highway and urban environment proceedings of the 9th highway and urban environment symposium 17 alliance for global sustainability bookseries

#highway urban environment #symposium proceedings #global sustainability #environmental engineering #urban planning research

Discover the latest research and discussions from the 9th Highway and Urban Environment Symposium, presented in these comprehensive proceedings. This volume, part of the esteemed Alliance for Global Sustainability bookseries, explores critical topics concerning infrastructure, ecological impact, and sustainable development within both highway and urban settings.

Highway and Urban Environment

The 9th Highway and Urban Environment Symposium (9HUES) was held in Madrid, Spain, from 9-11 June 2008. HUES is run by Chalmers University of Technology within the Alliance for Global Sustainability (The AGS). HUES was initiated by Professor Ron Hamilton at Middlesex Polytechnic (now University) in the early 1980s and had the title "Highway Pollution". The initial aim was to measure and assess challenges in highway pollution, with a strong emphasis on urban photochemical smog, ozone formation and particle release. After the first symposium, the emphasis on air pollution issues continued through to Munich in 1989 where diesel particulate issues and the relevance to health through measurements of PM10 emerged. The focus on air quality issues was also strengthened. In parallel, the symposium started to receive an increasing number of scientific contributions from the area of urban run off, indeed to the extent that the title of the symposium was changed to "Highway and Urban Pollution". Since then the importance of science in support of policy became increasingly important as a key aspect of the symposium. 9HUES was held at TRANSyT- Universidad Politécnica de Madrid, Spain to provide a professional and scientific forum on global examples of the science required to support pathways to a positive and sustainable future in the highway and urban environment.

Environmental Forensics for Persistent Organic Pollutants

Environmental Forensics for Persistent Organic Pollutants represents the state-of-the-art in environmental forensics in relation to persistent organic pollutants (POPs). The book is a complete reference for practitioners and students, covering a range of topics from new analytical techniques to regulatory and legal status in the global community. Through case studies from leading international experts, real-world issues — including the allocation of responsibility for release into the environment —

are resolved through the application of advanced analytical and scientific techniques. This book introduces and assesses the development of new techniques and technologies to trace the source and fate of newly emerging and classic POPs (perfluoroalkyl substances, brominated flame retardants, organochlorine pesticides, perfluorinated chemicals, polycyclic aromatic hydrocarbons, and polychlorinated biphenyls) in environmental media, including atmospheric, marine, freshwater, and urban environments. Real-world case studies show the application of advanced analytical and scientific techniques Discussion of GC*GC provides an introduction and assessment of a novel technique from leaders in the field Introduces the development of new analytical techniques (such as 2-D GC*HC and LC*LC) to trace the source and fate Raises awareness about the health and environmental impact of persistent organic pollutants (POPs) Outlines the development of international measures to control POPs so that chemists can understand the legal issues

Special Report

This conference, sponsored by the Federal Highway Administration and the Transportation Research Board, examined the options available for maintaining future urban mobility. Its purpose was to bring together experts to (1) review the status of our current knowledge with respect to recent historical trends in urban development and transportation and their interaction with economic and demographic forces, (2) discuss solutions and innovative institutional and technical approaches to provide for future urban mobility, and (3) identify research needs to aid in the analysis, development, and implementation of such solutions. Resource papers were commissioned on the following topics: housing and jobs; financing; decision making; energy and environment; options; and urban design.

Special Report - Highway Research Board

"TRB's National Cooperative Highway Research Program (NCHRP) Report 541: Consideration of Environmental Factors in Transportation Systems Planning examines processes, procedures, and methods for integrating environmental factors in transportation systems planning and decision making at the statewide, regional, and metropolitan levels. The appendixes to NCHRP Report 541 have been published as NCHRP Web-Only Document 77"--Publisher's description.

Transportation, Urban Form, and the Environment

This Special Report contains papers presented at the Fifth Summer Meeting of the Highway Research Board, July 31-August 2, 1972, at Madison, Wisconsin. The papers are from the sessions on environmental considerations in planning, design, and construction. They fall into 5 topics: Where do we stand?; Environmental planning process; Preservation of recreational, natural, and historical values; Visual quality in highway design; Effects of highway construction on the environment.

Annual Report

The Committee on Planning and Design Policies was organized in 1937 upon authority of the Executive Committee of the Association. The purpose of the committee is the formulation of administrative policies looking toward the incorporation in practice of highway design features which will result in maximum safety and utility.

Controlled Access Expressways in Urban Areas

TRB's National Cooperative Highway Research Program (NCHRP) Synthesis 413: Techniques for Effective Highway Construction Projects in Congested Urban Areas explores a diverse set of techniques designed to address highway construction challenges in congested urban areas such as high-traffic volumes, utility conflicts, complex right-of-way acquisition issues, a diverse stakeholder base, and watchful news media. The report includes four case studies designed to help illustrate effective construction practices in congested urban areas.

Federally Coordinated Program of Research and Development in Highway Transportation: Environmental considerations in highway design, location, construction and operation

The purpose of this study was to provide the Federal Highway Administration (FHWA) with specific research recommendations designed to develop a better understanding of a broad range of societal, economic, and institutional factors that affect--and are affected by--the nation's highway transportation system. The report is organized in four chapters and six appendices.

Consideration of Environmental Factors in Transportation Systems Planning

This report follows an earlier AASHTO report for the National Surface Transportation Policy and Revenue Study Commission (the Commission) entitled State DOT Performance Management Programs: Select Examples, published in June 2007. It examined performance-based surface transportation program approaches currently being implemented at some of the state DOTs around the country. Building on that primer, this report describes the basic principles involved in applying performance measurement to the state budgeting and program delivery process, and profiles how 11 states have applied these principles to improve performance and accountability.

Environmental consideration in highway design, location, construction and operation

Indicators of the environmental Impacts of Transportation: Highway

Environmental Considerations in Planning, Design, and Construction

"Current practices used by state departments of transportation to design and manage the urban freeway roadsides (UFRs) environment is the focus of National Cooperative Highway Research Program (NCHRP) Synthesis 539: Landscape Development and Management Practices for Urban Freeway Roadsides. The urban freeway roadsides (UFRs) for this synthesis are those roadsides associated with high visibility urban freeways with limited pedestrian access, such as wider medians, interchanges, and overpasses. The UFR is part of a greater urban environment with broad social, political, economic, and environmental implications for management. There are numerous UFR stakeholders, such as their respective municipalities, residents, adjacent landowners and businesses, traveling public, and state DOTs, and each has specific requests, requirements, and considerations. Among these are an acceptable level of maintenance and stakeholder expectations for aesthetics. State departments of transportation (DOTs) recognize their roadway systems are assets that need management and acknowledge that pavements and other infrastructure routinely require resurfacing, restoration, and rehabilitation because their integrity degrades over time. However, the UFR and its respective urban freeway systems may not receive the same routine restoration. The vegetation installed at the time of roadway construction ages with the surrounding infrastructure. Decades after initial installation within the UFR, transportation agencies have mature landscapes that may be near the end of their life cycle. The inability to adequately access and maintain these areas can result in failure of planted vegetation, loss of investment, and public criticism of state DOTs. The UFR is part of state DOTs' highway system investment facing many challenges as freeway renovations and expansions encroach on limited right-of-way (ROW) areas available for landscape development. As the size of these areas decreases, so does the ability of maintenance workers and equipment to safely access and maintain them." -- from TRB.

A Policy on Arterial Highways in Urban Areas

HIGHWAYS and environmental quality