



Research Digest

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Transportation Research Board Publications, Mar.-Sep. 2012

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Research Digest

Item 1

Achieving Airport-Compatible Land Uses and Minimizing Hazardous Obstructions in Navigable Airspace

TRANSPORTATION RESEARCH BOARD (TRB)

ACRP LRD 14 · 2012

"Federal law currently requires airport owners to provide for the safe over-flight of property surrounding airports, as well as to restrict surrounding land uses to those that are airport-compatible. Potential tools for ensuring compatible land include comprehensive (or master) land-use planning, zoning, building and site design, and navigation and clearance easements. An airport sponsor's deployment of these tools is based on state and local, not federal, law... This report discusses airport-compatible land-use requirements, the legal issues related to achieving airport-compatible land use, and legal issues particular to eliminating hazardous obstructions to airspace. The report concludes by reviewing the major legal issues of concern in achieving airport-compatible land use." --p.1

This report is available for free download (785 KB):

http://onlinepubs.trb.org/onlinepubs/acrp/acrp_lrd_014.pdf

Item 2

Asset and Infrastructure Management for Airports: Primer and Guidebook

TRANSPORTATION RESEARCH BOARD (TRB). AIRPORT COOPERATIVE RESEARCH PROGRAM (ACRP)

ACRP Report 69 · 2012

"This report provides a primer and guidebook for airport managers and staff on asset and infrastructure management applicable to all areas of the operation of an airport. The report begins with a primer for executive-level staff. The primer offers an overview of an asset and infrastructure management program and the benefits and costs of implementation. The guidebook provides examples from various airports and is designed to be a reference for integrating proven asset and infrastructure management practices and techniques at airports of all sizes. The guidebook defines an asset and infrastructure management program and its components and how a program relates to daily operations and longer term planning. In addition, a PowerPoint presentation, which can be used to present the benefits of a program to stakeholders, is available on the TRB website and can be found by searching on the title of the report." --TRID

This report is available for free download (7.9 MB):

http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_069.pdf



Item 3

Managing Aerial Firefighting Activities on Airports: A Synthesis of Airport Practice

TRANSPORTATION RESEARCH BOARD (TRB). AIRPORT COOPERATIVE RESEARCH PROGRAM (ACRP)

ACRP Synthesis 32 • 2012

"This synthesis study is intended to provide a review of current airport and agency [primarily the U.S. Forest Service (USFS)] practices, policies, and procedures at airports called upon to support aerial wildland firefighting suppression efforts. Information used in this study was acquired through a review of the literature and interviews with ten airport operators (representing 13 airports), two commercial helicopter operators, and one regional fire center manager to gather insights on the current state of airport practices that support aerial wildland firefighting suppression efforts. The interviews followed a series of questions in areas such as community and economic matters, contracts, operations, and general business practices. While the interviews were structured, the interviewees were encouraged to freely discuss matters related to the topic of the study and to offer information on the subject that they believed was important." -- TRID

This report is available for free download (1.5 MB):

http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_032.pdf

Item 4

Airport Climate Adaptation and Resilience: A Synthesis of Airport Practice

TRANSPORTATION RESEARCH BOARD (TRB). AIRPORT COOPERATIVE RESEARCH PROGRAM (ACRP)

ACRP Synthesis 33 • 2012

"This synthesis study is intended to provide airport heads and their technical managers with a document that reviews the range of risks to airports from projected climate change and emerging approaches for handling them. To gather relevant information on current practices, primary and grey literature was reviewed, and 16 airports were surveyed, supplying a profile of emerging practices and identifying personnel for subsequent interviews. From this information, a summary of likely climate effects and illustrative response actions was developed. The literature review, survey, and interviews also were used to identify the ways decision makers and their stakeholders use general information on climate effects and potential adaptation measures to define, plan for, and otherwise address climate risks to their own situation, including to their assets and operations. Detailed case examples were prepared to capture several distinct approaches to airport climate change resilience and adaptation."--Foreword.

This report is available for free download (5.2 MB):

http://onlinepubs.trb.org/onlinepubs/acrp/acrp_syn_033.pdf



Item 5

Commercial Truck and Bus Safety Synthesis Program: A Status Report 2012

TRANSPORTATION RESEARCH BOARD (TRB)

CTBSSP RRD 9 • 2012

"This is a staff digest of the progress and status of the Commercial Truck and Bus Safety Synthesis Program [CTBSSP], which is administered by the Transportation Research Board... CTBSSP is a cooperative research program sponsored by the Federal Motor Carrier Safety Administration (FMCSA) and administered by the Transportation Research Board. The program began in 2002 in support of the FMCSA's safety research programs. The program initiates several synthesis studies annually that address concerns in the area of commercial truck and bus safety. A synthesis report summarizes existing practice in a specific technical area based typically on a literature search and a survey of relevant organizations (e.g., state DOTs, enforcement agencies, commercial truck and bus companies, or other organizations appropriate for the specific topic)."

This report is available for free download (92 KB):

http://onlinepubs.trb.org/onlinepubs/ctbssp/ctbssp_rrd_9.pdf

Item 6

Role of Human Factors in Preventing Cargo Tank Truck Rollovers

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

HMCRP Report 7 • 2012

This report analyzes the root causes of the major driver factors contributing to cargo tank truck rollovers and proposes safety, management, and communication practices that can be used to minimize or eliminate driver errors in cargo tank truck operations. The research focuses on three critical areas of practice that can be quickly implemented and will have long-lasting benefits for motor carriers of all sizes across the tank truck industry. These areas of practice, examined through case studies, include (1) rollover-specific driver training and safety programs, with particular attention to a program on heavy vehicle rollover prevention from VicRoads (the state government roads authority in Victoria, Australia), the components of a good overall safety program, and tips for investigating rollovers to prevent their recurrence; (2) the use of behavior management techniques using on-board technology, direct observation (driver ride-along), training, and other tools and methods to manage driver behavior based on a survey of current technology and interviews with operators who demonstrated successful behavior management processes; and (3) the use of fitness-for-duty management practices in fatigue management, general health and wellness, scheduling and dispatching strategies, and distracted driving prevention.

This report is available for free download (2.8 MB):

http://onlinepubs.trb.org/onlinepubs/hmcrp/hmcrp_rpt_007.pdf



Item 7

Evaluation of the Use of Electronic Shipping Papers for Hazardous Materials Shipments

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

HMCRP Report 8 • 2012

"This report examines the challenges of advancing the use of electronic shipping papers as an alternative to the current paper-based hazardous materials communication system. Paper copy hazardous materials shipping papers have several drawbacks: they are labor intensive and subject to human error; they are perishable and may not be available to emergency responders in the event of an incident; and they are difficult to exchange between modes or different vehicles within a mode. The use of internationally compatible electronic data-sharing technologies could significantly improve the exchange of hazardous materials shipping information among shippers, carriers, regulatory agencies, and emergency responders. Timely access to accurate hazardous materials shipping information will likely reduce errors in information exchange, improve efficiency, enhance security, and improve the response efforts in the event of a hazardous materials incident." --TRID

This report is available for free download (2.4 MB):

http://onlinepubs.trb.org/onlinepubs/hmcrp/hmcrp_rpt_008.pdf

Item 8

Preserving and Protecting Freight Infrastructure and Routes

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCFRP Report 16/CRP-CD-103 • 2012

This report provides practical tools for public and private stakeholders to develop, preserve, protect, and enhance freight transportation infrastructure and routes for all modes of transportation. The report provides guidance to decision makers involved in freight facility operations, freight transportation planning, and land use on how to avoid conflicting land uses, or mitigate existing ones, by (1) providing information about freight transportation and its importance to people's everyday lives; (2) illustrating the types of conflicts between freight and other land uses and their consequences; and (3) providing tools and resources to preserve facilities and corridors, including prevention or resolution of these conflicts. An innovative contribution of the research is the development of a website, EnvisionFreight.com, which is intended to complement this report. For many of the topics covered in this report, more detailed materials are available on the website. References to the website are provided in this report where relevant. The appendixes to the contractor's final report are included herein on CRP-CD-103 and are available for download on the TRB website as an ISO image.

This report is available for free download (552 KB):

http://onlinepubs.trb.org/onlinepubs/ncfrp/ncfrp_rpt_016.pdf



Research Digest

Item 9

Multimodal Freight Transportation Within the Great Lakes-Saint Lawrence Basin

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCFRP Report 17 • 2012

This report describes the current multimodal freight transportation system within the bi-national region that includes Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, New York, Ontario, and Quebec and its importance to regional, U.S., and Canadian economies. The report also analyzes the system's overall performance and related opportunities and constraints to improving performance and to meeting projected freight flows. The multimodal freight transportation system in the Great Lakes-Saint Lawrence Basin is complex. It spans numerous modes, geographies, and jurisdictions, and serves a wide variety of commodity and supply chains. The Basin generates 30% of the combined gross domestic product of the U.S. and Canada and is home to 31% of the two countries' populations combined. The report includes an analysis of each mode's capacity and the major commodities each of them moves; the barriers and constraints that impact each mode's ability to move cargo; the performance implications in terms of major commodity supply chains (coal, automotive parts and machinery, containerized consumer goods, grains, and iron ore); and a strategic freight planning process for multimodal transport chain performance going forward.

This report is available for free download (10 MB):

http://onlinepubs.trb.org/onlinepubs/ncfrp/ncfrp_rpt_017.pdf



Item 10

Tort Liability Defense Practices for Design Flexibility

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCHRP LRD 57 • 2012

In response to community and developmental demand, many state transportation agencies have modified their design policies to specifically require staff to consider historical, environmental, and other context-related elements during the design process rather than merely focusing on following “generally accepted” standards. However, the threat of tort claims continues in a number of states and that is having a damping effect on designers’ willingness to tailor designs to suit projects’ unique contexts rather than designing projects that follow standard templates. This research, which focuses on tort liability defense practices and cases involving the exercise of discretion in design, will hopefully provide a framework for determining successful strategies employed when defending design decisions made following the principles of Context Sensitive Solutions (CSS). This digest explores the concept of discretion as a defense to government tort liability, and defending these actions based on the designers’ and policy-makers’ discretion may be described by terms such as governmental immunity, official immunity, design immunity, or policy immunity. The existing law is relevant to analysis of tort legal defenses available to protect the decisions inherent in CSS. Many departments of transportation have adopted CSS principles or related concepts such as Practical Design to encourage flexibility in design decision-making. The digest’s processes for documenting design decisions, articulating clearly the various factors considered in making a decision with a focus on decisions that involve design exceptions, should be of great help to attorneys, administrators, information officers, document retention officials, risk managers, planners, designers, and others responsible for such decisions.

This report is available for free download (3.9 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_lrd_57.pdf



Item 11

Attracting, Recruiting, and Retaining Skilled Staff for Transportation System Operations and Management

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES
NCHRP Report 693 · 2012

"This report presents guidance to help transportation agencies recruit and retain qualified professional staff in the Systems Operation and Management (SOM) area. It is based on an analysis of SOM career paths, skill requirements, and training needs to identify successful programs, state-of-the-art initiatives, and best industry practices. This report will be useful for all transportation professionals working in the SOM area and the Human Resources staff who address their personnel requirements." --TRID

This report is available for free download (8.9 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_693.pdf

Item 12

Practical Approaches for Involving Traditionally Underserved Populations in Transportation Decisionmaking

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES
NCHRP Report 710 · 2012

"This report provides state departments of transportation (DOTs), metropolitan planning organizations (MPOs), and other transportation agencies with a rich source of practical and effective tools, techniques, and approaches for identifying and connecting with populations that have traditionally been underserved and underrepresented in transportation decision-making. The report is organized in an easy-to-use format that gives transportation agency staff responsible for developing and maintaining community relationships—for one project or on a continuous basis—proven tools, techniques, and approaches to be successful. This report should be of immediate use to transportation professionals who manage, develop, or implement public involvement activities for a transportation agency." --TRID

This report is available for free download (22.4 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_710.pdf



Item 13

Estimating Life Expectancies of Highway Assets. Volume 1: Guidebook

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCHRP Report 713 vol.1 • 2012

This two-volume report provides a methodology for estimating the life expectancies of major types of highway system assets, in a form useful to state departments of transportation (DOTs) and others, for use in lifecycle cost analyses that support management decision making. Volume 1 is a guidebook for applying the methodology in DOT asset management policies and programs.

This report is available for free download (7.1 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_713v1.pdf

Item 14

Highway Safety Manual Training Materials

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCHRP Report 715/CRP-CD-106 • 2012

"This report provides the training materials to aid in implementing the AASHTO Highway Safety Manual (HSM). The training materials provide a broad overview of the HSM format and procedures. The enclosed CD-ROM (CRP-CD-106) includes presentation slides with speaker notes, participant handouts, interactive sample problems, smart spreadsheets, and similar supporting documents. Since the target audience for this training is transportation professionals who are not required to have a vast knowledge of safety assessment procedures, the collection of training material includes basic introductory information as well as specific content for advanced procedures where appropriate. The report also briefly addresses the preferred expertise of the candidate instructors so as to enhance the learning experience for all involved parties. The report will be of particular interest to safety practitioners responsible for developing and managing highway safety improvement programs." --TRID

This report is available for free download (Website includes links for downloading report and CD-ROM contents):

<http://www.trb.org/Publications/Blurbs/167185.aspx>



Item 15

Travel Demand Forecasting: Parameters and Techniques

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCHRP Report 716 · 2012

"This report... provides guidelines on travel demand forecasting procedures and their application for solving common transportation problems. The report presents a range of approaches that allow users to determine the level of detail and sophistication in selecting modeling and analysis techniques most appropriate to their situations and addresses straight-forward techniques, optional use of default parameters, and appropriate references to other more sophisticated techniques." --TRID

This report is available for free download (5.4 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_716.pdf

Item 16

Guidelines for Project Selection and Materials Sampling, Conditioning, and Testing in WMA Research Studies

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCHRP RRD 370 · 2012

This digest summarizes the results of a workshop held on May 13, 2011 in Irvine, California, to coordinate key warm mix asphalt (WMA) research projects. The results of the workshop are presented in tables which contain a proposed core set of criteria, methods, and protocols, including the following: field project selection criteria (Table 1); specimen preparation methods (Table 2); conditioning methods for laboratory-mixed, laboratory-compacted (LMLC) specimens, plant-mixed, laboratory-compacted (PMLC) specimens, and plant-mixed, field-compacted (PMFC) specimens (Table 3); performance test methods for LMLC, PMLC, and PMFC specimens (Table 4, Table 5, Table 6, and Table 7); and binder and aggregate test methods (Table 8).

This report is available for free download (1.8 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_370.pdf



Item 17

A Toolkit for Reporting Rural and Specialized Transit Data: Making Transit Count

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCHRP RRD 373 • 2012

The objective of this research was to identify the data reporting requirements of state departments of transportation (DOTs) to meet the Federal Transit Administration's (FTA's) requirements, and develop a set of tools to assist state DOTs and individual rural and specialized transit providers in data collection, analysis, management, and reporting. The objective was also to conduct an analysis of automated transit data collection and reporting processes in state DOT transit units. Tasks included a review of FTA's requirements for rural and specialized transit data reporting; issuance of a questionnaire to DOTs to learn about data reporting collection processes and needs; and the preparation of mini-case studies to highlight DOT automated transit data collection and reporting processes.

This report is available for free download (24.4 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_373.pdf

Item 18

Rural Public Transportation Strategies for Responding to the Livable and Sustainable Communities Initiative

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

NCHRP RRD 375 • 2012

"This digest summarizes key findings of research performed under NCHRP Project 20-65, Task 42, Rural Public Transportation Strategies for Responding to the Livable and Sustainable Communities Initiative, by ICF International. For the study, ICF conducted a nationwide survey of state departments of transportation (DOTs) and their rural livability activities; conducted follow-up interviews about grants from the Partnership for Sustainable Communities (PSC); and created a primer highlighting strategies that state DOTs, transit operators, and their partners can use to help rural organizations applying for discretionary grant programs. The strategies discussed in the primer are: (1) Building awareness of PSC resources and livability in rural communities; (2) Providing programmatic and financial support; (3) Creating statewide or regional partnerships; and (4) Encouraging transit coordination at the regional level." --TRID

This report is available for free download (717 KB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rrd_375.pdf



Item 19

Engineering Economic Analysis Practices for Highway Investment: A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD (TRB)
NCHRP Synthesis 424 · 2012

"This study has looked at how U.S. transportation agencies have applied engineering economics (benefit-cost analyses and similar procedures) to decisions on highway investments. State departments of transportation (DOTs) are most likely to use economic methods when considering investments in pavement and bridge preservation, safety improvements, and major projects on trunk lines and in urban areas. This study, however, has found agencies that use economic information across their key business and decision processes. Information was gathered through literature review, presentations at conference committee meetings, a screening survey of state DOTs, and interviews leading to case studies." --TRID

This report is available for free download (2.6 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_424.pdf

Item 20

Performance-Based Highway Maintenance and Operations Management: A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD (TRB)
NCHRP Synthesis 426 · 2012

"This synthesis examines current performance-based management practices that are applied by state departments of transportation (DOTs) in highway maintenance and operations (M&O). Past studies have focused on the elements that make up a performance-based M&O approach, such as condition ratings, levels of service, performance measures, and threshold values. This study focuses on how state DOTs actually use performance-based measures to manage their highway programs. Information used in this study was acquired through a review of the literature, a survey of state DOTs, and follow-up interviews with four state DOTs to develop case examples of highway M&O performance management." --TRID

This report is available for free download (3.5 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_426.pdf



Item 21

Extent of "Highway Capacity Manual" Use in Planning: A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD (TRB)

NCHRP Synthesis 427 • 2012

The Highway Capacity Manual (HCM), a publication of the Transportation Research Board, is used for a variety of transportation facility and traffic engineering applications. This study reports on the current use of the HCM in transportation planning by federal, state, regional, and local agencies. The scope includes performance monitoring, problem identification, project prioritization, programming, and decision-making processes. Information was gathered through a literature review, a survey of selected agencies, and in-depth interviews.

This report is available for free download (1.4 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_427.pdf

Item 22

Geotechnical Information Practices in Design-Build Projects: A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD (TRB)

NCHRP Synthesis 429 • 2012

"Use of the design-build project delivery method by state agencies for transportation projects is increasing each year. This study reviews how states use geotechnical information in solicitation documents and contracts for design-build highway projects. The report examines current practices regarding the allocation of geotechnical risk and the level of geotechnical information provided with bid documents, the scope of geotechnical information required after contract award, geotechnical-related performance testing during construction, and contract provisions related to geotechnical design and construction. Information used in this study was gathered through a literature review, a survey of state departments of transportation (DOTs), analysis of design-build policy guidelines and solicitation documents from state DOTs, and interviews with design-build contractors. The report also provides case studies on legal and engineering geotechnical issues." -- TRID

This report is available for free download (2.0 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_429.pdf



Item 23

Recent Roadway Geometric Design Research for Improved Safety and Operations: A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD (TRB)
NCHRP Synthesis 432 · 2012

"[This synthesis] reviews and summarizes selected roadway geometric design literature completed and published from 2001 through early 2011, particularly research that identified impacts on safety and operations. The report is structured to correspond to chapters in AASHTO's "A Policy on Geometric Design of Highways and Streets," more commonly referred to as the Green Book. Information for the synthesis study was collected using an extensive literature review and analysis." --TRID

This report is available for free download (3.1 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_432.pdf

Item 24

Use of the U.S. Census Bureau's Public Use Microdata Sample (PUMS) by State Departments of Transportation and Metropolitan Planning Organizations: A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD (TRB)
NCHRP Synthesis 434 · 2012

"Census microdata are the confidential records of specific individuals and housing units from whom Decennial Census or American Community Survey responses have been obtained. The U.S. Census Bureau also draws a sample from the full set of microdata and makes these sampled records available in the Public Use Microdata Sample (PUMS) data products, so that users can develop their own tabulations. These data are being used by state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) for studies, such as analyses of the commuting characteristics of population subgroups, and for supporting travel demand model and land use models." --Preface

This report is available for free download (1.7 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_434.pdf



Item 25

Local Policies and Practices that Support Safe Pedestrian Environments: A Synthesis of Highway Practice

TRANSPORTATION RESEARCH BOARD (TRB)
NCHRP Synthesis 436 · 2012

Many communities around the country have adopted regulatory, administrative, and financial practices designed to promote and fund safe pedestrian facilities and activities. The objective of this study is to document various tools and strategies used by municipalities to improve the safety, convenience, and accessibility of the pedestrian experience. Information used in this study was acquired through a review of the literature and interviews with key staff in local agencies that have implemented practices designed to support pedestrian-friendly environments.

CONTENTS

- Introduction
- State of practice in the industry
- Case studies
- Summary of implementation challenges and strategies
- Conclusions

This report is available for free download (1 MB):

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_436.pdf

Item 26

Expedited Planning and Environmental Review of Highway Projects

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES
SHRP2 Report S2-C19-RR-1 · 2012

"The main objective of this project was to describe tools, techniques, and strategies to expedite delivery of highway capacity projects and programs of projects based on review of selected case studies. This project added to the growing body of research and understanding about expediting transportation project delivery, focusing in particular on the early planning, corridor planning, programming, and environmental phases of delivery. The project identified common types of bottlenecks, identified specific strategies that can address these bottlenecks, and documented case studies that provide further illustration of how these bottlenecks have been encountered and successfully addressed. Strategies implemented in the early phases typically provide expediting benefits in subsequent phases of project delivery. Key results from this project were incorporated into TCAPP."--Publisher's description.

This report is available for free download (1.4 MB):

http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_S2-C19-RR-1.pdf



Research Digest

Item 27

Legal Issues Involving Surety for Public Transportation Projects

TRANSPORTATION RESEARCH BOARD (TRB). TRANSIT COOPERATIVE RESEARCH PROGRAM (TCRP)
TCRP LRD 40 · 2012

"Various types of surety bonds are used on transit projects, each of which fulfills a specified purpose. They typically fall under one of four common categories: bid bonds, performance bonds, payment bonds, or warranty or maintenance bonds. Transit owners, like other owners of capital projects, use these bonds as a means of mitigating the risk of contractor default. Most often owners of large capital projects encounter unique problems when seeking surety bonds... This digest includes a review of applicable federal law, examples of state and local laws, and industry practices. The digest also examines surety issues and industry practices in various types of construction and other public transportation projects. The types of surety available, including performance, payment, and warranty bonds; letters of credit; and other instruments, are discussed." --p.1

This report is available for free download:

http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_lrd_40.pdf

Item 28

A Guide for Implementing Bus on Shoulder (BOS) Systems

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES
TCRP Report 151 · 2012

"Provides guidelines for the planning, design, and implementation of BOS operations along urban freeways and major arterials ... The report should be useful as a decision-making guide to assist transit operators, state DOTs, MPOs, and other stakeholders in assessing the feasibility of the BOS concept, developing safe and effective BOS plans, implementing initial BOS operations, and maintaining or expanding ongoing BOS operations."--Foreword.

This report is available for free download (7.2 MB):

http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_151.pdf



Item 29

Guidelines for Providing Access to Public Transportation Stations

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

TCRP Report 153/CRP-CD-107 · 2012

"This report provides a process and spreadsheet-based tool for effectively planning for access to high capacity transit stations, including commuter rail, heavy rail, light rail, bus rapid transit (BRT), and ferry. The report is accompanied by a CD that includes the station access planning spreadsheet tool that allows trade-off analyses among the various access modes (automobile, transit, bicycle, pedestrian, and transit-oriented development) for different station types. The potential effectiveness of transit-oriented development opportunities to increase transit ridership is also assessed. This report and accompanying materials are intended to aid the many groups involved in planning, developing, and improving access to high capacity transit stations, including public transportation and highway agencies, planners, developers, and affected citizens." --TRID

The appendices to TCRP Report 153 provide detailed additional information and are available on the accompanying CD.

This report is available for free download at the following website:

<http://www.trb.org/Publications/Blurbs/166516.aspx>

Item 30

Guidebook for Evaluating Fuel Purchasing Strategies for Public Transit Agencies

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES

TCRP Report 156 · 2012

This report is a guidebook for public transit agency professionals on how to identify and evaluate risks and uncertainties with respect to fuel prices, and describes tools and techniques for minimizing the impact of these uncertainties over time. This guidebook introduces the concept of fuel price risk management to public transit agencies, identifying alternative purchasing strategies and outlining steps necessary to implement an effective risk management program. It defines and evaluates alternative cost-effective fuel purchasing strategies designed to benefit public transportation agencies of varying sizes, and it provides a management framework to assist transit agencies through the fuel purchasing process. While using this guidebook, it is important to recognize that "risk management" is distinct from "removal of risk." It does not assure the lowest fuel prices; rather, it seeks to control the impact of price swings on overall transit system operating budgets.

This report is available for free download (3.5 MB):

http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_156.pdf



Research Digest

Item 31

Assessing and Comparing Environmental Performance of Major Transit Investments: Summary of Research Findings

TRANSPORTATION RESEARCH BOARD (TRB). TRANSIT COOPERATIVE RESEARCH PROGRAM (TCRP)
TCRP RRD 105 · 2012

"This digest presents the results of Transit Cooperative Research Program (TCRP) Project H-41, Assessing and Comparing Environmental Performance of Major Transit Investments. The research was undertaken to offer decision makers optional criteria, metrics, and methods for assessing transit projects with regard to environmental performance. The first phase of research included a literature review, interviews with stakeholders, a review of four recent transit project alternatives analysis documents or environmental impact statements, an enumeration of potential metrics, and development of a more detailed approach to screening and selecting metrics. In the second phase of research the selected metrics were tested on six pilot projects." --TRID

This report is available for free download (581 KB):

http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rrd_105.pdf



Item 32

Financing Surface Transportation in the United States: Forging a Sustainable Future Now! Summary of the Fourth International Conference

TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES
TRB CP 48 · 2012

"This Fourth International Conference on Transportation Finance attracted some 150 transportation finance specialists from the public and private sectors. They gathered to share the latest developments in innovative funding techniques and to explore options for securing continued revenue to support national infrastructure and mobility needs. The conference's opening plenary session featured keynote presentations by Victor Mendez, Federal Highway Administrator, and Jane Garvey, North American Chair for Meridiam Infrastructure, who highlighted transportation priorities and future opportunities. The subsequent plenary sessions each explored a different issue, as follows: the policy dynamics of future surface transportation finance, public and political acceptance issues posed by alternative financing methods, international project finance, sustainable transportation finance, emerging issues, and creation of a research road map for the future. The conference also featured two preconference workshops describing the state of the practice for performing benefit-cost analysis and discussing emerging trends for raising capital, and several breakout sessions after each plenary session. This report is a factual summary of what occurred at the conference." --TRID

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This report is available for free download (2.4 MB):

<http://onlinepubs.trb.org/onlinepubs/conf/CP48.pdf>