



## TRANSPORTATION INNOVATION PLANNING INSPIRATION

TN APA/TRB ADC-10 Summer Workshop  
August 26-29, 2014 - Nashville, TN



T-PH Link

### **Proposal Submission: Transportation Public Health Link**

Website: [www.tphlink.com](http://www.tphlink.com)

*We would like to request a **120 minute** block of time to complete the Workshop*

### **LEARNING OBJECTIVE**

This session will describe the Built Environment as it relates to the process of transportation and urban planning and the factors that impact human health.

### **MODERATOR/CO-PRESENTER/PROPOSAL CONTACT**

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## **SPEAKER 1**

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### ***Traffic-Generated Emissions as an Elusive Environmental and Human Health Threat***

The adverse consequences of air pollution have become a world-wide public health concern. A major contributor to air pollution is the exhaust emitted from the tailpipe of diesel and combustible motor vehicles. A traffic-generated plume commonly includes particulate matter (PM) with a gaseous pollutant mixture of nitrogen oxides (NO, NO<sub>2</sub>), carbon monoxide (CO) and other volatile organic compounds and over 20 different species of allergens and other substances such as particles from normal vehicle wear of tires, brake pads and rotors. Particle complexes have been demonstrated to elicit an exposure-response relationship resulting in premature death, hospital admissions and long term human health effects; increases in chronic disease morbidity, lung cancer, cardiovascular and cardiopulmonary disease. In response to a growing body of evidence the EPA has set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment under the Clean Air Act (as amended in 1990). In addition, the EPA Office of Air Quality Planning and Standards has set Air Quality Standards for six principle pollutants specifically for CO, lead, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, ozone and sulfur dioxide, which have a major long term impact on air quality and hence human health. This presentation will describe various research studies currently underway aimed at defining and mitigating the impact of vehicle emissions on human health.

## **SPEAKER 2**

**Ronald Deverman, MA**

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### ***Health Impacts and Transportation Decision-Making: Environmental Nexus***

The National Environmental Policy Act (NEPA) is the regulatory process that guides the evaluation and disclosure of potential environmental impacts of a proposed action on humans and the environment. This is especially true for transportation infrastructure actions that use federal money or require federal permits; projects such as new highways, passenger rail lines, major bridges and airports. Traditional

social, economic, and environmental analyses include assessments of noise, air quality and potential exposure to special or hazardous waste. In addition, livability, community culture, neighborhood cohesion, and public place-making have been important considerations during the assessment of the impacts and benefits of new transportation projects. The inclusion of social determinants of health has resulted in both transportation and environmental planners identifying the linkages between public health and good transportation decisions. Looking at transportation challenges with new eyes, we can realize a more significant role in modifying professional perspectives. This presentation will provide an explanation of the NEPA process as a vital step in transportation infrastructure planning and design process by considering potential health impacts.

### **SPEAKER 3**

**Pedro B. Ortiz, MSc**

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#### ***Ensuring Quality of Life through the Transportation and Urban Planning Process***

To provide a healthy structure for growth, communities must consider the long-term. What is most important is to have a plan in mind that will allow the development of infrastructure over a period of years based on the availability of financing. The underlying principle is simple; combine five regional subsystems: transportation ('gray' infrastructure), environment ('green' infrastructure), housing, productive activities (industry, commerce, offices, etc.) and social facilities (education, health, leisure, etc.). Thus, metropolitan areas are located at strategic geographic points where two ecosystems meet: land and sea, plain and mountain passage, the crossing of a river - that is, a shift of transportation mode is required. With that said, transportation planning is an important first step in the development of a proposed infrastructure project or system of projects and services. This requires effective collaboration and communication between transportation planners and engineers with governmental entities and community leaders to shape the built environment. The planning and evaluation process must include a cross-disciplinary approach that considers the sociopolitical, environmental and economic impacts of sustainability. This presentation will focus on the active role of transportation planning to improve health and quality of life in a community through the appropriateness of infrastructure projects, facility design, land use, safety, and mitigation of environmental impacts, performance metrics and enhanced mobility of motorized and non-motorized options needed to meet the demands of a growing population.

### **SPEAKER 4: Presentation & Interactive Group Activity**

Barbara Stuckey

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***Cross-Disciplinary Communication Styles: Finding a Common Language***

Very smart people make policy, define new vision, plan and oversee systems for public health and transportation. Yet, silos grow. Barriers increase between disciplines. Distance ensues, not collaboration. Why? We feel safe. We protect our funding streams. We have deep histories of success without the added pressure of working with others, which often feels like against ourselves. No matter how much this appears to be business as usual, we cannot continue to operate in a vacuum.

Every English speaker has a thinking style. Every English sentence has context between the lines. There are only four patterned strings of thought that create the underlying context of our language. We have to use all four to communicate verbally and on paper. But we're not conscious of this process. This presentation will provide the participant with knowledge of their thinking style and that of others so that they are able to consciously improve personal and professional collaborations.

A Thought-Printing inventory creates objectivity for writing, thinking, and working in teams. People often remain focused on single word choices rather than drawing on connections among strings of thought or become "blinded" by their preferences for a particular type of information. Ms. Stuckey, will provide a paradigm for connecting intuitive thought to wording; thereby, shifting to a more powerful form of cross-disciplinary communication.

Participants will identify their Thought-Prints and then separated into four groups. These groupings will define the intellectual capital in the room. Once grouped, keywords will be listed based on discipline to determine language style and identify how many keywords or similar words cross disciplines and/or clash. Each group will quickly identify the priority of:

- organizational mission;
- circumstances or conditions impinging on mission objectives;
- guidelines and processes as long-accepted and time-tested principles; and
- details required to execute the first three.

Assuming that group Thought-Prints have influenced group choices, conclusions will be compared based on differences and overlap to spark innovation. Cross-disciplinary harmony are often assumed, but even with good ideas, consensus has meant that someone has had to compromise or feels as if they were forced to give-in. In reality, everyone contributes. Every task has a mission and impinging conditions accompanied by past principles and guidelines. Discovering a common language and shared problems changes how we perceive the world. Thinking styles become a denominator to substantive innovation and reduce barriers to collaboration.