eligible under DOT's other mandatory highway and transit formula programs. Furthermore, the Nationally Significant Highway and Freight Projects discretionary grant program provides DOT the ability to award competitive grants to projects of national or regional significance and is authorized at \$4.5 billion through 2020. DOT's credit and finance programs also have additional capacity for financing many transportation projects. Therefore, the Department will continue to use all Congressionally funded programs to meet our national infrastructure needs. Given the fact that Congress has appropriated \$500 million in FY17 for the TIGER program, if confirmed, I will help to ensure that the Department executes this program in accordance with Congressional requirements to seek the best possible transportation outcomes for our Nation.

*Question 5.* I'm very concerned about recent trends in the subcontracting among airlines of services like cabin cleaning, catering, and those who are wheelchair attendants. Last month, Senator Brown and I sent letters to the CEOs of each of the major airlines asking for more information about their increased reliance on the subcontracted workforce. Do you think we can and should do more to improve labor conditions for workers that play these vital roles?

Answer. If confirmed, I will look into the role subcontractors' play in airline services like the ones you mentioned.

*Question 6.* What do you think airlines can do to improve labor conditions for workers—both the primary workers employed by the airlines, and the workers employed by the companies airlines subcontract with?

Answer. If confirmed, I will look into this issue and consult with the Department of Labor.

*Question 7.* For decades, the United States Department of Transportation has required airports to set goals for the inclusion of minority-owned, women-owned, and disadvantaged businesses in federally-funded projects. This is a successful program across multiple transportation agencies, which is why I included an amendment to last year's FAA reauthorization legislation that aligns the Department of Transportation (DOT)'s definition of a small business with that used by the Small Business Administration (SBA). This amendment passed the Senate but unfortunately it was not included in the FAA extension bill that became law. Do you agree that it is important to include small business owners from historically disadvantaged groups in federally-funded airport infrastructure projects?

Answer. If confirmed, I will work with the Secretary to continue DOT's outreach to small, women and minority-owned businesses in federally-funded projects.

*Question 8.* Will you commit to work with Congress to expand access and remove obstacles to participation for disadvantaged small business owners in these projects?

Answer. If confirmed, I will work with Congress to expand access and remove obstacles for all groups, including disadvantaged small business owners, related to infrastructure projects.

*Question 9.* The Airport Improvement Program (AIP) and the Passenger Facility Charge (PFC) are both important funding streams for airport infrastructure projects. However, unlike the AIP, the PFC program does not set participation goals for women-and minority-owned small businesses, otherwise known as disadvantaged business enterprises (DBEs). Meanwhile, PFCs are eclipsing AIP as the primary funding source for airport infrastructure. This means that DBEs are missing out on more and more contracting opportunities for these projects. According to a 2015 report prepared for the Airport Minority Advisory Council, the cost of these missed opportunities may be as high as \$564 million. What is the Department's plan to improve DBE participation in PFC-funded projects?

Answer. Ever since the PFC program was established by law 27 years ago (in 1990), it has been treated as a special form of local revenue but subject to Federal approval. The PFC program has never been subject to any of the Federal requirements associated with Federal funds.

PFCs do play an important role in airport infrastructure funding. PFCs can be used in conjunction with public-private partnerships and alternative project delivery methods. Airports also like the PFC program because PFCs can be used to pay in-

terest on bonds—in fact, a third of the approved PFC collections has been specifically for interest (rather than hard construction).

*Question 10.* Would it be helpful to update legislation in this area?

Answer. If Congress wants to add DBE requirements to the PFC program, then legislative action would be needed.

*Question 11.* Mr. Kan, can you commit to work in your new role to help the Department of Transportation do everything it can to advance construction of the Gateway Project including the Hudson River tunnels?

Answer. Infrastructure in the tri-state area is of great importance to the daily lives of millions of Americans. If confirmed, I will request a full briefing on the status of the various projects that comprise the “Gateway” program to ensure that the Department is well-apprised as to any applications pending or submitted to DOT with regard to these.

*Question 12.* One critical component of the Gateway Program is the replacement of the century-old swing span Portal Bridge in New Jersey that carries 450 passenger trains between Newark and New York City each day. The environmental review process for the Portal Bridge concluded years ago and the bridge design completed in June 2013. Given the importance of this project to the entire Northeast Corridor, can you commit to working to help make sure the Department of Transportation does everything it can to facilitate construction on this project in FY18?

Answer. If confirmed, I intend to: (1) request a full briefing on the Portal Bridge project, (2) review the status of any application related to this project, and (3) work with you and other stakeholders to ensure that the project is not bogged down in a long permitting process. Streamlining the permitting process is a goal we should pursue for all infrastructure projects.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN THUNE TO  
DAVID J. REDL

*Question 1.* Mr. Redl, as you know, last fall, the National Telecommunications and Information Administration’s (NTIA) contract with the Internet Corporation for Assigned Names and Numbers (ICANN) to perform the Internet Assigned Number Authority (IANA) functions was allowed to lapse, effectively transitioning oversight of the IANA functions from the U.S. Government to the global multi-stakeholder community.

What do you see as NTIA’s role going forward with regard to ICANN and the global multi-stakeholder community model for Internet governance, and how engaged will you be in representing U.S. interests at ICANN’s Governmental Advisory Committee, should you be confirmed?

Answer. Both Congress and the Trump Administration (through the President’s FY18 budget) have expressed support for the multistakeholder approach to Internet governance and NTIA remains the United States’ representative on ICANN’s Governmental Advisory Committee. I believe that NTIA should continue to serve as a vigorous advocate for the United States’ interests at ICANN and other fora where Internet governance issues may be raised. I believe that the power of the Internet to bring free speech and free-market commerce to every corner of the world is one of the most potent gifts the United States has given the world, and as such, if confirmed I plan to be very involved in working to preserve, protect, and expand the reach of the Internet.

*Question 2.* Mr. Redl, as you know, the ICANN is a California-based nonprofit corporation that serves as the convening authority for the global multi-stakeholder community. One of the key concerns of those who criticized last year’s transfer of the IANA functions from NTIA oversight to ICANN and the global multi-stakeholder community, was that it could lead to ICANN moving outside the jurisdiction of the United States. My understanding is that place and jurisdiction of incorporation and operations, including governance of internal affairs, tax systems, and jurisdiction of places of physical presence are all still open topics for discussion. Needless to say, ICANN shifting its legal jurisdiction of incorporation to another country would be deeply concerning to many in Congress.

*Question 2a.* Do you share the concern about ICANN shifting its legal jurisdiction to another country? Will you commit to informing Congress if you observe any efforts by ICANN to move to another country?

Answer. The accountability mechanisms created by the multistakeholder process and adopted by ICANN are rooted in the laws of the state of California. Therefore, if confirmed, I will work with Federal agencies and Congress work to ensure that ICANN remains headquartered in the United States.

*Question 2b.* Another concern voiced by many critics of last year's transition of the IANA functions from NTIA oversight to the multi-stakeholder community was whether it would enhance the role of authoritarian regimes in Internet governance. Will you commit to informing Congress if you observe any actions by authoritarian regimes to enhance their role with respect to Internet governance?

Answer. As a congressional staffer, I witnessed firsthand, on several occasions, attempts by some countries to impose more government control over governance of the Internet. The cooperative relationship between all parts of the U.S. Government is necessary to ensure that these countries don't succeed. If confirmed, I will work with Congress to counter any actions by authoritarian regimes to enhance their role with respect to Internet governance.

*Question 3.* Mr. Redl, we are all aware that certain nation-states such as Russia and China, as well as the United Nations (UN), through its agency known as the International Telecommunication Union (ITU), are constantly seeking opportunities to replace the global multi-stakeholder community approach to Internet governance with a top-down, government-controlled model. Obviously, government control of the Internet would have profoundly negative implications for free expression, free enterprise, and democratization. Many worry that the UN will again seek to implement a top-down model for Internet governance at the ITU's World Telecommunications Development Conference in Buenos Aires in October and at the 2018 ITU Plenipotentiary Conference in Dubai. Should you be confirmed, what efforts will you engage in to preserve the global multi-stakeholder model, and to prevent a top-down approach to Internet governance such as that envisioned by the UN?

Answer. Preserving the multistakeholder approach to Internet governance will be an ongoing challenge not only for the United States government, but for all stakeholders the world over. Challenges to this successful approach will certainly continue given the importance of the Internet in global discourse and commerce. At a minimum, it is critical that NTIA have the resources to be present at every step of these multistakeholder and multilateral processes. As Chairman Upton often reminded the staff of the Energy and Commerce Committee, "you have to be there on the takeoff if you want to be there for the landing." Without strong, informed voices like those of the talented professionals at NTIA engaging at every stage of the debate, we run the risk of giving ground to those who do not share our vision of the Internet. If confirmed, I will work with the staff of NTIA, and across the U.S. Government, to ensure that we are represented wherever these debates are happening.

Additionally, the strength of the multistakeholder process is inclusive participation. It is incumbent on the United States—all stakeholders in the United States—to be informed advocates for the Internet that we depend on and love. That means working across the United States government to engage companies large and small, universities, advocates, and individual citizens to participate in the process. If confirmed, I will work to ensure that Americans and American interests are represented in these important debates.

*Question 4.* Mr. Redl, as you know, the First Responder Network Authority (FirstNet) is an "independent authority" within NTIA tasked with the creation and operation of a nationwide interoperable public safety broadband network. This spring, FirstNet selected AT&T to be its private partner to build out and operate this network, and it appears that the ambitious project to build a nationwide interoperable public safety broadband network is finally under way.

Keeping in mind that FirstNet is an "independent" authority within NTIA, what role do you envision playing as NTIA Administrator with regard to FirstNet, should you be confirmed?

Answer. FirstNet has a very important task in front of it, and we stand on the cusp of its realization. NTIA has a specific role under the terms of the Middle Class Tax Relief and Job Creation Act of 2012 (MCTR) with respect to states that "opt-out" of FirstNet's radio access network (RAN). While I am hopeful that FirstNet and AT&T's plans for deployment of RAN in each state will be met with approval, the statute is very clear and states have the choice to opt-out if they believe they can better meet their public safety users' needs. In MCTR, Congress adopted provisions that require states that opt-out make certain showings to establish that a state can build and operate the RAN so that first responders get mission critical service. If confirmed, NTIA will follow the statute and work to ensure that opt-out states are able, through a network partner, to provide any first responder high quality, reliable broadband service for the long-term.

Additionally, as FirstNet is an independent authority within NTIA, if confirmed I will work with FirstNet to ensure that its mission is achieved. The professionals at NTIA have a wealth of experience in networks and Federal contracting that com-

pliments the public safety experience amassed at FirstNet. There should be ways to work together to achieve the National Public Safety Broadband Network Congress envisioned.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JERRY MORAN TO  
DAVID J. REDL

*Question 1.* I worked with the Office of Management and Budget (OMB) on legislation that was ultimately included in the Bipartisan Budget Act of 2015 to provide more funding and flexibility for Federal agencies to use the Spectrum Relocation Fund (SRF) for research and development related to their spectrum activities. It was our intention that this additional funding and flexibility would result in more efficient use of spectrum by Federal users and free up more government spectrum for commercial use. OMB oversees the fund in consultation with the National Telecommunications and Information Administration (NTIA). Can this committee count on you to ensure that the SRF is being utilized by agencies to achieve these goals?

Answer. Yes.

*Question 1a.* The U.S. Government Accountability Office (GAO) issued a report in 2011 that basically said that NTIA needed to improve its spectrum-management policies to promote more efficient use of Federal spectrum. To put it bluntly, NTIA oversees the Federal use of spectrum, but is sometimes “pushed around” by the large departments that utilize the spectrum. Often large organizations within the Federal Government do not have much of an incentive to relinquish valuable spectrum, even if they’re not using it efficiently. Do you agree that changes should be made to NTIA’s process when evaluating the spectrum needs of other departments and agencies, so that NTIA can more effectively manage such a valuable Federal resource?

Answer. Ensuring that Federal agencies have the spectrum resources to meet their missions efficiently is part of NTIA’s mission and will continue to be a priority if I am confirmed. I believe that a functional process—one that adapts to the rapid changes in spectrum-based technology—is critical to achieving this goal. If confirmed, I will work to ensure that NTIA’s processes continue to evolve to meet our national needs.

*Question 2.* As a concerned representative of rural Kansas, I have been focused upon both spectrum policy and how to effectively see wireless services deployed in the smaller, rural reaches of my home state. I gather from your previous experiences that you understand the challenges that places like Kansas face and that the NTIA has played a vital role in the past in helping assess the state of deployment across the Nation. I hope you will work with me and my colleagues to ensure that rural Kansans are not relegated to inferior wireless service. An accurate assessment of not only what urban consumers have available but what rural consumers experience will be essential to helping guide this Administration’s and Congress’ policy decisions to build out to the “hard-to-reach” corners of this country. What tools are available to you at NTIA to ensure my constituents will have high quality wireless service?

Answer. My experiences have shown me that if we want to have a coherent policy for bringing broadband to rural and hard-to-reach areas, we need to understand the challenges. To that end, NTIA used to administer a program to ensure a National Broadband Map. This map provided a crucial tool to understand the scope of the challenge and to appropriately target support. Unfortunately, NTIA lacked the resources to continue to maintain the map and without updates it no longer represents the state of broadband in America. With appropriate resources, the National Broadband Map represents a first step in understanding the broadband needs of rural America.

In addition to understanding the scope of the problem, typically, in rural and hard-to-reach areas economics are the overarching challenge.

The economics of wireless are heavily impacted by population density. Each cell site in a rural area serves fewer customers and each site needs backhaul to bring the traffic into the larger network. Therefore, the investment in the site itself takes longer to recoup—sometimes longer than the lifecycle of the equipment given the rapid pace of wireless evolution. At least part of this challenge can be alleviated through smart policies and incentives to promote investment. NTIA has been hard at work to help address some of these challenges through the BroadbandUSA program—developing best practices and providing technical assistance for state and local governments to foster private-sector investment.

If confirmed, I will work with the staff of NTIA and across the Federal Government to tackle these challenges.

*Question 3.* Due to the leadership of the Kansas 9–1–1 Coordinating Council and AT&T, Kansas is well-positioned to serve as a leading model in the operation of a nationwide interoperable public safety broadband network pending some additional decision-making within the state. How do you plan to use successful models of coordination, like those in Kansas, to attract other states’ to opt-in to the program?

Answer. The experience of states like Kansas were very instructive as FirstNet went through the State and Local Implementation Grant Program as well as the process of developing its RFP for a public-private partner. If confirmed, I will work with FirstNet—an independent authority within NTIA—to ensure FirstNet succeeds in its mission to deploy a nationwide interoperable public safety broadband network.

*Question 3a.* What are some of the major barriers or issues you expect to come across in your efforts to stand up this high-speed FirstNet system built specifically for the millions of public safety users in all 50 states and five U.S. territories?

Answer. NTIA has a specific role under the terms of the Middle Class Tax Relief and Job Creation Act of 2012 (MCTR) with respect to states that “opt-out” of FirstNet’s radio access network (RAN). While I am hopeful that FirstNet and AT&T’s plans for deployment of RAN in each state will be met with approval, the statute is very clear and states have the choice to opt-out if they believe they can better meet their public safety users’ needs. In MCTR, Congress adopted provisions that require states that opt-out make certain showings to establish that a state can build and operate the RAN so that first responders get mission critical service. Going forward, NTIA’s biggest challenge will be to faithfully follow the statute and work to ensure that opt-out states are able, through a network partner, to provide any first responder high quality, reliable broadband service for the long-term.

*Question 4.* The American Recovery and Reinvestment Act of 2009, commonly referred to as the “Stimulus,” provided \$4.35 billion to NTIA to fund broadband projects through grants. As this Committee is once again posed to debate and hopefully pass an infrastructure bill that likely will include money to expand broadband, what assurances can you give this committee that NTIA will not pursue a policy of using government money to overbuild existing broadband networks? And will you commit to working with Congress to limit the opportunity of government policies that overbuild existing networks?

Answer. If confirmed, I will work with the staff of NTIA to honestly and effectively implement the laws adopted by Congress. That includes any work to bring infrastructure to America’s unserved population. And yes, if confirmed I will work with Congress to ensure our national investments in infrastructure are best targeted to serve the unserved.

*Question 4a.* Americans today enjoy a wide platform of broadband delivery options. Will you commit that NTIA will pursue a policy that encourages the expansion of broadband to rural America on a “technology neutral” platform, especially when direct government funding is being used?

Answer. Yes.

*Question 5.* There are numerous efforts underway to add Dynamic Spectrum Access to Federal spectrum bands to facilitate sharing, but these are mostly being done as one-off solutions unique to specific bands. Would it be more efficient and effective in the long-term for NTIA to consolidate these under a single spectrum management system that can provide a common platform to support these band-specific efforts?

Answer. The current efforts to employ Dynamic Spectrum Access (DSA) are in their early stages. It is too early to know if these types of efforts will be successful at facilitating better sharing than other methods. Additionally, each spectrum band presents unique challenges both because of the spectrum characteristics, but also because of the nature of the incumbent operations. Work to expand DSA might prove to be a valuable way to get more from our spectrum assets, but at this point it is too soon to tell. If confirmed, I will work with the staff of NTIA, the FCC, and Federal incumbents to evaluate the effectiveness of DSA and its suitability to other bands of spectrum.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. ROY BLUNT TO  
DAVID J. REDL

*Question 1.* What should happen if NTIA doesn’t like an alternative plan from a state that chooses to opt-out of FirstNet building and operating the Radio Access Network within their state, and how will NTIA work with states who choose to opt-out?

Answer. By law, an opt-out state must submit to NTIA an application for required spectrum rights from FirstNet and optional funds for construction of the radio access network (RAN) in its state. To qualify for either, the law requires a state to demonstrate five RAN attributes that are necessary to ensure that a first responder has consistent, sustainable, high-quality, and secure broadband service across the nation—regardless of whether a state or FirstNet operates the RAN in a state. NTIA is currently developing its Notice of Funding Opportunity, which will detail how a state may make these demonstrations. NTIA should only disapprove a state's opt-out application if a state fails to make those statutory demonstrations. If given the opportunity, I'll work to ensure that opt-out states clearly understand what they need to demonstrate to NTIA.

*Question 2.* Will NTIA work with states who choose the opt-out option to remedy any perceived deficiencies in their alternative plans, and what recourse does a state have if it disagrees with NTIA's findings on their alternative plans?

Answer. NTIA has stated that applicants will be provided opportunities to remedy deficiencies before an application is recommended for disapproval. NTIA intends to rely on no less than three independent, subject matter experts to review applications based on review standards and criteria that will be clearly laid out in the grant guidance. NTIA will provide feedback from the technical review panel to states and provide the states with opportunities to remedy their application.

*Question 3.* Can you give your commitment that if a state chooses to opt-out, that NTIA won't seek to thwart that choice, but will review an alternative state plan objectively and with an eye toward respecting a state's legally enshrined opt-out right?

Answer. Yes.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEAN HELLER TO  
DAVID J. REDL

*Question 1.* Given the Senate Commerce Committee has jurisdiction over both the FTC and the Internet, I want to bring to your attention concerns regarding the potential confusion arising from the Internet Corporation for Assigned Names and Numbers (ICANN) not implementing proper safeguards when awarding certain generic top-level domain strings (gTLDs).

Accountants in Nevada have provided me with some details about the Association of International Certified Professional Accountants' (AICPA's) situation with the pursuit of the .cpa gTLD, and I understand that you are familiar with that issue as well.

NTIA plays an important role in the proper operation of the Internet. What you can do as NTIA Administrator to ensure that consumers are not faced with fraudulent and deceptive practices that may arise from the awarding of a domain name to an entity that may misuse that domain and foster misrepresentations about certified public accountants?

Answer. NTIA remains the United States' representative on ICANN's Governmental Advisory Committee and I believe that NTIA should continue to serve as a vigorous advocate for the United States' interests at ICANN. The accountability mechanisms at ICANN include tools to address disputes regarding new gTLDs. I understand that AICPA is engaged in this process. If confirmed, I will work with other Federal agencies, including the Federal Trade Commission, to represent interests at ICANN on these and other matters.

*Question 2.* Everyone in Congress agrees spectrum is valuable, and we need it now to continue innovating, create jobs, and boost the economy.

But it seems that time is the critical factor. In the past, it's taken 13 years on average from start to finish to reallocate spectrum.

Looking at the 2012 legislation that reallocated spectrum, many of those bands had been identified long before the auction took place.

We need spectrum now, not 13 years from now.

What are your ideas for speeding up the reallocation process? Is there a specific reason it takes this long?

Answer. Finding opportunities for reallocation, and actually moving very expensive and technologically complex government systems can be a complicated and time consuming process. Congress has already begun the process of making this process more fluid through the changes made to the Spectrum Relocation Fund and the concept of a spectrum pipeline. While it will continue to take time to evaluate, upgrade, or relocate government spectrum systems, doing so on an ongoing basis with SRF funding for research and development will help us continually find opportunities. If

confirmed, I look forward to further reviewing the various processes and identifying efficiencies where able.

*Question 3.* Given that NTIA manages Federal spectrum, my view is that your most important job, if confirmed, is to find more spectrum to bring to market. Is there anything Congress can do to give NTIA more authority and more leverage to convince Federal agencies to give up some of their spectrum?

Answer. The work Congress has done to adapt the Spectrum Relocation Fund to provide incentives for Federal agencies to part with spectrum or upgrade systems along with the spectrum pipeline are in the process of delivering results. If confirmed, I will work with the NTIA staff, Federal agencies and Congress to provide the right incentives for efficiency that can go a long way toward meeting our spectrum needs.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DEB FISCHER TO  
DAVID J. REDL

*Question 1.* Mr. Redl and Mr. Kan, there are numerous examples of autonomous technologies, whether it's trucks, ports, or railroads, which are moving to a more connected transportation system. We need to ensure the Federal Government will keep pace with these technologies. Regulatory silos, in which agencies across the government are creating duplicative and counter-productive regulations, are also a concern. What will both of you do to incentivize the growth of new technologies safely? And what methods can the government adopt to ensure duplicative regulations and silos do not hinder these technologies?

Answer. The FY17 Omnibus Appropriations Act included report language encouraging the Commerce Department to "continue its consideration of how to appropriately plan for and encourage the proliferation of network connected devices, including soliciting input from: industry stakeholders; subject matter experts; businesses . . . and relevant Federal agencies." If confirmed, I will work with the staff of NTIA to implement this provision and convene an interagency group to review the policy issues impacting the Internet of Things, including those related to transportation.

*Question 2.* Mr. Redl, Senators Booker, Gardner, Schatz, and I have been working to develop a better understanding of the Internet of Things here in the Senate. As the administrator of the NTIA, you would have a significant role in developing the government's position on IoT. What do you see as the greatest challenges facing IoT technologies, and what can we do to promote innovation?

Answer. I believe the greatest challenge for IoT will be cybersecurity. While most Americans have embraced the idea that they need to do more to protect themselves when they are on their computers or smartphones, IoT presents different challenges. Many don't regard their thermostats, lightbulbs, cars, or appliances as computers that may have cybersecurity risks, but in the age of IoT, they can be. If we want to promote innovation, we must ensure that Americans trust the IoT devices in their lives. NTIA already plays a role in both cybersecurity and in the Internet of Things. If confirmed, I will work with the staff at NTIA and across the Federal Government to promote smart IoT policies that incorporate security and protect American consumers.

*Question 3.* Mr. Redl, the American Recovery and Reinvestment Act (ARRA), commonly referred to as the "Stimulus Act," provided \$4.35 billion to NTIA to fund broadband projects through grants. As Congress is once again posed to debate and an infrastructure bill that may include money to expand broadband, what assurances can you give this committee that NTIA will not pursue a policy of using government money to overbuild existing broadband networks?

Answer. I share your concern that Federal dollars be spent to bring broadband to unserved areas, rather than competing with private capital in areas that already have broadband. If confirmed, I will work with Congress to ensure our national investments in infrastructure are best targeted to serve the unserved.

*Question 4.* Mr. Redl, the Global Positioning System (GPS) plays a critical role in today's "precision agriculture" and will continue to do so as farmers face the ever-increasing need to produce more on less land using less seed, water, fertilizer, and pesticide. The expanding use of GPS on rural croplands and ranchlands may be the largest single technological advancement for farmers and ranchers in the past 30 years. With the help of location and navigation services made possible by precision GPS, farmers today can use advanced tracking and automated machine systems to conduct tilling, seeding and spraying operations at levels of precision within 2 cm. Farmers are always looking for ways to avoid personnel and equipment downtime,

analyze soil, seed and other inputs crops for optimum yield and efficiently manage inputs. Based on government crop statistics, annual reported costs of each input, and actual field savings data from the past 10 years, U.S. farmers could save \$8.2 billion annually by using GPS technology. If GPS technology is compromised or cannot be used in the future, rural American economies that are tied to the agricultural sector will be harmed, U.S. leadership in agricultural production and trade will suffer, and American consumers would likely see a significant uptick in food costs across the board.

In the past few years, multiple Federal agencies, including the FCC, the NTIA, the FAA and DOT, after significant testing, all recognized that a proposal to convert mobile satellite spectrum for the use of terrestrial wireless services would interfere with GPS and, among other problems, would harm high precision GPS services integral to U.S. agriculture. That proposal was rejected based on potential harm to GPS. How would you ensure that any future spectrum proposals would not interfere with or undermine such GPS-based services?

Answer. GPS is one of the United States military's greatest technological advancements. Its use in the commercial sector and just how pervasively it powers our economy cannot be overstated. In addition to agriculture, nearly every aspect of our daily lives relies on the GPS constellation at some point in its lifecycle. Protection of GPS has been, and should be, a priority for NTIA. However, that does not mean that the remainder of the L-band cannot be maximized for other uses. Improvements in technology and coordination between users should be part of the discussion as we look to best ensure no part of the spectrum goes underused. If confirmed, working cooperatively with all of the stakeholders in the GPS community would be a priority when it comes to addressing additional uses in the L-band.

*Question 5.* Mr. Redl, many government and private commercial stakeholders have said that GPS is a critical national asset that has led to innovation not only in the agriculture sector in precision farming, but also in military, surveying, aviation, automotive, automatic highways, and consumer technologies. Do you agree and, if so, what steps would you take to protect GPS from encroachment as the Nation looks to find more and more wireless spectrum for re-allocation to mobile broadband?

Answer. Protection of GPS has been, and should be, a priority for NTIA. However, that doesn't mean that the remainder of the L-band should not be maximized for other uses. Improvements in technology and coordination between users should be part of the discussion as we look to ensure no part of the spectrum goes underused. If confirmed, working cooperatively with all of the stakeholders in the GPS community would be a priority when it comes to addressing additional uses in the L-band.

*Question 6.* Mr. Redl, the introduction and use of GPS-enabled devices have brought significant advances in aviation safety and greatly benefited the flying public. Numerous studies have documented and quantified these life-saving benefits. Today, virtually all types of aircraft utilize GPS for navigation and approaches. For the majority of these aircraft, GPS is the primary means of navigation. As you may be aware, GPS is a critical building block for TAWS (terrain awareness and warning system), which has been responsible for reducing CFIT (controlled flight into terrain) accidents among U.S. airlines. Such incidents have dropped from a leading cause of deadly crashes to zero.

Given how dependent pilots have become on GPS features in avionics equipment, particularly certified equipment, how would you ensure that their ability to rely on GPS continues uninterrupted in the future by potential interference from new spectrum services?

Answer. Protection of GPS has been, and should be, a priority for NTIA. However, that does not mean that the remainder of the L-band cannot be maximized for other uses. Improvements in technology and coordination between users should be part of the discussion as we look to best ensure no part of the spectrum goes underused. If confirmed, working cooperatively with all of the stakeholders in the GPS community would be a priority when it comes to addressing additional uses in the L-band.

*Question 7.* Mr. Redl, GPS is the foundation for modernizing the Nation's air traffic control system. The Capstone project in Alaska, the original precursor to nationwide roll-out of the new reforms, produced concrete evidence that GPS-enabled devices improve aviation safety. What steps would you take to ensure that the full benefits of GPS, unimpaired by the effect of future spectrum proposals, remain available for modernizing the air traffic control system?

Answer. Protection of GPS has been, and should be, a priority for NTIA. However, that does not mean that the remainder of the L-band cannot be maximized for other uses. Improvements in technology and coordination between users should be part of the discussion as we look to best ensure no part of the spectrum goes underused.

If confirmed, working cooperatively with all of the stakeholders in the GPS community would be a priority when it comes to addressing additional uses in the L-band.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO  
DAVID J. REDL

*Question 1.* As you know, spectrum is a finite resource. Given that both Federal and non-Federal spectrum uses are critical, what are your policy priorities in key areas such as increasing bi-directional spectrum sharing and similar access opportunities for both Federal Government and commercial users?

Answer. As you note, spectrum needs are going to continue to increase for both Federal and non-Federal users. In order to ensure that we are getting the most out of this precious national resource, NTIA will need to continue to work closely with both commercial and Federal spectrum users to take advantage of every opportunity. If I am confirmed, I intend to see to it that NTIA follows through on this mission. NTIA has existing advisory groups, both within the Federal Government (PPSG, IRAC) and with non-Federal interests (CSMAC) that have been working productively on these issues. Coordination and collaboration between NTIA and the Federal Communications Commission also plays a key role.

Among the priorities for NTIA and the advisory groups, should I be confirmed, will be examining how new commercial technologies can improve Federal spectrum efficiency, how geographic and temporal sharing between Federal and non-Federal users can improve spectrum access for both, and how commercial systems can be leveraged to meet government needs.

*Question 2.* The FCC recently released large amounts of millimeter wave band spectrum (*i.e.*, above 24 GHz). NTIA had an important role in assisting with that effort, including making sure that Federal operations were not hampered by future commercial operations. That said, large-scale commercial operations (particularly wireless broadband operations) are untested in millimeter wave spectrum. Would it be useful now for NTIA and the FCC to focus on implementation measures with respect to commercial operations in the bands already made available to ensure the success of deploying 5G service to U.S. consumers before focusing efforts on making available even more millimeter wave bands in the short term?

Answer. Deployment and implementation of 5G technologies and making additional spectrum available are interrelated goals. 5G technologies have the potential to significantly change the way spectrum is used by both Federal and non-Federal users. How that technology can be implemented to meet our national needs is a priority in which NTIA can, and does, play a large role. If confirmed, I will work with the NTIA staff and Federal agencies to assess how 5G can be brought to Federal users to meet mission needs and whether this could lower the spectrum footprint needed for Federal users to perform their critical missions.

Additionally, as we look to implementation of 5G, NTIA's Institute for Telecommunication Sciences (ITS) can play an important role through its spectrum research and testing. The applied spectrum research done at ITS will be key to ensuring that we maximize use of 5G technologies without hampering existing spectrum operations.

*Question 3.* According to some analysts, the cost of deploying advanced wireless technologies is a fraction of what it was even a few years ago. We have had testimony before the Committee that indicates wireless carriers no longer have to rely exclusively on additional spectrum to increase network capacity. How do you see these developments impacting the market for spectrum and auction revenues, particularly in light of the statutory directive for auction revenues to cover relocation costs of Federal operations?

Answer. While technology has certainly impacted the way that commercial carriers use spectrum, there continues to be demand for additional spectrum. The recent incentive auction of broadcast spectrum is indicative of this need and demonstrates that, even with the incentive payments to broadcasters, there was tens of billions of dollars worth of capitol interest in the licenses.

However, demand for spectrum is multifaceted and is dependent on the characteristics of the specific band being considered and the requirements of the technology to be deployed. Thirty years ago, the 2.4 GHz band was considered a "junk band" and given away for unlicensed experimentation. Today, that band is the workhorse of unlicensed allocations, fueling hundreds of millions of Wi-Fi devices. And, just a few years ago, the spectrum in the millimeter wave bands was considered too challenging for commercial wireless use. However, now it is seen as a critical component of 5G services. As we look forward, careful consideration of the needs of spectrum

users, along with the state of technological development band, will be critical to determining the right path forward for each band of spectrum.

*Question 4.* Given the importance of GPS to the United States (including for navigation, timing, banking, global operations, transportation, and economic prosperity to name a few examples), would you offer your thoughts regarding the importance of GPS operations as NTIA and the FCC explore how to maximize use of various spectrum bands?

Answer. GPS is one of the United States military's greatest technological advancements. From transportation to agriculture, nearly every aspect of our daily lives relies on the GPS constellation at some point in its lifecycle. Protection of GPS has been, and should be, a priority for NTIA. However, that does not mean that the remainder of the L-band cannot be maximized for other uses. Improvements in technology and coordination between users should be part of the discussion as we look to best ensure no part of the spectrum goes underused.

*Question 5.* The evolution of our Nation's 9-1-1 infrastructure to Next Generation 9-1-1 is a national imperative. That is why Senator Klobuchar and I have developed our Next Generation 9-1-1 Act of 2017, which is designed to give states and localities the Federal resources and support they need to upgrade their existing 9-1-1 systems to benefit our citizens and first responders who put their lives on the line every day. NTIA has an important role in helping promote and support Next Generation 9-1-1 as one of the two Departments who support the work of the Next Generation 9-1-1 Implementation and Coordination Office. Do you agree that the Nation's transition to Next Generation 9-1-1 systems is a national imperative, and that additional Federal support would help speed up that transition?

Answer. Sadly, our Nation's 911 system has not kept pace with the technological innovations of the communications sector. The dedicated professionals who answer the emergency calls made from smartphones and dispatch first responders that will be taking advantage of FirstNet are unfortunately stuck in the middle with last century technology. If confirmed, I would work to ensure that the potential of FirstNet is reached, and that the power of the smartphone is realized for saving lives by taking the needed steps to upgrade our Nation's 911 call centers. I agree that this should be a national imperative and that ensuring a speedy transition to Next Generation 9-1-1 will be dependent on the availability of sufficient resources.

*Question 6.* Will you commit to fully supporting the work of the Next Generation 9-1-1 Implementation and Coordination Office as it moves forward on Next Generation 9-1-1 issues?

Answer. Yes.

*Question 7.* Will you commit to working closely with the Department of Transportation, the other Department that supports the Next Generation 9-1-1 Implementation and Coordination Office, to help speed up the work of the Office?

Answer. Yes.

*Question 8.* Demand for spectrum is increasing among both commercial and Federal users at a prodigious pace. You have a long history in this space, including working for a trade association representing the wireless industry. It is imperative that the Nation maintain a balanced approach to spectrum policy that ensures that there are adequate spectrum resources made available to all users. As head of NTIA, will you commit to being an honest representative of the needs of Federal spectrum users in the debate over the Nation's spectrum policy?

Answer. Yes.

*Question 9.* How do you plan to ensure a balance in spectrum policy to meet the needs of both Federal and non-Federal users?

Answer. I take very seriously NTIA's statutory responsibility to ensure this balance. If confirmed, I plan to ensure that NTIA's existing resources, including the CSMAC, PPSG, IRAC, and ITS, are leveraged to fully examine the needs of both Federal and non-Federal users and that this information is used to help make informed spectrum policy decisions.

*Question 10.* Mr. Redl, as you are aware, FirstNet has made great strides over the last few years toward beginning deployment of the nationwide wireless broadband network for first responders. Part of this success has been a good working relationship with NTIA leadership, who have respected FirstNet's status, as established by Congress, as an independent entity within NTIA. Will you commit today to continuing that cooperative relationship between NTIA and FirstNet, and respecting FirstNet's statutory independence?

Answer. FirstNet enjoys a unique position within NTIA as an independent authority. However, the Middle Class Tax Relief and Job Creation Act of 2012 also creates a specific role for NTIA in the establishment of the National Public Safety

Broadband Network, specifically with respect to states that opt-out of having FirstNet deploy their Radio Access Networks. If confirmed, I will work with the staff of NTIA to continue the cooperative relationship that exists between FirstNet and NTIA, and work to provide any additional support FirstNet needs to succeed in its important mission.

*Question 11.* Will you commit to being an advocate inside the Department of Commerce on behalf of FirstNet, including with respect to the need for the Department's leadership to respect FirstNet's statutory status as an independent entity within the Department?

Answer. If confirmed, I will work with the staff of NTIA to continue the cooperative relationship that exists between FirstNet and NTIA, and work to provide any additional support FirstNet needs to succeed in its important mission.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO  
DAVID J. REDL

*Question 1.* One of the biggest challenges we face as a nation is making sure robust broadband reaches the most remote parts of our Nation. Thirty nine percent of rural Americans (23 million people) lack access to high speed broadband. By contrast, only 4 percent of urban Americans lack access to high speed broadband. And 41 percent of Americans living on Tribal lands (1.6 million people) lack access high speed broadband. Broadband is not a luxury—it is the infrastructure that is needed to participate in the modern Internet economy. If you are confirmed, you will be at the helm of an agency that has had a significant role advancing broadband. NTIA has administered grant programs to advance broadband. Additionally, the BroadbandUSA program has received high marks for providing technical support and metrics to public and private sector stakeholders for its ongoing broadband programs. If you are confirmed, do you intend to continue the work of BroadbandUSA and leverage those resources to continue the work to support the deployment of broadband networks rural America?

Answer. I agree that bringing the economic opportunity of broadband to every corner of America is a goal that we should all share. Rural America and Tribal lands are particularly affected by this divide largely because the economics of broadband are influenced greatly by population density. BroadbandUSA has been working for several years to provide state and local governments with the tools needed to attract private investment in broadband and to better measure the effectiveness of broadband deployment programs. If confirmed, I will work with the BroadbandUSA team, and across the Federal Government through the Broadband Interagency Working Group, to improve access to broadband in rural and Tribal areas.

*Question 2.* With regard to broadband on Tribal Lands, NTIA, the Department of Agriculture Rural Utility Service and the Federal Communications Commission have been criticized for not coordinating or pooling resources and information in order to address the truly unacceptable lack of broadband on tribal lands.

Answer. See my answer to Question 3.

*Question 3.* How do you intend to use your resources to address the problem of lack of broadband on Tribal Lands?

Answer. There are many challenges that Tribal areas face when it comes to the deployment of broadband and many parts of the Federal Government have responsibilities that affect the effort. If confirmed, I will work through the Broadband Interagency Working Group, which is co-chaired by the Department of Agriculture Rural Utility Service and includes the Federal Communications Commission, to improve access to broadband in rural and Tribal areas.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BRIAN SCHATZ TO  
DAVID J. REDL

*Question 1.* White House and the Office of Legal Counsel has recently asked Federal Government agencies to only answer oversight requests from committee chairmen, rather than all members of Congress, including the ranking member. Do you personally commit to responding to oversight requests and letters from minority members of Congress in a timely manner?

Answer. Yes.

*Question 2.* Can you commit to working with OMB to produce a report to the Committee with recommendations on options to reform the Spectrum Relocation Fund addressing how the Fund could cover costs incurred by Federal entities re-

lated to sharing bands with unlicensed users by November 1, as is required in the FY17 omnibus?

Answer. Yes.

*Question 3.* The FY17 omnibus included report language encouraging the Commerce Department to “continue its consideration of how to appropriately plan for and encourage the proliferation of network connected devices, including soliciting input from: industry stakeholders; subject matter experts; businesses . . . and relevant Federal agencies.” Can you commit to convening an interagency group to review the policy issues impacting the Internet of Things?

Answer. Yes.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. JOHN THUNE TO  
ROBERT L. SUMWALT III

*Question 1.* Mr. Sumwalt, your distinguished 11-year career at the National Transportation Safety Board (NTSB) as well as your background as a commercial pilot gives you substantial perspective regarding the challenges and opportunities at this agency. One of the issues you cited in your questionnaire mentions the challenges associated with integrating new technologies such as self-driving vehicles, unmanned aerial systems, and commercial space vehicles.

How will the agency, from an investigative standpoint, deal with safety challenges affiliated with these rapidly advancing technologies and what is the agency’s strategy for addressing any knowledge or skill gaps NTSB employees currently face in the context of these technologies?

Answer. *Self-driving vehicles.* As you well are aware, this technology is advancing extremely rapidly.

The NTSB is involved with our first investigation of a crash involving an automobile being operated in the autopilot mode. This crash involved a Tesla colliding with a 18-wheeler truck in Williston, Florida in May 2016. Although this vehicle is not a completely autonomous vehicle, this crash is allowing NTSB’s investigative staff to explore aspects associated with self-driving cars. We are also engaging with auto manufacturers, including their participation as party members in our investigations. We expect to have the report of this crash completed this fall and will keep your staff apprised of the precise date of the board meeting, as well as the findings and recommendations that emerge from the investigation.

*Unmanned Aerial Systems.* The NTSB completed our first investigation of a UAS in 2007. That crash involved a General Atomics Predator B, operated by U.S. Customs and Border Protection (CBP), which crashed into a sparsely populated neighborhood in Nogales, Arizona. As a result of this investigation, the NTSB issued 22 safety recommendations to the Federal Aviation Administration and CBP, all of which have been satisfactorily closed.

We have kept abreast of technological and regulatory developments in the UAS industry since 2007, and have a very thorough and robust capability and knowledge base in order to conduct an investigation of any accident or incident regarding UAS that comes under our authority.

In August 2010, we revised our regulations to clarify that our aviation accident and incident notification requirements also apply to UAS. We released an advisory to operators in July 2016 to clarify requirements for reporting—for example, if there is death or serious injury, the aircraft weighs more than 300 pounds and sustains substantial damage, or other specific serious incidents occur. To date, we have investigated 35 events involving UAS.

In addition, we have implemented a plan for technical and procedural training for staff who will participate in UAS accident and incident investigations. The agency’s lead investigator for UAS has training and experience operating various types of UAS, including the MQ-9 Predator-B, Insitu Scan Eagle, and numerous small UAS. Training continues to focus on technical areas such as air traffic procedures and technologies, vehicle performance, recorded data logging, battery technology, operational training, and maintenance. We are also conducting outreach with other investigative agencies and industry stakeholders to become aware of best practices and techniques and lessons learned from their experiences, and also to explain and clarify our role and safety initiatives.

Finally, we have deployed UAS as an investigation tool in aviation and rail accidents to provide aerial imagery and other technical capabilities.

*Commercial space vehicles.* The NTSB has the authority to investigate commercial space launch accidents under its general authority to conduct transportation accident and incident investigations for the purpose of improving transportation safety for the public.

In July 2015, we completed the investigation of the October 31, 2014, accident involving SpaceShipTwo, a reusable suborbital rocket which was operated by Scaled Composites LLC. The spaceship broke up into multiple pieces during a rocket-powered test flight and impacted terrain over a 5-mile area near Koehn Dry Lake, California.

We issued eight safety recommendations to FAA and two to the Commercial Spaceflight Federation. NTSB staff has established relations with numerous commercial space stakeholders and key government agencies and we will continue to work to develop the necessary expertise.

While the NTSB believes it has general authority to conduct investigations of commercial space accidents, that authority is not expressly spelled out in NTSB's enabling legislation. To relieve such ambiguity in the event of future commercial spaceflight accidents, it would be useful for Congress to consider specifically granting that authority.

*Question 2.* Mr. Sumwalt, as you know, the NTSB has a meticulous investigatory process for discerning the primary causes and contributing factors to accidents. Could you speak to your approach as a Board Member to publicly speaking or publicly identifying a particular cause or contributing factor, or a recommendation for addressing the cause or factor, prior to the results of the investigation?

*Answer.* The NTSB's ultimate goal is to prevent similar accidents from occurring in the future. If we focus only on the obvious error, we miss valuable accident prevention opportunities because systemic flaws may remain undetected and thus, uncorrected.

I have a sign posted in my office that states: "The discovery of the human error should be considered as the starting point of the investigation, not the ending point." I use these words as a constant reminder that our investigations must examine the entire system and not just focus on errors of front line personnel.

When preparing for board meetings, I firmly believe it is my responsibility to be fluent with the facts, circumstances, and conditions surrounding that accident; studying these issues is a duty I take seriously. I carefully study the report and meet with staff to outline my concerns and areas where I have questions. As a quality check on the draft report, I draft my own version of the probable cause to ensure that the analysis is supported by the facts, the analysis supports the findings and probable cause, and these support the recommendations. I then compare my draft probable cause with that of what staff has drafted. I typically delve into the public docket and party submissions to understand more than is just presented in the draft report. I encourage parties to the investigation to meet with me so I can better understand their perspective. I then take all of this into account when I vote on an accident product.

*Question 3.* Mr. Sumwalt, in some instances, as a result of limited technical capacity and budget constraints, the development process or expenditure of resources on a particular safety improvement may divert attention or resources from another type of safety improvement. To what extent does the NTSB consider these types of trade-offs that may have unintended consequences for safety?

*Answer.* I believe our job, as an accident investigation agency, is to determine what led to the accident and then look for ways that could prevent future similar accidents. The NTSB does not consider cost vs. benefit when issuing safety recommendations. This does not mean we are unconcerned about the practicality of our recommendations.

I believe we must challenge industry and government to raise the bar on safety by issuing recommendations that sometimes may be considered to be "stretch goals" for the recommendation's recipient. I believe unless we push the envelope on some issues, we won't achieve breakthrough safety improvements.

As an example, as a result of the TWA 800 crash, a Boeing 747 that crashed into the Atlantic Ocean shortly after departure from John F. Kennedy International Airport, NTSB issued a recommendation in 1996 calling for improved fuel tank flammability standards. Most in the industry believed that this could not be accomplished cost effectively for transport category aircraft. FAA initially responded to the recommendation, stating that such a recommendation would have "little benefit" and would have "significant economic implications." However, because of NTSB's recommendation—indeed a stretch goal—FAA and industry pursued ways to develop affordable, practical, and effective flammability reduction systems. Based on its success of this undertaking, on July 21, 2008, the FAA adopted a requirement for certain transport category aircraft to have fuel tank inerting systems. I believe had NTSB not issued this recommendation in 1996, these requirements may not have been implemented.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DAN SULLIVAN TO  
ROBERT L. SUMWALT III

*Question 1.* The Medallion Foundation was founded in Alaska in 2001 to improve pilot safety awareness. One of its goal is to get operators to voluntarily train and commit to higher standards of operational safety through audits, simulator training and classroom training. Do you agree that voluntary participation, in conjunction with normal regulatory oversight, is an effective approach to increasing aviation operational safety?

Answer. I firmly believe that voluntarily submitted safety information is key to uncovering safety deficiencies. From 1991 through 2009, I was an outside consultant to NASA's Aviation Safety Reporting System (ASRS). ASRS is a government-funded and operated program that collects voluntarily submitted incident and safety reports from aviation industry employees. These reports often contain rich narratives and explanations of information that would not otherwise be known. Through analyzing such information, we were able to identify intervention measures to improve safety.

Additionally, as an airline pilot who worked in the airline's safety department, I can state with authority the importance of having voluntary nonpunitive safety reporting systems. Through these programs, the airline was able to learn of safety-related issues that may not have been highlighted until after an accident or serious incident.

Before being appointed to the NTSB in 2006, I ran the small flight department for a Fortune 500 company. There I put in place the elements for a confidential nonpunitive safety reporting system, as well as the practice of internal and external audits. Now at the NTSB, when speaking at safety conferences, I encourage the practice of internal and external audits, as well as confidential nonpunitive safety reporting systems.

NTSB has protections in our enabling legislation (49 USC 1114) and regulations (49 USC 831.6) to protect voluntarily submitted safety information. If confirmed, I will fight to ensure we do everything we possibly can to encourage collection of such information, and that the protections granted by the legislation and regulations remains in force.

*Question 2.* The FAA and the Medallion Foundation have created a partnership that has constituted a paradigm shift in public policy that has resulted in dramatic improvements in aviation safety. Do you think the NTSB would be interested in establishing a partnership with the Medallion Foundation to help improve aviation safety?

Answer. I am familiar with the Medallion Foundation and appreciate the work they have done to improve safety in Alaska. I believe in order for the Medallion Foundation to be effective, a partnership with the regulator (FAA) is essential. As the regulator, the FAA has the ability to encourage such programs, and in my opinion, programs such as the Medallion Foundation should be part of the FAA's "safety tool box."

On the other hand, the NTSB is not the regulator. Through the Independent Safety Board Act of 1974, as amended, Congress intended for us to be independent accident investigation agency, free from outside influences. Keeping with that line of thinking, I believe the NTSB must not compromise our independence by partnering with outside organizations or agencies. This does not mean, however, that we should not work with organizations such as the Medallion Foundation, and government agencies, to encourage their endeavors to continue working diligently to improve safety.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. BILL NELSON TO  
ROBERT L. SUMWALT III

*Question 1.* In October 2015, the El Faro tragically sank and all 33 crewmembers were lost. The National Transportation Safety Board has been investigating the sinking. It's critical that we know what happened so that we can prevent this kind of tragedy in the future. I am anxious to hear the NTSB's recommendations for how we can prevent this kind of tragedy from happening again. When can we expect this report?

Answer. A Board meeting to determine the probable cause and issue safety recommendations is planned for late fall of this year. I will be sure that you are kept updated as more information is available.

*Question 2.* Are there specific safety issues that the NTSB has identified so far? Answer. Among other things, the investigation is looking into decision-making processes regarding vessel operations in hurricanes and other heavy weather occurrences, as well as tropical cyclone/hurricane weather forecasting and dissemination.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICHARD BLUMENTHAL TO  
ROBERT L. SUMWALT III

*Question 1.* In 2013 and 2014, Metro-North experienced a series of crashes and collisions that led to six deaths and scores of injuries. The NTSB, as an independent safety authority, was instrumental in investigating those incidents, culminating in an exhaustive report in late 2014. You were critical to that investigation and report. Some of the many key findings were that Metro-North needed to better address worker fatigue as well as install Positive Train Control—something your agency has been urging for nearly five decades.

In late May, Metro-North had yet another derailment when a train entered a part of track in Rye where Metro-North knew there was a defect. A dozen riders were sent to hospitals.

I wrote Metro-North demanding answers that ensure Metro-North installs PTC by the 2018 deadline. I received a response yesterday that says the railroad “continues to work diligently to implement” by 2018.

I also understand you are investigating. What are your findings about the incident in Rye?

Answer. The NTSB dispatched an investigative team to examine the factors surrounding the derailment. The investigators gathered information regarding the track’s condition and operational factors related to the derailment, and they are currently analyzing their findings. I will be sure to continue to provide you with more information as updates become available.

*Question 2.* What can you say about Metro-North’s improvements as a railroad since your 2014 report?

Answer. As part of the investigation into the derailment in Rye, we are also evaluating Metro-North’s progress toward addressing the organizational issues raised in our 2014 investigation report of five significant Metro-North Railroad accidents that occurred in 2013 and 2014. We will continue to provide you with more information as updates become available.

*Question 3.* In February 2015, a Metro-North train collided into a car at a grade crossing north of New York City, killing the driver of the car and five on the train. It was a horrific event, and based on that I worked closely with my colleagues to craft measures to improve grade-crossing safety.

But there is much work to be done. I am eager to learn more about how we can further prevent such tragedies. It is important to know more about how the event took place.

You have led the agency’s response to this incident and the subsequent investigation. I recognize it was a unique incident with many complicated technical issues about the train and intersection, but it has been over two years.

When should we expect a report with conclusions about the incident?

Answer. A Board meeting to determine the probable cause and issue safety recommendations is scheduled for this summer. I will be sure that you are kept updated as more information is available.

I share your concerns regarding the time-frame for completing this and other investigations, and, if confirmed, I pledge to continue to push for timely completion of accident reports, which requires the availability of adequate resources.

*Question 4.* What can you share about your findings?

Answer. The investigation is considering the adequacy of grade-crossing warning systems, roadway and track conditions, and driver behavioral factors, as well as analyzing the rail and the crashworthiness of the railcar to determine if further safety improvements are warranted.

The Board will consider the findings of the investigation during the Board meeting.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. BRIAN SCHATZ TO  
ROBERT L. SUMWALT III

*Question.* White House and the Office of Legal Counsel has recently asked Federal Government agencies to only answer oversight requests from committee chairmen, rather than all members of Congress, including the ranking member. Do you personally commit to responding to oversight requests and letters from minority members of Congress in a timely manner?

Answer. Yes.

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RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. CATHERINE CORTEZ MASTO  
TO ROBERT L. SUMWALT III

*Question 1.* Would you agree that technology like PTC and ECP brakes are incredibly important to raising the bar of safety for rail operations in this country?

Answer. The NTSB has long called for Positive Train Control and we have investigated numerous accidents that could have been prevented if an operational PTC system been in place.

The NTSB does not have a position on ECP brakes, but in a study performed by our staff, it was determined that ECP brake systems out-performed distributed power configurations and conventional brake systems. The study provides detailed description and analysis of each rail braking system and the stopping distances they achieved under various circumstances. While ECP brake systems performed best, increasing the net braking ratio for any brake system substantially improved its stopping performance. Improving braking capability is one component of improving rail safety.

*Question 2.* Could provide us a round estimate on how many rail investigations you've known about at NTSB that were PTC preventable?

Answer. Since 1969, the NTSB has investigated 148 rail accidents that could have been prevented if an operational PTC system been in place.

*Question 3.* In your safety expert opinion, do you think there would be safety concerns with large amounts of nuclear waste traveling from say Minnesota, Texas, or Mississippi, all the way to Nevada, by rail?

Answer. By statute, the NTSB is primarily an accident investigation agency. To my knowledge, NTSB has never investigated an accident or incident involving transport of nuclear waste by rail. Regulating the safety of these shipments is the joint responsibility of the Nuclear Regulatory Commission (NRC) and the Department of Transportation (DOT).

I believe that in order to ensure highest levels of safety of our Nation's railway system, it is necessary to take a holistic approach to managing safety. There is no single magic bullet.

From a high-level perspective, there needs to be an absolute commitment to safety by the leaders and management of the railroad, as well as that of the frontline employees. Leaders and individuals to must have a collective commitment to emphasize safety over competing goals to ensure protection of people and the environment. A culture must exist where errors and unsafe acts can be brought to the attention of management without fear of retribution or punishment, so that safety concerns and deficiencies can be identified and corrected before an accident or serious incident occurs.

Aggressive risk assessment and mitigation measures must be employed. For example, when transporting flammable liquids by rail, the railroad is required to consider 27 risk factors when evaluating route selections.

Drilling down further, there needs to be adequate track inspection and maintenance. In addition, because we continue to see transportation accidents related to sleep apnea, the NTSB has recommended that the Federal Railroad Administration implement a requirement for railroads to conduct sleep apnea screening. We also have called for inward facing cameras to be installed in the controlling locomotive cabs. PTC is, of course, an essential component of maximizing railroad safety.

Measures such as these are necessary to ensure the highest levels of safety.

*Question 4.* Are you aware if we have a safe and certified rail car available to move spent nuclear fuel?

Answer. I am not aware of this but, if confirmed, pledge to look into these standards.

*Question 5.* Would you think it would be a logical expectation that we wouldn't move significant amounts of nuclear waste by rail until those operations have trustworthy innovations like PTC and ECP brakes more roundly installed, and utilized, by the industry?

*Answer.* I believe that transport of nuclear waste, like transport of all hazardous materials, absolutely needs to be conducted in a manner where risks are managed to an acceptable level. The measures outlined in my response to Question 3, as well as those identified by other agencies such the DOT, Department of Energy, and NRC, as well as by the railroad and nuclear industries, must be implemented to ensure that nuclear waste is transported safely.



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