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TRB Annual Meeting 2020

Sustainability Measurement Subcommittee (ADD40-1)

Meeting at: Independence Salon B (M4), Marriott Marquis

Time: Monday, January 14, 1:30 PM- 3:15 PM

Presiding: *Dan Hardy*

Draft agenda (approximate timing)

1:30 – 1:40 Welcome and introductions

1:40 – 2:10 Meeting context, strategies, initiatives

- TRB Transition from ADD40 (see attached Disposition of Current Committees)
- Linkage to other ADD40 activities
 - ADD40 Committee meeting (Tuesday 1:30) – same room
 - Research subcommittee meeting (Wednesday 10:15) – same room
 - Sustainability Next Steps Session 1774 (Thursday 8:00 – Salon A)
 - Key [TRB meeting sessions](#) related to sustainability
- Updates on performance measures
 - Joseph Shacat, Director of Sustainable Pavements, National Asphalt Pavement Association, to discuss innovations in pavement sustainability
 - Jeralee Anderson, President/CEO, Greenroads, to discuss Greenroads evolution to V3

2:10 – 2:40 Report on 2019 Initiatives

- Sustainability Measurement Synthesis Proposal
 - Second attempt submitted in 2019 (see attached)
 - Discussion on approach / status for 2020
- Definition of sustainability as related to transportation
 - Excerpt from ADD40 [Triennial Strategic Plan](#) (see attached)
 - 2019 Annual Meeting Session 1792 discussion
 - Discussion on approach / status for 2020
- Other outcomes from 2019 Session 1792 discussion
 - Pros/cons of VMT as a sustainability metric
 - Targets and timing for carbon/related footprint sustainability (20 years? More? Less?)

- Idea of sustainability BMPs (including, and/or beyond rating systems) with linkage to a possible fourth action like “enhance” or “improve” after the avoid/minimize/mitigate triad for linking to internal DOT processes

2:40 – 3:00 Rapid Fire Communications Brainstorming

- How can current ADD40 members help TRB most effectively share sustainability measurement ideas under the new committee structure?

3:00 – 3:15 Wrap up – conclusions and next steps

- Action items and timeframes
- Segue to Research Needs Statements conversation on Wednesday

3:15 – Adjourn

Dan Hardy

From: Jo Allen Gause <jagause@nas.edu>
Sent: Wednesday, February 20, 2019 9:58 AM
To: Dan Hardy
Subject: Synthesis Submittal Confirmation

Thank you for entering a Synthesis Statement. Your statement has been successfully received. If you have any questions or concerns please reply to this email or jagause@nas.edu.

If you would like to submit a revised statement, please use the 'Notes' section to alert us of the new version.

Title: Applying and Advancing Sustainable Practices in Transportation
Scope:
Summary:

The essence of sustainability is to foster solutions that are viable beyond the spatial, temporal, and topical requirements required by laws and permits. The concepts of implementing and managing transportation plans, programs, and projects to address the Triple Bottom Line (TBL) of economic, environmental, and social benefits have been addressed in landmark TRB documents such as NCHRP Report 708 for project and program level outcomes and NCHRP Report 750, Volume 4 for institutional considerations.

This synthesis should summarize the current state of the practices within state Departments of Transportation on their progress, success stories, and lessons learned in institutionalizing sustainable practices in their plans and programs, including:

- Provide an up-to-date state of the practice of applying sustainability to transportation plans, programs, and projects from a survey of State DOTs and follow-up conversations
- Identify opportunities for expanding awareness of sustainability issues as applied to transportation and institutional capacity for delivering and measuring sustainability
- Evaluate the extent to which the term “sustainability” is being described or applied fully and consistently across organizations
- Identify notable gaps in the state of the practice that could influence the next generation of research needs statements

Background:

There are three areas where the synthesis should summarize of the state of the practice within state DOTs for developing transportation solutions for sustainable communities:

- understanding the measures of success for advancing sustainability within transportation solutions from both institutional perspectives and effect on project and program outcomes.
- coordinating activities between state DOTs and partner agencies and stakeholders, and
- identifying knowledge gaps associated with emerging technical and societal issues.

Understanding Measures of Success for Sustainability

In the five years since publication of NCHRP Reports 708 and 750, state DOTs have had opportunities to further develop their institutional approaches to sustainability and evolve their approach to assessing the effects of these approaches on the degree to which their projects and programs have improved the sustainability of the communities they serve. The synthesis will support effective dissemination of sustainability information by:

- Collecting guidance on how state DOTs are defining and measuring sustainability in transportation with a focus on identifying common and best practices which may range from use of project-level sustainability rating systems like INVEST or Greenroads to independently determined measures of outcomes (e.g., crash reduction, jobs creation or other economic development, or public health measures)
- Providing brief case studies of effective agency practices for including all three pillars of the TBL associated with the use of the term “sustainable”
- Identifying methods for simplifying and distributing ideas, methods, and tools, with specific consideration of advancing society’s TBL, such as:
 - o Appropriate means and methods for correlating values across measures, including but not limited to monetization
 - o Access for agencies with limited technical and/or resource capacity to apply formal ratings and maturity model tools
 - o Identifying communications tools for coordination with external agencies and other stakeholders, and
 - o Models or templates of contractual tools for incentivizing sustainability performance in standard contract language

Coordination of Sustainability with Partner Agencies and Stakeholders

The success of sustainability efforts within a state DOT is expected to be partly measured by the degree to which their efforts are recognized and supported by partner agencies and stakeholders, including federal, regional and local government agencies (in both transportation and related/affected disciplines), elected/appointed decisionmakers, and other interested stakeholders. Areas of coordination are expected to include:

- Discussing the pros and cons of sustainability definitions and measures (such as those in project rating systems or from national/international guidance) that are unified across a wide range of users as contrasted with measures customized to specific users (i.e., what are the challenges if a state DOT uses INVEST but local municipalities use Greenroads?)
- Opportunities and challenges of coordinating sustainability initiatives across agency missions (i.e., if a state DOT uses one method of ranking projects and programs for planning and others for implementation or TSM&O)
- Effective tools for communicating the benefits of sustainability initiatives to decisionmakers and the general public.
- Degree to which sustainability precepts are reflected in agency performance criteria

Addressing Emerging Issues Relevant to Sustainability

Since the first Transportation Planning for Sustainability Guidebook was published in 2011 by FHWA, sustainability principles and measurements are continually challenged to stay current regarding emerging trends within the transportation profession. Current emerging topics which could significantly impact the transportation system and thus affect transportation’s ability to support a more sustainable society include:

- Automated vehicle considerations and analysis of potential impacts,
- Goods movement considerations,
- Shifting demographics, and
- Resiliency definition and relationship to sustainability.

The synthesis should review how current state DOT programs and activities address these topics, identify where gaps exist, and suggest means by which a strategic research plan would close these gaps.

Definition of Sustainable Transportation in ADD40 2016-2019 Strategic Plan

Sustainable Transportation

Sustainability is frequently expressed as a *triple bottom line* concept, or as applying the **three Es: Environment, Economy and Equity**. The triple bottom line is exemplified in a transportation system which supports the economy, preserves the environment, and enhances equity in our communities and the quality of life for all. The Transportation and Sustainability Committee defines sustainable transportation in its basic form as a system that meets present needs without compromising the needs of the future. It is an equitable and safe transportation system across land, water, and air. It is an adaptable, integrated, multimodal transportation system.

Within the Transportation Research Board (TRB) environment, the Committee represents the convergence of sustainability research and its practical application leading to reductions in greenhouse gases, increases in system efficiencies returning a fiscal and resource benefit, and improvements in the transportation system's effect on disproportionately impacted populations.

The Committee views sustainable transportation as an overarching, holistic concept that advances public health and access to destinations, is zero-emissions based to reduce climate change and air pollution impacts, and responds to changing conditions to improve people's quality of life.

Disposition of Current Committees as a Result of Restructuring
December 2019

Current Code	Current Committee Name	Notes
A0000	Technical Activities Council	
A0010	International Cooperation	Convert into an International Coordinating Council
A0020T	Special Task Force on Climate Change and Energy	Sunset task force; its function to be handled by new Transportation and Sustainability Section; some of its topics may be covered under a new committee on Natural Hazards and Extreme Weather Events.
A0030T	Task Force on Data for Decisions and Performance Measures	Move to Executive Management Issues Section in Policy and Organization Group and convert to committee on Data for Decision-making
A0040T	Young Members Council	Convert into a Young Members Coordinating Council
AB000	Policy and Organization Group	
AB010T	Task Force on Knowledge Management	Convert task force into new standing committee on Knowledge Management in Executive Management Issues Section
ABC00	<i>Section - Management and Leadership</i>	Rename <i>Executive Management Issues</i> . Section would cover the key enterprise-wide decisions that need to be made at the <u>executive</u> level. The sections committees work with more technically-focused committees in other Groups.
ABC10	Strategic Management	Committee should focus on executive level organization structure and agency management. Themes can include risk, revenue, and asset management
ABC20	Management and Productivity	Rename <i>Transportation Workforce Management</i> , merge ABG20 material as appropriate, and focus scope more on workforce issues.
ABC30	Performance Management	No structural change
ABC40	Transportation Asset Management	No structural change
ABE00	<i>Section - Transportation Policy</i>	Sunset this section
ABE10	Revenue and Finance	Merge ABE10 and ABE20, rescope, and move to ABC00. Scope should cover the application of economics within transportation (for pricing, financing, etc.), while ADD10 Transportation and Economic Development in new Transportation and Sustainability section addresses the relationship between transportation and the economy.
ABE20	Transportation Economics	Merge ABE10 and ABE20. See note with ABE10.
ABE25	Congestion Pricing	Merge ABE25 into ABE50 and move to Planning Section in Data, Planning, and Analysis Group.
ABE30	Transportation Issues in Major Cities	Convert into a City Transportation Issues Coordinating Council
ABE50	Transportation Demand Management	Merge ABE25 into ABE50 and move to Planning Section in Data, Planning, and Analysis Group.
ABE60	Accessible Transportation and Mobility	Move to new Transportation and Society Section in Sustainability and Resilience Group
ABE70	Women's Issues in Transportation	Move to new Transportation and Society Section in Sustainability and Resilience Group
ABE80	Native American Transportation Issues	Move to new Transportation and Society Section in Sustainability and Resilience Group
ABE90	Transportation in the Developing Countries	Move to new Transportation and Society Section in Sustainability and Resilience Group

ABG00	<i>Section - Research and Education</i>	Sunset this section
ABG10	Conduct of Research	Merge ABG10 and ABG30 to become a Research and Innovation Management committee in Executive Management Issues Section in Policy and Organization Group. The new committee will address organization-wide issues in managing innovation and will not duplicate the work of AASHTO's Research Advisory Committee.
ABG20	Transportation Education and Training	Merge into ABC20 as refocused on workforce issues.
ABG30	Technology Transfer	Merge into ABG10, see note at ABG10.
ABG40	Library and Information Science for Transportation	Create a Knowledge Management committee in ABC and merge the scope of this committee into that new committee, forming a subcommittee on Library and Information Science for Transportation.
ABG50	Transportation History	Convert to a subcommittee of the Transportation and Society Section in Sustainability and Resilience Group.
ABJ00	<i>Section - Data and Information Systems</i>	Move entire section, with the modifications shown below, to Data, Planning, and Analysis Group
ABJ10	National Transportation Data Requirements and Programs	Merge into ABJ20.
ABJ20	Statewide Transportation Data and Information Systems	Merge ABJ10 into ABJ20.
ABJ30	Urban Transportation Data and Information Systems	No structural change besides section move.
ABJ35	Highway Traffic Monitoring	Move to Operations Section in Safety and Operations Group
ABJ40	Travel Survey Methods	Move to Transportation Planning and Analysis Section in Data, Planning, and Analysis Group
ABJ50	Information Systems and Technology	No structural change besides section move.
ABJ60	Geographic Information Science and Applications	Rename to Geographic Information Science; applications belong in the other groups
ABJ70	Artificial Intelligence and Advanced Computing Applications	No structural change besides section move.
ABJ80	Statistical Methods	Retain but ensure that it covers all relevant statistical methods needed to serve the other committees.
ABJ90	Freight Transportation Data	No structural change besides section move.
ABJ95	Visualization in Transportation	No structural change besides section move.
ABJ45T	Task Force on Understanding New Directors for National Household Travel Survey	Disband at the end of its term.
ABJ55T	Task Force on Data Privacy, Security and Protection Policy	Convert into a subcommittee under the new Data for Decision Making committee in Policy and Organization Group. This subcommittee should have a strong connection to the committees in the Data section.
ABR00	<i>Section - Transportation Systems Resilience</i>	Move Section to Sustainability and Resilience Group
ABR10	Critical Transportation Infrastructure Protection	Rename Transportation Infrastructure Protection and Preparedness
ABR20	The Logistics of Disaster Response and Business Continuity	Merge ABR20 and ABR30 and rename Disaster Response, Recovery, and Business Continuity
ABR30 MERGE	Emergency Evacuations	Merge into ABR20 and make evacuation management a subcommittee.

AD000	Planning and Environment Group	Rename <i>Data, Planning, and Analysis</i> Group
ADA00	<i>Section - Transportation System Policy, Planning and Process</i>	Merge Transportation System Policy, Planning and Process Section with Travel Analysis Methods Section to form Transportation Planning and Analysis Section
ADA10	Statewide Multimodal Transportation Planning	Merge ADA10 Statewide Multimodal Transportation Planning, ADA20 Metropolitan Policy, Planning, and Processes, ADA30 Transportation Planning for Small and Medium-Sized Communities, and ADB50 Transportation Planning Applications and create two new committees, named <i>Transportation Planning Policy and Processes</i> and <i>Transportation Planning Analysis and Application</i> .
ADA20	Metropolitan Policy, Planning, and Processes	See note at ADA10.
ADA30	Transportation Planning for Small and Medium-Sized Communities	See note at ADA10.
ADA40	Transportation Needs of National Parks and Public Lands	No structural change besides section merge.
ADA50	Transportation Programming and Investment Decision-Making	Discontinue and merge topics into other committees.
ADA60	Public Involvement in Transportation	Rename to Communications and Engagements and move to Executive Management Issues in Policy and Organization Group. Broaden scope to address communications with public and elected officials about transportation, not just for specific projects and planning processes.
ADB00	<i>Section - Travel Analysis Methods</i>	Merge Transportation System Policy, Planning and Process Section with Travel Analysis Methods Section to form Transportation Planning and Analysis Section
ADB10	Traveler Behavior and Values	No structural change besides section merge.
ADB20	Effects of Information and Communication Technologies (ICT) on Travel Choices	No structural change besides section merge.
ADB30	Transportation Network Modeling	No structural change besides section merge.
ADB40	Transportation Demand Forecasting	No structural change besides section merge.
ADB45	Travel Forecasting Resources	Merge into ADB40; this committee was created to oversee a wiki.
ADB50	Transportation Planning Applications	See note at ADA10.
ADC00	<i>Section - Environment and Energy</i>	Sunset this section; move existing/merged committees to as indicated.
ADC10	Environmental Analysis in Transportation	Merge ADC30 into ADC10 and rename to Environmental Analysis and Ecology. Move to Transportation Planning and Analysis Section
ADC20	Transportation and Air Quality	Add GHG mitigation, rename to Air Quality and Green House Gas Mitigation, and move to Transportation and Sustainability Section in Sustainability and Resilience Group
ADC30	Ecology and Transportation	Merge into rescoped/renamed ADC10.
ADC40	Transportation-Related Noise and Vibration	Move to Transportation Planning and Analysis Section
ADC50	Historic and Archeological Preservation in Transportation	Move to Transportation and Society section in Sustainability and Resilience Group.

ADC60	Resource Conservation and Recovery	Move to Transportation and Sustainability Section in Sustainability and Resilience Group.
ADC70	Transportation Energy	Move to Transportation and Sustainability Section in Sustainability and Resilience Group.
ADC80	Alternative Transportation Fuels and Technologies	Move to Transportation and Sustainability Section in Sustainability and Resilience Group.
ADD00	<i>Section - Social, Economic, and Cultural Issues</i>	Sunset section and merge or move committees as shown below.
ADD10	Transportation and Economic Development	Merge ADD30 into this committee and move to Transportation and Sustainability Section in Sustainability and Resilience Group.
ADD20	Social and Economic Factors of Transportation	Sunset; issues are addressed in the other committees in this section,
ADD30	Transportation and Land Development	Merge scope into ADD10.
ADD40	Transportation and Sustainability	Sunset and cover elements of sustainability in new Transportation Sustainability Section.
ADD50	Environmental Justice in Transportation	Rename <i>Equity in Transportation</i> and expand to cover additional equity issues beyond environmental justice.
AF000	Design and Construction Group	Rename/rescope as <i>Highway Infrastructure Group</i>
AFB00	<i>Section - Design</i>	Rename <i>Roadway Design</i>
AFB10	Geometric Design	Merge AHB65 Operational Effects of Geometrics into AFB10 and rename Performance Effects of Geometric Design.
AFB20	Roadside Safety Design	No structural change.
AFB30	Low-Volume Roads	No structural change.
AFB40	Landscape and Environmental Design	No structural change.
AFB60	Hydrology and Hydraulics	Merge AFB65 into this committee and rename Hydrology, Hydraulics and Stormwater.
AFB65	Stormwater	Merge into AFB60.
AFB70	Utilities	No structural change.
AFB80	Geospatial Data Acquisition Technologies	No structural change.
AFD00	<i>Section - Pavements</i>	
AFD10	Pavement Management Systems	Move to new Infrastructure Management and System Preservation Section
AFD20	Pavement Condition Evaluation	No structural change.
AFD30	General and Emerging Pavement Design	Sunset and find homes for some subcommittees, such as those on pavement materials and climate and on sustainable pavements.
AFD40	Full-Scale Accelerated Pavement Testing	Merge topic into AFD80
AFD50	Design and Rehabilitation of Concrete Pavements	No structural change.
AFD60	Design and Rehabilitation of Asphalt Pavements	No structural change.
AFD80	Pavement Structural Modeling and Evaluation	Merge AFD40 into AFD80 and rename AFD80 Pavement Structural Modeling, Conventional and Accelerated Testing, and Evaluation
AFD90	Pavement Surface Properties and Vehicle Interaction	No structural change.
AFF00	<i>Section - Structures</i>	

AFF10	General Structures	Merge AFF10 and AFF80 and rename Innovative Highway Structures and Appurtenances to address misperceptions about the scope.
AFF20	Steel Bridges	No structural change.
AFF30	Concrete Bridges	No structural change.
AFF40	Testing and Evaluation of Transportation Structures	No structural change.
AFF50	Seismic Design and Performance of Bridges	No structural change.
AFF60	Tunnels and Underground Structures	No structural change.
AFF70	Culverts, Buried Bridges and Hydraulic Structures	Merge AFF70 and AFS40 and rename Buried Structure Systems and Soil-Structure Interaction
AFF80	Structural Fiber Reinforced Polymers	Merge AFF80 into renamed AFF10.
<i>AFH00</i>	<i>Section - Construction</i>	
AFH10	Construction Management	No structural change.
AFH15	Project Delivery Methods	No structural change.
AFH20	Quality Assurance Management	No structural change.
AFH30	Emerging Design and Construction Technologies	Sunset
AFH40	Construction of Bridges and Structures	No structural change.
AFH50	Concrete Pavement Construction and Rehabilitation	No structural change.
AFH60	Asphalt Pavement Construction and Rehabilitation	No structural change.
AFH70	Fabrication and Inspection of Metal Structures	No structural change.
AFH80	Disadvantaged Business Enterprises	Rename Contracting Equity, broaden scope, and move to Executive Management Issues Section in Policy and Organization Group.
<i>AFK00</i>	<i>Section - Asphalt Materials</i>	Merge committees from AFN00 with this section, rescope and rename to <i>Materials</i> Section
AFK10	Critical Issues and Emerging Technologies in Asphalt	Rename Production and Use of Asphalt and rescope to cover plant production, constructability, economics, and supply.
AFK20	Asphalt Binders	Rename Binders
AFK30	Non-Binder Components of Asphalt Mixtures	Merge AFK30 Non-Binder Components of Asphalt Mixtures, AFK40 Surface Requirements of Asphalt Mixtures, and AFK50 Structural Requirements of Asphalt Mixtures into two committees named <i>Asphalt Materials, Selection, and Mix Design</i> and <i>Asphalt Mixture Evaluation and Performance</i> .
AFK40	Surface Requirements of Asphalt Mixtures	See note at AFK30.
AFK50	Structural Requirements of Asphalt Mixtures	See note at AFK30.
<i>AFN00</i>	<i>Section - Concrete Materials</i>	Discontinue this section and merge committees into new Materials Section
AFN10	Basic Research and Emerging Technologies Related to Concrete	Restructure AFN10 Basic Research and Emerging Technologies Related to Concrete, AFN20 Properties of Concrete, AFN30 Durability of Concrete, and AFN40 Concrete Materials and Placement Techniques into three committees.
AFN20	Properties of Concrete	See note at AFN10.
AFN30	Durability of Concrete	See note at AFN10.

AFN40	Concrete Materials and Placement Techniques	See note at AFN10.
AFP00	<i>Section - Geological and Geoenvironmental Engineering</i>	Combine AFP00 and AFS00 into a single <i>Geology and Geotechnical Engineering</i> Section
AFP10	Engineering Geology	Merge AFP20 into AFP10 and rename Engineering Geology and Site Characterization.
AFP20	Geotechnical Site Characterization	No structural change besides section merge.
AFP30	Soil and Rock Properties	No structural change besides section merge.
AFP40	Geo-Environmental Processes	No structural change besides section merge.
AFP50	Seasonal Climatic Effects on Transportation Infrastructure	Merge AFP50 Seasonal Climatic Effects on Transportation Infrastructure, AFP60 Engineering Behavior of Unsaturated Geomaterials, and AFS60 Subsurface Drainage.
AFP60	Engineering Behavior of Unsaturated Geomaterials	See note at AFP50
AFP70	Aggregates	Move to new Materials Section.
AFS00	<i>Section - Geotechnical Engineering</i>	Combine AFP00 and AFS00 into a single <i>Geology and Geotechnical Engineering</i> Section
AFS10	Transportation Earthworks	No structural change besides section merge.
AFS20	Geotechnical Instrumentation and Modeling	No structural change besides section merge.
AFS30	Foundations of Bridges and Other Structures	No structural change besides section merge.
AFS40	Subsurface Soil-Structure Interaction	Merge with AFF70 in Structures Section to create Buried Structure Systems and Soil-Structure Interaction.
AFS60	Subsurface Drainage	Merge AFP50 Seasonal Climatic Effects on Transportation Infrastructure, AFP60 Engineering Behavior of Unsaturated Geomaterials, and AFS60 Subsurface Drainage to create Moisture and Temperature Effects on Geomaterials.
AFS70	Geosynthetics	No structural change besides section merge.
AFS80	Stabilization of Geomaterials and Recycled Materials	No structural change besides section merge.
AH000	Operations and Preservation Group	Sunset Operations and Preservation Group. Include operations committees in Safety and Operations Group and maintenance and preservation committee into Highway Infrastructure Group
AH010	Surface Transportation Weather	Rename to <i>Road Weather</i> and move to Roadway Maintenance Section in Highway Infrastructure Group
AHB00	<i>Section - Operations</i>	
AHB10	Regional Transportation Systems Management and Operations	No structural change.
AHB15	Intelligent Transportation Systems	No structural change.
AHB20	Freeway Operations	No structural change.
AHB25	Traffic Signal Systems	No structural change.
AHB30	Vehicle-Highway Automation	No structural change.
AHB35	Managed Lanes	No structural change.
AHB40	Highway Capacity and Quality of Service	No structural change.
AHB45	Traffic Flow Theory and Characteristics	No structural change.
AHB50	Traffic Control Devices	Merge AHB55 and AHD55 into AHB50.
AHB55	Work Zone Traffic Control	Merge into AHB50
AHB60	Highway/Rail Grade Crossings	Move to Rail Group

AHB65	Operational Effects of Geometrics	Merge this into AFB10 Geometric Design.
AHB70	Access Management	No structural change.
AHD00	Section - Maintenance and Preservation	Rename Highway Maintenance and move into Highway Infrastructure Group
AHD10	Maintenance and Operations Management	Merge AHD15 into AHD10
AHD15	Maintenance and Operations Personnel	Merge into AHD10.
AHD18	Pavement Preservation	Move to Infrastructure Management and System Preservation Section in Highway Infrastructure Group
AHD20	Pavement Maintenance	Merge AHD25 into this committee and move to Infrastructure Management and System Preservation Section in Highway Infrastructure Group
AHD25	Sealants and Fillers for Joints and Cracks	Merge into AHD20
AHD30	Structures Maintenance	Merge AHD45 into this committee and move to Infrastructure Management and System Preservation Section in Highway Infrastructure Group
AHD35	Bridge Management	Rename Bridge and Structures Management and move to Infrastructure Management and System Preservation Section in Highway Infrastructure Group.
AHD37	Bridge Preservation	Move to Infrastructure Management and System Preservation Section in Highway Infrastructure Group.
AHD40	Polymer Concretes, Adhesives, and Sealers	Move to new Materials Section
AHD45	Corrosion	Merge into AHD30
AHD50	Roadside Maintenance Operations	
AHD55	Signing and Marking Materials	Merge into AHB50 Traffic Control Devices
AHD60	Maintenance Equipment	Rename to Maintenance Fleet and Equipment
AHD65	Winter Maintenance	
AL000	Legal Resources Group	Move to become a section in AB000 Policy and Organization
AL010	Transportation Law	Rename to General Law.
AL020	Transit and Intermodal Transportation Law	No structural change besides overall group change.
AL030	Contract Law	No structural change.
AL040	Emerging Technology Law	No structural change besides overall group change.
AL050	Environmental Issues in Transportation Law	No structural change besides overall group change.
AL060	Eminent Domain and Land Use	Retain but note that the scope includes ROW acquisition in general (not just eminent domain) and topics such as commercial activity on ROW, encroachments, billboards, beautification laws.
AL070	Tort Liability and Risk Management	No structural change besides overall group change.
AN000	Safety and Systems Users Group	Rename/rescope Safety and Operations Group
ANB00	Section - Safety	
ANB10	Transportation Safety Management	Rename Transportation Safety Management Systems
ANB20	Safety Data, Analysis and Evaluation	Merge with ANB25.
ANB25	Highway Safety Performance	Merge with ANB20 and rename <i>Safety Performance and Analysis</i>
ANB30	Operator Education and Regulation	Rename <i>Driver Education and Regulation</i> and move to Pedestrian, Bicycles, Human Factors Section
ANB40	Traffic Law Enforcement	No structural change.

ANB45	Occupant Protection	No structural change.
ANB50	Alcohol, Other Drugs, and Transportation	Rename <i>Impaired Driving</i> ; possibly include distraction.
ANB60	Safe Mobility of Older Persons	Sunset and merge relevant issues into other committees such as ABE60, AP060, ANB30.
ANB70	Truck and Bus Safety	No structural change.
ANB75	Roundabouts	Broaden scope, add some elements of AFB10, rename Roundabouts and other Intersection Design and Control Strategies, and move to Roadway Design Section in Highway Infrastructure Group
AND00	<i>Section - Users Performance</i>	Sunset this section and include some committees in rescoped ANF00.
AND10	Vehicle User Characteristics	Rename <i>Human Factors of Vehicles</i>
AND20	User Information Systems	Merge AND40 into this committee and rename <i>Human Factors of Roadway Design and Operation</i>
AND30	Simulation and Measurement of Vehicle and Operator Performance	Rename <i>Human Factors and Behavioral Research Methods</i>
AND40	Visibility	Merge into renamed AND20
ANB30	<i>Section - Pedestrians and Cycles</i>	Rename <i>Pedestrians, Bicycles, Human Factors</i> and rescope this section to include some committees from AND00
ANF10	Pedestrians	No structural change.
ANF20	Bicycle Transportation	No structural change.
ANF30	Motorcycles and Mopeds	No structural change.
AP000	Public Transportation Group	
AP010	Transit Management and Performance	No structural change.
AP015	Transit Capacity and Quality of Service	No structural change.
AP020	Emerging and Innovative Public Transport and Technologies	Rename to <i>Innovative Public Transportation Services and Technologies</i> ; merge technology part of AP060 Paratransit.
AP025	Public Transportation Planning and Development	No structural change.
AP030	Public Transportation Marketing and Fare Policy	No structural change.
AP040	Automated Transit Systems	Merge bus automation scope into AP050 and rail transit automation scope into AP065.
AP045	Passenger Intermodal Facilities	No structural change.
AP050	Bus Transit Systems	Merge automation of buses from AP040 into this committee.
AP055	Rural Public and Intercity Bus Transportation	Merge ADA paratransit and human service transportation operations from AP060 into this committee and rename to Rural, Intercity Bus, and Specialized Transportation
AP060	Paratransit	Merge appropriate elements of scope into AP020, AP055, and ABE60
AP065	Rail Transit Systems	Merge AP070 into this committee. Merge automation of rail transit from AP040 into this committee.
AP070	Commuter Rail Transportation	Merge into AP065
AP075	Light Rail Transit	No structural change.
AP085	Ferry Transportation	Move to Marine Group
AP018T	Task Force on Transit Safety and Security	Convert into new committee on Transit Safety and Security.
AR000	Rail Group	
AR010	Intercity Passenger Rail	Rename Passenger Rail Transportation
AR020	Rail Rolling Stock and Motive Power	No structural change.

AR030	Railroad Operating Technologies	No structural change.
AR040	Freight Rail Transportation	No structural change.
AR050	Railroad Track Structure System Design	Consolidate AR050, AR055, and AR060 and create two committees, one each for railroad and rail transit.
AR055	Rail Transit Infrastructure	See note at AR050.
AR060	Railway Maintenance	See note at AR050.
AR070	Railroad Operational Safety	Rename <i>Rail Safety</i>
AT000	Freight Systems Group	
AT010	Freight Transportation Economics and Regulation	No structural change.
AT015	Freight Transportation Planning and Logistics	No structural change.
AT020	International Trade and Transportation	No structural change.
AT025	Urban Freight Transportation	No structural change.
AT030	Agriculture and Food Transportation	No structural change.
AT035	Military Transportation	Move to Resilience Section and rename Transportation for National Defense.
AT040	Transportation of Hazardous Materials	No structural change.
AT045	Intermodal Freight Transport	No structural change.
AT050	Intermodal Freight Terminal Design and Operations	Convert to a joint subcommittee between AT045 and AW010; the terminal design and operations concepts apply in both areas.
AT055	Truck Size and Weight	Convert to joint subcommittee of DCG, Rail, Trucking industry, etc.
AT060	Trucking Industry Research	Create joint subcommittee on truck size and weight.
AV000	Aviation Group	
AV010	Intergovernmental Relations in Aviation	No structural change.
AV020	Aviation System Planning	No structural change.
AV030	Environmental Impacts of Aviation	No structural change.
AV040	Aviation Economics and Forecasting	Merge AV080 into AV040, and expand focus to include a broader range of aircraft and users.
AV050	Airport Terminals and Ground Access	No structural change.
AV060	Airfield and Airspace Capacity and Delay	No structural change.
AV070	Aircraft/Airport Compatibility	No structural change.
AV080	Light Commercial and General Aviation	Merge into rescoped AV040
AV090	Aviation Security and Emergency Management	No structural change.
AW000	Marine Group	
AW010	Ports and Channels	No structural change.
AW020	Inland Water Transportation	No structural change.
AW030	Marine Environment	No structural change.
AW040	Marine Safety and Human Factors	No structural change.



- LINKING DOT5
TO OTHER STATE
AGENCIES TO PARTNER
& SET UP SUSTAINABILITY

- DEMONSTRATE
DOT RESOURCE BENEFITS

SYN.

VMT LEVERS

- "TRADITIONAL" AIR NOISE DELAY
- ACCESS TO MOBILITY (EQUITABLE)
- PROS/CONS (C.F.P.)

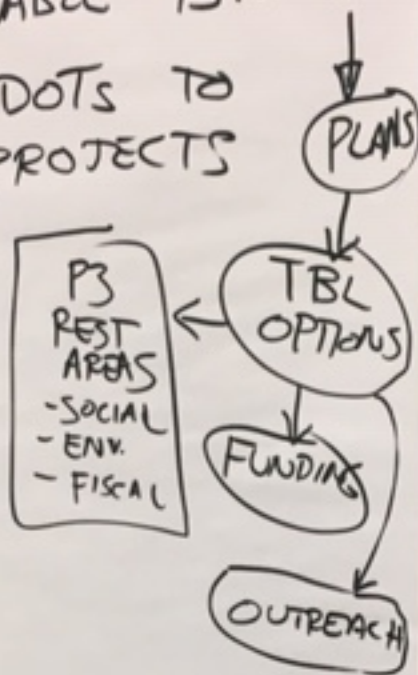
- RESEARCH RESULTS
 - TECH.
 - POLICY
- } ² PRODUCTS?
-

- TIMELINES
 - TRUCK PARKING CU/AV
 - FLEET TURNOVER - Z.E.P.
 - "GLIDE PATH"
RE 20 YRS
OR OTHER

CFP

VM-

- SUSTAINABLE B.M.P.
IN/FOR DOTs TO
SEED PROJECTS

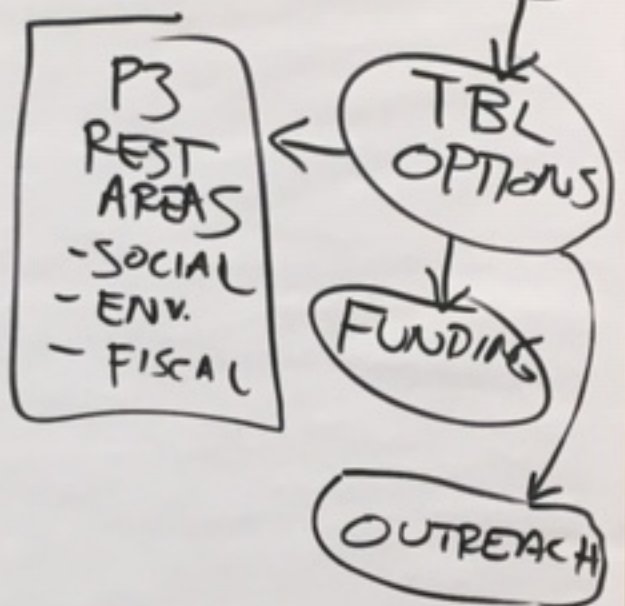


- RESEARCH
- TECH
- POLIC

-
- TIMELIN
 - TRUC
 - FLEET
 - "GLID
 - RE

CFP

- SUSTAINABLE B.M.P.
IN/FOR DOTs TO
SEED PROJECTS



- SHARED ECONOMY

- EQUITY OF
ACCESS

- GOODS MOVEMENT
SPEED

- T.B.L FOR ALL
C.F.P. USERS

- BROADCASTING
LOCAL NEPA AWARENESS

- C.F.P.: AVOID, MINIMIZE,
MITIGATE, IMPROVE
EXAMPLES?

- SHARED

- EG
ACC

- Good
SP

- T.B.
C.F.P.

HOW CAN WE PARALLEL THE
SAFETY MSG W/ THE SUSTAIN.
MSG? TO GAIN TRACTION

- CAN WE/HOW DO WE CALCULATE THE ROI IN SUSTAINABILITY (SUSTAINABILITY RESEARCH)?
- VALUE OF SUSTAINABILITY APPLICATION VS. VALUE OF NON-SUSTAINABLE OPTION
 - VALUE TO WHOM?
- IS A SUSTAINABLE PHASED PROJECT MORE EFFECTIVE/DESIRED THAN A FULL SUSTAINABLE 1ST STEP.
- WOULD THERE BE A BENEFIT TO HAVING A SUSTAINABILITY VALUE/ MEASUREMENT SYSTEM.
- HOW DOES SUSTAINABILITY BRING IN UNCALCULATED COSTS - HOW DO WE BRING IN COSTS - DIFFERENT THAN THE NORM.

#3 Requires
multi-agency, executive
focus.

Historically has been
~~exp~~ implicit.

Reallocation of right of way
example from Minneapolis

Sustainability opportunities in TRANS AGENCIES

1 Business Operations

V.1 [compliance]

2 Direct impact of materials & facilities on natural environment

3 ^{INFLUENCE} ~~the~~ [Impact] on movement of people + goods, indirect impact on env. +

V.2-

• Recognize overlaps + relationships

• Resilience?

• Indirect impacts of <

Climate + social inclusion + health + safety

DEFINITIONS

① Sust vs Resilience

challenge

↳ timeframes?

↳ way of thinking
↳ proactive vs reactive

② Standardizing terminology for different disciplines

③ top down vs. bottom-up approach

④ context. ⑤ tradeoffs.

NAME

ORG

E-MAIL

DAN HARBY	RENAISSANCE PLANNING	lharby@renewalplanning.com
Ellen Greenberg	Caltrans	ellen.greenberg@dot.ca.gov
Scott Strick	WSDOT	seth.strick@wsdot.wa.gov
Ian Anderson	Vermont AOT	ian.anderson@vermont.gov
Natalie Liljenwall	Oregon DOT	natalie.liljenwall@odot.state.or.us
Denise Garcia	Mass DOT	denise.garcia@dot.state.ma.us
Tsueki Takayanagi	Panasonic	takayanagi.yuichi@jp.panasonic.com
Adrienne Boer	TxDOT	adrienne.boer@txdot.gov
Sam Bourcier	CARB	Sam.Bourcier@arb.ca.gov
Douglas Ito	CARB	doug.ito@arb.ca.gov
CRAG HEBERBRAND	ARCADIS	emig.heberbrand@arcadis.com
Hans Deukel	TU eindhoven	j.f.jeukel@tue.nl
Camilla Fonseca	University of Minnesota	fonseca24@umn.edu
FARUK BERNARD	CITY OF MONTREAL, CANADA	fbarnard@ville.montreal.qc.ca
Joseph Shacet	National Asphalt Pavement Assn.	jsachet@ASPHALT.PAVEMENT.ORG
Tony Fischer	Metropolitan Council	Tony.Fischer@mtc.state.mn.us
Mark H. Rubenroga	UNRA	mark.henry.rubenroga@unra.com
Annie Bennett	Georgian Climate Center	bennett@georgian.cc
Melicia Pittlik	Illinois Tollway	apittlik@getipass.com
Aye McCarty	ARIZONA DOT	ayemccarty@azdot.gov
Tim Sertom	Mn DOT	timothy.sertom@state.mn.us
ERIC ODOSU	GHANA, GHANA	odosu.eric@yahoo.co.uk
Camille Crickton-Summers	TRB	ccricktonsummers@trb.org
Velvet Desverre-Filipovich	TRB	vfilipovich@trb.org
Omid Rouhani	McGill University	Omid.rouhani@mcgill.ca
Greg Krause	KrauseConsult	gregkrause@krcglobal.net
JOHN CONTESTABLE	JOHN HOPKINS	JOHN.CONTESTABLE@JHUAPL.EDU
Beth Klemann	MnDOT	Beth.Klemann@mn.state.us
Stephanie Micucci	NHDOT	stephanie.micucci@dot.nh.gov
Stephanie Monette	NHDOT	Stephanie.Monette@dot.nh.gov

Name

Org

E-mail

Allen Greenberg

John Sullivan

Jeff Ang-Ohm

Karin Landsberg

Therese Amorse

Michael Kwan

XUN ZHOU

JACQ BEAUBERT

Abdul Quinting

FHWA

USTMA

ICF

WSDOT

UCO

DVRP

JSTI Group

CALTRANS

INTE Group

LIN CONG

Hua Cai

Katherine Garcia

Tongji University

Purdue University

Seca Club

conglin@tongji.edu.cn

huacai@purdue.edu

katherine.garcia@seca.org

Allen Greenberg @ del.gov

jsullivan@USTMAES.org

jeffang-ohm@icf.com

karin.landsberg@wsdot.wa.gov

therese.amorse@uco.edu

michael.kwan@rutgers.edu

zx931@jsti.com

JACQ.BEAUBERT@caltrans.ca.gov

mqquinting@intex.com