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General

ACTT Workshop: Wyoming. Held in DuBois, Wyoming on September 21-22, 2005
Federal Highway Administration, Washington, DC. 2005, 90p, FHWA-IF-05-010. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110154WTS Price code: PC A06/MF A01

Accelerated Construction Technology Transfer (ACTT) is a strategic process that uses innovative techniques and technologies to reduce construction time on major highway projects while enhancing safety and improving quality. The process is implemented by conducting 2-day workshops for State departments of transportation (DOTs). The American Association of State Highway Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) jointly fund ACTT workshops. In September 2004, the Wyoming Department of Transportation (WYDOT) hosted a workshop that brought together transportation professionals from around the Nation. The primary objective of the workshop was to draw on the expertise of participants to help WYDOT achieve its goal of minimizing construction time for its US-287/26, between Moran Junction and Dubois. The $100 million project is to reconstruct this 37-mile stretch of the highway to upgrade to a super-two facility with passing lanes. The primary project challenge is to complete the project under traffic while minimizing socioeconomic, environmental, and wildlife impacts.

Border Security: Opportunities to Increase Coordination of Air and Marine Assets
Government Accountability Office, Washington, DC. Aug 2005, 38p, GAO-05-543. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109989WTS Price code: PC A04/MF A01

Three agencies of the Department of Homeland Security (DHS) have primary responsibility for securing the nation's borders--the U.S. Coast Guard (USCG), Customs and Border Protection (CBP), and Immigration and Customs Enforcement (ICE). Together, they enforce security across 7,500 miles of land border between the United States and Mexico and Canada, and protect more than 361 seaports and 95,000 miles of coastline. To fulfill their missions, these agencies deploy a variety of valuable air and marine assets. In this report, GAO analyzed (1) what efforts DHS has undertaken to facilitate coordination of the air and marine assets of the three agencies and (2) how the agencies local air and marine units have, in selected areas, coordinated the use of assets and what challenges they faced.

Crack Control for Ledges in Inverted 'T' Bent Caps
R. R. H. Zhu, H. Dhonde, and T. T. C. Hsu.
Houston Univ., TX. Dept. of Civil and Environmental Engineering. Jan 2004, 6p, PSR-0-1854-S. See also PB2002-104368, PB2005-106314, and PB2005-106315. Sponsored by Texas Dept. of Transportation, Houston. and Federal Highway Administration, Austin, TX. Texas Div. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109454WTS Price code: PC A02/MF A01

Inverted 'T' bent caps are used extensively on Texas bridges because they are aesthetically pleasing and offer a practical means to increase vertical clearance. The cross-section of an inverted 'T' bent cap consists of a 'web' with short cantilever 'ledges' at the bottom to support the bridge girders, thus minimizing the structural depth of bridges. The problem is that at service load unacceptable diagonal cracking frequently occurs between the cantilever ledges and the web. In addition to giving the appearance of structural distress, excessive crack widths can lead to the corrosion of reinforcement and the shortening of service life of bridges.

Do Neighborhood Attributes Affect Commuting Times
P. Gordon, B. Lee, J. E. Moore, and H. W. Richardson. University of Southern California, Los Angeles. 1 Sep 2005, 40p. See also PB2005-101958. Sponsored by Department of Transportation, Washington, DC. University Transportation Centers Program. and California State Dept. of Transportation, Los Angeles. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110431WTS Price code: PC A04

Can generic neighborhood types for Californias major metropolitan areas be defined. To what extent do neighborhood differences affect commuting times. Using census data, including TIGER file variables that describe street patterns and transit and highway accessibility, we found that there are identifiable residential as well as workplace neighborhood types observable throughout the four major California metropolitan areas. We also found that many of these had consistent effects on commuting durations across the four areas. In most cases, neighborhood effects helped to explain a longer commute than could be explained by a generalized accessibility index. Many households trade off desirable neighborhood characteristics (at work and/or at home) for a longer commute. All things considered, jobs-housing balance is, apparently, not high on most peoples agenda.

Elements of a Comprehensive Signals Asset Management System
Cambridge Systematics, Inc., MA. Dec 2004, 70p, FHWA-HOP-05-006. Sponsored by Federal Highway Administration, Washington, DC. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110153WTS Price code: PC A05/MF A01

This document takes an initial step towards development of an operations asset management methodology through an investigation of traffic signal systems applications. It presents findings of a state-of-the-practice review of signal systems asset management and lays out the characteristics of signal systems that need to be considered in defining an asset management approach. The report then develops an architecture for a signal system asset management system, and presents an analysis illustrating how such a system could be used to evaluate tradeoffs across different options for addressing signal system deficiencies. The report concludes with a comparison of the signal systems asset management approach to asset management systems currently in use for infrastructure assets and information technology assets. Elements of each of these two types of asset management systems can be used as models for the further development of the signal systems asset management methodology. The architecture, analysis, and comparison presented in the report provide a solid basis for proceeding with further development of a signal system asset management approach. They also provide insights that are applicable to developing asset management approaches for other types of operations assets.

Environmental Impacts of a Modal Shift
Minnesota Dept. of Transportation, St. Paul. Jan 1991, 24p. See also PB2005-110459. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110453WTS Price code: PC A03/MF A01

Concern for the environmental impacts of any activity on or in Minnesota's waterways has generated a great number of studies and will likely continue to cause study. Commercial navigation is often the focal point of these analyses. Navigation has, in the majority of the studies, been viewed as a major contributor to environmental degradation of the waterways as a precondition to the study. Historically, environmental assessments have confined their transportation related reviews to the possible impacts from operations of vessels and shore side support activities. The possible environmental impacts of not developing a waterways projects or not maintaining or improving an existing operation are never included in the environmental analysis. Continued concern about the impacts on commercial navigation from such an approach caused the Minnesota Department of Transportation (Mn/DOT) to undertake this study. This analysis will examine the type and extent of environmental impacts which could result from a shift waterborne carriage of certain commodities to other modes of transportation.

Freight Technology Story: Intelligent Freight Technologies and Thier Benefits
North River Consulting Group, Northmarshfield, MA. Jun 2005, 74p, FHWA/HOP-05-030. Sponsored by Federal Highway Administration, Washington, DC. Office of Freight Management and Operations. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107598WTS Price code: PC A05/MF A01

This report discusses advancements in information technologies and telecommunications that have improved the efficiency, reliability, and security of freight transportation and increased global connectivity. It also describes how these technologies work and the benefits they deliver, including the results form intelligent freight technology field operational tests (FOTs) and other initiatives.

Funding Strategies and Project Costs for State-Supported Intercity Passenger Rail: Selected Case Studies and Cost Data
Texas Transportation Inst., College Station. Jun 2005, 166p, REPORT 0-4723-1, FHWA/TX-05/0-4723-1. Sponsored by Texas Dept. of Transportation, Austin. Research and Technology Implementation Office. and Federal Highway Administration, Austin, TX. Texas Div. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109453WTS Price code: PC A09

This report documents an investigation into project costs and funding strategies that U.S. states and coalitions of states use to fund intercity passenger rail projects. Four states (California, North Carolina, Pennsylvania, and Virginia) and one multi-state corridor (the Pacific Northwest Corridor in

Washington and Oregon) with documented histories of funding intercity passenger rail projects were selected for in-depth review. Factors that were considered in the case studies included: state-level funding sources, project costs, and estimated costs for future projects. A secondary goal of this research was to develop project cost analysis tools, such as a cost-per-mile index, for use by state rail planners in evaluating proposed intercity passenger rail projects. The research team concluded that the development of universally applicable cost-per-mile indices for intercity rail was infeasible at present due to the great number of variables involved in rail construction and the relatively small sample size of recent, comparable projects. Variables involved include project-specific factors such as terrain type, drainage requirements, regional labor and material costs, signalization and communication upgrade requirements, and the condition/track classification/traffic levels of existing infrastructure. As a result, researchers developed example project cost data and model cost ranges by project type.

Tiltakspakker for Kollektivtransport 1996-2000. Kollektivtrafikantenes Vurdering av Tiltakene og Endret Bruk av Buss (Public Transport Packages of Measures 1996-2000. Passengers Evaluation of Service Improvements and Effect on Trip Frequency)
B. Norheim, and K. N. Kjorstad.
Transportoekonomisk Inst., Oslo (Norway). cDec 2004, 132p, TOI-736/2004. Text in Norwegian; summary in English. See also PB2005-106393 and PB2005-106396. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109475WTS Price code: PC A08

In the period from 1996-2000, packages of measures were introduced for public transport, partly financed by the Ministry of Transport and Communications. This report analyzes user surveys from 10 packages of measures in order to indicate the passenger evaluations of the measures and any changes in the use of public transport. Changes in frequency have the greatest effect on overall satisfaction. There is a clear connection between satisfaction and frequency of travel. The effect of a poorer service is greater than the effect of a better service. This means that it is easier to lose passengers than to attract new ones through changes in the service. The packages of measures have equally important significance for reducing the drop off in journeys as for increasing the number of journeys. The measures which have been implemented have, in other words, contributed to counteracting an underlying negative trend in passenger development.

Transportpakker i by. Rammebetingelser, Organisering og Innhold en Oversikt (Urban Transport Packages in Norway. Organisation, Content and Framework An Overview)
J. T. Bekken, and O. Osland.
Transportoekonomisk Inst., Oslo (Norway). cDec 2004, 88p, TOI-744/2004. Text in Norwegian; summary in English. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109474WTS Price code: PC A06/MF A01

The focus in this report is the toll cordons/transport packages in the four largest Norwegian urban areas: Oslo, Bergen, Trondheim and Nord-Jaeren. The following questions are addressed. What are the characteristics of these packages in particular in terms of the financing scheme and the use of revenue; what are the reasons behind the content of the different packages. The question concerns the relation and interplay between framework, organization and decision-making processes. What are the strengths and the weaknesses of the organization of the packages. Our main focus is to evaluate whether the organization of the packages lead to priorities that are in accordance with the overall transport policy. We conclude that the overall effect of the organization is ambiguous. In terms of improved mobility the organization has resulted in increased funding for infrastructure. However, the organizational focus on making the packages acceptable by the public and the focus on investments result in other important policies being omitted, such as parking policy.

Air Transportation

Aviation Safety: FAA Management Practices for Technical Training Mostly Effective; Further Actions Could Enhance Results
Government Accountability Office, Washington, DC. Sep 2005, 96p, GAO-05-728. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109994WTS Price code: PC A06/MF A01

One key way that the Federal Aviation Administration (FAA) makes air travel safer is to inspect the manufacture, operation, and maintenance of aircraft that fly in the United States. To better direct its resources, FAA is shifting from an inspection process that relied on spot-checks of compliance with regulations to one that evaluates operating procedures and analyzes inspection data to identify areas that pose the most risk to safety (called system safety). While FAA believes the new approach requires some technical knowledge of aircraft, Congress and GAO have long-standing concerns over whether FAA inspectors have enough technical knowledge to effectively identify risks. GAO reviewed the extent that FAA follows effective management practices in ensuring that inspectors receive up-to-date technical training.

Aviation Safety: Oversight of Foreign Code-Share Safety Program Should Be Strengthened
Government Accountability Office, Washington, DC. Aug 2005, 64p, GAO-05-930. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110005WTS Price code: PC A05/MF A01

U.S. airlines are increasingly relying on code-share partnerships with foreign carriers to provide additional sources of revenue. Code-sharing is a marketing arrangement in which an airline places its designator code on a flight operated by another airline and sells and issues tickets for that flight. To determine whether the foreign code-share partners of U.S. airlines meet an acceptable level of safety,

in 2000, the Department of Transportation (DOT) established the Code-Share Safety Program, which requires U.S. airlines to conduct safety audits of their foreign code-share partners as a condition of code-share authorization. GAO's objective was to assess the federal government's efforts to provide reasonable assurance of safety and security on foreign code-share flights. GAO reviewed (1) the extent to which DOT's code-share authorization process is designed to consider safety and security, (2) the Federal Aviation Administration's (FAA) management of the Code-Share Safety Program, and (3) the implementation of the program by airlines and the results.

Aviation Security: Flight and Cabin Crew Member Security Training Strengthened, but Better Planning and Internal Controls Needed

Government Accountability Office, Washington, DC. Sep 2005, 54p, GAO-05-781. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

PB2005-109997WTS Price code: PC A05/MF A01

Training flight and cabin crew members to handle potential threats against domestic aircraft is an important element in securing our nations aviation system. The responsibility for ensuring that crew members are prepared to handle these threats is a shared responsibility between the private sector--air carriers--and the federal government, primarily the Transportation Security Administration (TSA). This report addresses (1) actions TSA has taken to develop guidance and standards for flight and cabin crew member security training and to measure the effectiveness of the training, (2) how TSA ensures domestic air carriers comply with the training guidance and standards, and (3) efforts TSA has taken to develop and assess the effectiveness of its voluntary self-defense training program.

Flight Test Evaluation of Situation Awareness Benefits of Integrated Synthetic Vision System Technology f or Commercial Aircraft

L. J. Prinzel, L. J. Kramer, and J. J. Arthur. NASA Langley Research Center. 2005, 6p. Text in English. Presented at 2005 (13th) International Symposium on Aviation Psychology, Oklahoma City, OK, United States, 18-21 Apr. 2005. Publicly available Unlimited. CASI. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

N20050192472WTS Price code: PC A02/MF A01

Research was conducted onboard a Gulfstream G-V aircraft to evaluate integrated Synthetic Vision System concepts during flight tests over a 6-week period at the Wallops Flight Facility and Reno/Tahoe International Airport. The NASA Synthetic Vision System incorporates database integrity monitoring, runway incursion prevention alerting, surface maps, enhanced vision sensors, and advanced pathway guidance and synthetic terrain presentation. The paper details the goals and objectives of the flight test with a focus on the situation awareness benefits of integrating synthetic vision system enabling technologies for commercial aircraft.

Ghana Civil Aviation Authority. Accra-Kotoka International Airports Integrated Noise Impact Report. A Segment of the Final Report

AAROTEC Group, Fairfax, VA. Jan 2005, 316p. This document was provided to NTIS by the U.S. Trade and Development Agency, Rosslyn, VA. See also PB2005-106440, Volume 3. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

PB2005-106439WTS Price code: PC A15

This part prescribes the procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving of those programs. It prescribes single systems for: (a) measuring noise at airports and surrounding areas that generally provides a highly reliable relationship between projected noise exposure and surveyed reaction of people to noise; and (b) determining exposure of individuals to noise that result from the operations of an airport. This part also identifies those land uses which are normally compatible with various levels of exposure to noise by individuals. It provides technical assistance to airport operators, in conjunction with other local, State, and Federal authorities, to prepare and execute appropriate noise compatibility planning and implementation programs.

Ghana Civil Aviation Authority - Investment Plan for Accra, Kumasi and Tamale Airports and Civil Aviation Academy. Final Report, Volume 1

AAROTEC Group, Fairfax, VA. Jan 2005, 358p. This document was provided to NTIS by the U.S. Trade and Development Agency, Rosslyn, VA. See also PB2005-106439, Volume 2. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

PB2005-106438WTS Price code: PC A17

This report, conducted by the 'Aarotec Infrastructure Group,' was funded by the U.S. Trade and Development Agency. The objective of the study is to provide the 'Ghana Civil Aviation Authority' with a coordinated and prioritized investment program for the Accra, Kumasi, and Tamale airports, as well as for the proposed Civil Aviation Training Academy, including recommendations as to the means of financing and implementation of these investment plans. The report, in three volumes, contains information on existing airport facilities, airport development, air traffic demand versus existing capacity, environmental impacts, airport development and land use plans, investment and financing requirements, and the Aviation Training Academy. This project has the potential to produce $40 million in U.S. exports, with the bulk of exports in equipment, materials, and technical services.

Ghana Civil Aviation Authority. Investment Plan for Accra, Kumasi and Tamale Airports and Civil Aviation Academy. Supplementary Note

AAROTEC Group, Fairfax, VA. Mar 2005, 24p. This document was provided to NTIS by the U.S. Trade and Development Agency, Rosslyn, VA. See also PB2005-

106438, (Vol. 1). Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-106440WTS Price code: PC A03

The present document is intended to complement the Final Report dated January 2005 which was approved by the Ghana Civil Aviation Authority (GCAA) as evidenced by the returned Certified Invoice for final payment, signed and dated October 17, 2004 and returned to AAROTEC, January 2005, which was submitted to USTDA on January 19, 2005. In particular, the present Supplementary Note addresses the following issues relative to the tasks specified in the Terms of Reference of the study: (Task 5) Identification of sources in the US for equipment and supplies; (Task 5) Development of a list of required equipment for the Civil Aviation Training Academy; and (Task 6) Development of a financing plan for the cost of the aggregate capital improvement program.

Hypersonic Wind Tunnel Calibration Using the Modern Design of Experiments
M. N. Rhode, and R. DeLoach.
NASA Langley Research Center. 2005, 27p. Text in English. Presented at 41st AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, Tucson, AZ, United States, 10-13 Jul. 2005. Publicly available Unlimited. CASI. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
N20050192473WTS Price code: PC A03/MF A01

A calibration of a hypersonic wind tunnel has been conducted using formal experiment design techniques and response surface modeling. Data from a compact, highly efficient experiment was used to create a regression model of the pitot pressure as a function of the facility operating conditions as well as the longitudinal location within the test section. The new calibration utilized far fewer design points than prior experiments, but covered a wider range of the facility s operating envelope while revealing interactions between factors not captured in previous calibrations. A series of points chosen randomly within the design space was used to verify the accuracy of the response model. The development of the experiment design is discussed along with tactics used in the execution of the experiment to defend against systematic variation in the results. Trends in the data are illustrated, and comparisons are made to earlier findings.

Kingdom of Morocco, Ministry of Finance and Privatization. Technical Assistance for the Privatization of Moroccan Airports. Preliminary Evaluation of the Perspective for Privatization of Moroccan Airports. Final Report, Financial Model Documents. Volume 1
Aarotech Infrastructure Group, Inc., Oakton, VA. Apr 2005, 124p. See also PB2005-109001. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109002WTS Price code: PC A07

The US Trade and Development Agency (TDA) funded the feasibility study of Moroccan airports privatization. It will help probe the privatization project of some airports in the kingdom in a bid to upgrade services and infrastructure to meet growing air-traffic demand and develop a competitive edge. The report contains financial models.

Operational Benefits of the Integrated Terminal Weather System (ITWS) at Atlanta
S. Allan, and J. Evans.
Massachusetts Inst. of Tech., Lexington. Lincoln Lab. 15 Jul 2005, 170p, ATC-320. Sponsored by Federal Aviation Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107659WTS Price code: PC A09

This report summarizes the results of an initial study to estimate the yearly delay reduction provided by the initial operational capability (IOC) Integrated Terminal Weather System (ITWS) at Hartsfield-Jackson Atlanta International Airport (ATL). Specific objectives of this initial study were to: analyze convective weather operations at ATL to determine major causes of convective weather delay and how those might be modeled quantitatively; provide estimates of the ATL ITWS delay reduction based on the 'Decision/Modeling' method using questionnaires and interviews with Atlanta Terminal Radar Approach Control (TRACON) and Air Route Traffic Control Center (ARTCC) operational ITWS users; assess the 'reasonableness' of the model-based delay reduction estimates by comparing those savings with estimates of the actual weather-related arrival delays at ATL. In addition, the reasonableness of model-based delay reduction estimates was assessed by determining the average delay savings per ATL flight during times when adverse convective weather is within the coverage of the ATL ITWS; conduct an exploratory study confirming the ATL ITWS delay savings by comparing Aviation System Performance Metrics (ASPM) database delays pre-and post-ITWS at ATL; assess the accuracy of the 'downstream' delay model employed in this study by analyzing ASPM data from a major US airline; and make recommendations for follow-on studies of the ITWS delay reduction at Atlanta and other IOC ITWS facilities. All of these objectives were achieved.

Partially Premixed Flame (PPF) Research for Fire Safety
I. K. Puri, S. K. Aggarwal, A. J. Lock, and U. Hegde.
Illinois Univ. Aug 2004, 11p. Publicly available Unlimited. CASI. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
N20040161243WTS Price code: PC A03/MF A01

Incipient fires typically occur after the partial premixing of fuel and oxidizer. The mixing of product species into the fuel/oxidizer mixture influences flame stabilization and fire spread. Therefore, it is important to characterize the impact of different levels of fuel/oxidizer/product mixing on flame stabilization, liftoff and extinguishment under different gravity conditions. With regard to fire protection, the agent concentration required to achieve flame suppression is an important consideration. The initial stage of an unwanted fire in a microgravity environment will depend on the level

of partial premixing and the local conditions such as air currents generated by the fire itself and any forced ventilation (that influence agent and product mixing into the fire). The motivation of our investigation is to characterize these impacts in a systematic and fundamental manner.

Public Sector Value Analysis of Boston-Logan International's Terminal B Parking Garage
W. B. Blew, and K. B. Elenes.
John F. Kennedy School of Government, Cambridge, MA. 10 Aug 2005, 53p. The original document contains color images. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
ADA436629WTS Price code: PC A05/MF A01

The parking system at Boston-Logan International Airport may seem unglamorous to the average traveler, but for The Massachusetts Port Authority, its importance cannot be understated. Not only does the system provide a necessary service to great numbers of travelers every year, but also it generates income for MassPort that subsidizes many of its other activities. Using Accenture's Public Sector Value Model, we analyzed the public value creation of Logan's Terminal B Parking Garage. We created three outcomes consisting of three metrics each in order to conduct our analysis. Then, we used those outcome scores as the Y-axis and cost effectiveness as the X-axis in order to plot the results on a 2 X 2 matrix depicting public value creation. The garage services about one million customers per year and generates roughly 20 million dollars annually. However, four of the last five years have not produced the type of value creation necessary for the garage. While the events of 9/11 clearly had a negative effect, as they did on all airports, the biggest concern for this garage is its reaching of full operational capacity. Our analysis showed that the garage has overextended its operational capacity. Because it has reached capacity, the garage's management can no longer realistically hope to significantly increase outcomes, and as costs inherently rise over time, lower and lower PSV scores will result. Each week brings more and longer closures, a larger parking gap, more revenue lost to damages, and lower customer satisfaction, while exits do not increase. Management will be unable to compensate for the higher costs because they will have few options by which to increase revenue. Since exits cannot increase, the only way to increase revenue is through an increase in rates, which is neither easy to implement or satisfactory to customers.

Small Aircraft Transportation System, Higher Volume Operations Concept: Normal Operations
Booz-Allen and Hamilton, Inc. Aug 2004, 29p.
N20040110780WTS Price code: PC A03/MF A01

For complete citation see Transportation Safety

Global Navigation Systems

Control Systems Architecture, Navigation, and Communication Research Using the NPS Phoenix Underwater Vehicle
D. B. Marco, A. J. Healey, R. B. McGhee, D. P. Brutzman, and R. Cristi.
NAVAL POSTGRADUATE SCHOOL MONTEREY CA CENTER FOR AUTONOMOUS UNDERWATER VEHICLE RESEARCH. 2005, 35p. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
ADA436439WTS Price code: PC A04/MF A01

While there has always been a need to determine the global position of an underwater vehicle, in some missions involving search, mapping, and intervention with objects, navigation to local area landmarks is more appropriate and precise. All aspects of autonomous search have been of interest to us for some time now, and we have recently developed and extended our robot control system architecture using Prolog as a rule based mission specification language to drive vehicle missions involving motion around targets of interest. In particular, we have studied the use of onboard scanning sonar to perform local area navigation. Additionally, we have installed a new low cost short / long baseline acoustic communications / navigation system called DiveTracker, and are developing filtering software that would combine inputs from several sources having different update rates and levels of precision to produce high update rate navigational information with the precision afforded by the low update rate reference. Also, the DiveTracker system affords a low cost acoustic communications system that can be used for low rate message sending and retrieval from autonomous vehicles.

Marine & Waterway Transportation

Environmental Impacts of a Modal Shift
Minnesota Dept. of Transportation, St. Paul. Jan 1991, 24p.
PB2005-110453WTS Price code: PC A03/MF A01

For complete citation see General

Labor at the Ports: A Comparison of the ILA and ILWU
K. Monaco, and L. Olsson.
California State Univ., Long Beach. 2005, 42p. Sponsored by METRANS Transportation Center, Los Angeles, CA. and Department of Transportation, Washington, DC. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110111WTS Price code: PC A04/MF A01

Longshore employment is often used an example of one of the few remaining avenues for blue-collar workers to earn high incomes. Indeed, longshore jobs are the few in the contry where an individual without a college degree can earn annual income over $90,000. Much like other blue collar occupations, technology has largely transformed the nature of work in the industry, however the power of the union, particulary on the West Coast, has resulted in technology phase-ins that displace as few workers as possible and keep wages high. Longshore workers have also benefited from the movement of manufacturing overseas, which has increased trade volumes at the ports, resulting in substantial hiring of new longshoremen at California ports over the last year.

Technical Assistance to the Mauritius Ports Authority for the Information Technology Implementation Plan
Marine Design and Operations, Inc., Kenilworth, NJ. May

2005, 256p. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-106435WTS Price code: PC A13

Situated on the trade routes of three continents, and serving as the only port in the Mauritius, the Mauritius Ports Authority's (MPA) mission is 'to be an engine of growth in the country by facilitating trade and providing safe, efficient, and competitive port services.' As part of this mission MPA and State Informatics Limited (SIL) a Mauritius based Information Technology (IT) Company, conducted an internal audit. The audit identified that organizational efficiencies exist within MPA due to an absence of an electronic communication network, and organizational automation systems. The MPA/SIL IT Modernization Team outlined their IT modernization objectives which formed the basis of an RFP (released in March of 2002) funded by the United States Trade Development Agency, to hire an US based consulting firm to provide Technical Assistance to MPA with their IT implementation Plan as per the objectives set forth by MPA/SIL Team. Marine Design and Operations, Inc. (MDO Inc.) a maritime transportation consulting firm in the State of New Jersey, was one of several responders to this RFP. MPA decided to award the contract to MDO and formal contract between MPA, USTDA and MDO was signed in November of 2002. The Technical Assistance was to be provided in four main areas: (1) To prepare detailed Automation System Specifications; (2) To identify and evaluate the needs for training of the MPA staff and recommend an appropriate training program; (3) To assist the MPA with the tendering process by preparing the request for proposal (RFP); and (4) To assist with the tender evaluation and selection of the most appropriate solution/providers for the MPA.

Metropolitan Rail Transportation

Funding Strategies and Project Costs for State-Supported Intercity Passenger Rail: Selected Case Studies and Cost Data
Texas Transportation Inst., College Station. Jun 2005, 166p.
PB2005-109453WTS Price code: PC A09

For complete citation see General

——*Foreign Technology*——

Lettbaner Europeiske Erfaringer (Light Rail European Experiences)
J. U. Hanssen, J. T. Bekken, N. Fearnley, and A. H. Steen.
Transportoekonomisk Inst., Oslo (Norway). cFeb 2005, 78p, TOI-764/2005. Text in Norwegian; summary in English.
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109470WTS Price code: PC A06

The report is part of a larger effort initiated in Copenhagen in order to decide on future public transport investments in the city. It gives a brief description of existing, modern light rail system in some European cities and summarizes factors (objectives and goals) on which local decisions in favor of this transport mode are made. As part of the project there is also created a picture gallery showing how light rail is integrated in urban areas.

Pipeline Transportation

Evaluation of Alyeska Pipeline Service Company's Operation of the Trans-Alaska Pipeline System. Comprehensive Monitoring Program Report
Department of the Interior, Washington, DC. Feb 1999, 44p.
Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110448WTS Price code: PC A04/MF A01

The Joint Pipeline Office (JPO) conducted field surveillances and assessments in 1997 and 1998, to evaluate selected aspects of Alyeska Pipeline Service Company's operation of the Trans-Alaska Pipeline System (TAPS). This report explains the issues which were addressed, describes their current status, and identifies instances of noncompliance with the Federal Agreement and Grant and State Lease of Right-of-Way. This reports conclusions will not surprise Alyeska. To their credit, Alyeska's own audits and surveillances have identified these concerns and corrective action is underway. In 1999, JPO will continue to oversee Alyeska's TAPS Operation Program, including compliance with the stipulations of the Grant and Lease, to determine Alyeska's effectiveness in resolving these issues.

Road Transportation

Alabama Department of Transportation Research and Development Peer Exchange Conference 2005
D. S. Turner.
Alabama Univ., Tuscaloosa. Dept. of Civil and Environmental Engineering. 31 May 2005, 36p, UTCA-05406. Sponsored by Alabama Dept. of Transportation, Montgomery. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107656WTS Price code: PC A04/MF A01

This report documents a 2005 Peer Exchange of the Research & Development Bureau of the Alabama Department of Transportation (ALDOT). It was conducted with the participation of DOT research program managers from Georgia, Mississippi, North Carolina, and the Alabama Division of the Federal Highway Administration. In addition, members of the ALDOT Research Committee and university representatives participated, bringing total participation to over 50 individuals. This Peer Exchange concentrated on five high-priority theme areas selected by the ALDOT Bureau of Research and Development. They included: (Theme 1) Organization and Project Management; (Theme 2) University Collaboration; (Theme 3) Research Budget Management; (Theme 4) Research Project Management and Performance Measures; and (Theme 5) Implementation Strategies. For each theme, participants received overview presentations by ALDOT and peer programs. For Theme 2: University Collaboration, the overview was expanded through presentations by seven of ALDOT's university research partners. Following each theme presentation a thorough discussion ensued, with core group members identifying and capturing good ideas and key

thoughts. During the latter portion of the exchange, the core group organized these key thoughts into three categories: (1) Accomplishments of the ALDOT Research & Development Bureau, (2) Opportunities for Improvement, and (3) General Observations. These are contained in the body of the report.

Annual Report of the California DUI Management Information System, 2005. Annual Report to the Legislature of the State of California in Accord With Assembly Bill 757, Chapter 450, 1989 Legislative Session
California State Dept. of Motor Vehicles, Sacramento. Jan 2005, 152p.
PB2005-110118WTS Price code: PC A09/MF A02

For complete citation see Transportation Safety

Automotive Collision Avoidance System Field Operational Test: Final Program Report
General Motors Research and Development Center, Warren, MI. Mar 2005, 116p.
PB2005-110422WTS Price code: PC A07

For complete citation see Transportation Safety

Automotive Collision Avoidance System Field Operational Test Report: Methodology and Results
Michigan Univ., Ann Arbor. Transportation Research Inst. Aug 2005, 522p.
PB2005-110300WTS Price code: PC A23

For complete citation see Transportation Safety

Automotive Collision Avoidance System Field Operational Test Report: Methodology and Results. Appendices
Michigan Univ., Ann Arbor. Transportation Research Inst. Aug 2005, 434p.
PB2005-110421WTS Price code: PC A20

For complete citation see Transportation Safety

Commercial Vehicle Operations (CVO) Advanced Traveler Information Systems (ATIS) Summary of National Practice. Final Report
TranSmart Technologies, Inc., Madison, WI. Jun 2003, 70p. Sponsored by Minnesota Dept. of Transportation, St. Paul. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110451WTS Price code: PC A05/MF A01

The Minnesota Department of Transportation (Mn/DOT) has implemented new and improved Advanced Traveler Information Systems (ATIS) to the general public, most notably 511 phone and web services. These services are intended to provide real-time information about traffic congestion, construction activity and road/weather conditions primarily to general road users such as commuters and longer-distance travelers. As part of an overall policy of facilitating freight movement in Minnesota, Mn/DOT is considering customizing traveler information content or the method of delivery used to better meet the needs of Commercial Vehicle Operators (CVO), in particular, motor carrier operators. As a first step, Mn/DOT is interested in learning from the national experience with CVO ATIS. This report is intended to provide Mn/DOT with a baseline of information to make better decisions about investments in traveler information systems.

Construction Management Practices in Canada and Europe
American Trade Initiatives, Inc., Alexandria, VA. May 2005, 80p, FHWA/PL-05-010. Sponsored by Federal Highway Administration, Washington, DC. Office of Policy. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107592WTS Price code: PC A06/MF A01

Construction management is an essential element of transportation project success, and evolving industry roles are creating changes in conventional U.S. construction management practices. The Federal Highway Administration, American Association of State Highway and Transportation Officials, and National Cooperative Highway Research Program sponsored a scanning study of construction management practices used in Canada and Europe for effective project delivery, contract compliance, and quality assurance. The U.S. team observed the Canadian, European, and U.S. transportation communities face similar political, financial, and resource challenges, but Canadian and European agencies have developed construction management systems that promote more collaboration between the public and private sectors and create stronger long-term partnerships. The international agencies are more willing to delegate traditional highway functions to the private sector when cost and schedule benefits are significant. The team's recommendations for possible implementation in the United State include developing risk assessment and allocation techniques, using qualifications in procurement, piloting early contractor involvement, applying alternate bids and designs in procurement, conducting preproposal meetings, and using appropriate alternative payment methods.

Conversion of the Statewide Noise Barrier Inventory Into a Spatially Referenced Geodatabase
M. Berrios, P. McGilvray, S. L. Forelle, K. Volarich, M. Stamm, E. Householder, P. Brett, C. Bragdon, S. Burton, and C. Bryk.
Florida Atlantic Univ., Fort Lauderdale. 29 Apr 2005, 94p, FAU-1020-411-43. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109966WTS Price code: PC A06

In January of 2004, the Environmental Management Office of the Florida Department of Transportation (FDOT) Central Office and the Catanese Center for Urban and Environmental Solutions (CUES) at Florida Atlantic University (FAU) embarked initiated conversion of the existing statewide noise barrier inventory spreadsheet into a user-friendly geodatabase. The statewide Noise Barrier Geodatabase (NBGD) is the first and only comprehensive geodatabase designed to serve as an inventory for existing and future barriers.

——*Proceedings, Symposia, Etc.*——

Development of Improved Procedures for Business Accommodation on Transportation Construction Projects
R. Ellis, and S. Washburn.
Florida Univ., Gainesville. Dept. of Civil and Coastal

Engineering. 2005, 130p. Sponsored by Florida State Dept. of Transportation, Tallahassee. Research Management Center. and Federal Highway Administration, Tallahassee, FL. Florida Div. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109965WTS Price code: PC A08

Recognizing the transportation construction project can adversely impact adjacent businesses the Florida Department of Transportation sponsored this research project with two primary objectives: to determine the business accommodation needs and priorities for different types of businesses, and to develop strategies for improving business accommodation during transportation construction projects. Business managers of businesses located within highway construction work zones were interviewed concerning their experiences and needs. Focus group meetings of business representatives were conducted. Current planning, design and construction management processes were reviewed with regard to business accommodation issues. Strategies for improving business accommodation were developed. This research resulted in the development of a business survey specification and survey document.

Duluth Entertainment Convention Center (DECC) Special Events Traffic Flow Study Phase II: Mobility Monitoring and Performance Measure via Dynamic Travel Time Prediction
J. S. Yang.
Minnesota Univ.-Duluth. Aug 2005, 50p, CTS-05-09. Sponsored by Minnesota Univ., Minneapolis. Intelligent Transportation Systems Inst. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110117WTS Price code: PC A04

Researchers tested the use of an on-board Global Positioning System to collect travel-time data after special events at the Duluth Entertainment Convention Center in Duluth, Minn. The report also studies travel-time prediction via the Kalman filter algorithm which provides estimates of existing values, predicts future values of prescribed variables and improves estimates of earlier variables. The study was conducted to assist Mn/DOT District One and the City of Duluth Traffic Service Center in the performance monitoring, planning and management of the traffic flow following special events at the Duluth Entertainment Convention Center (DECC). The report focuses on travel-time predictions on the arterial roads adjacent to the DECC. To project travel times that are both accurate and timely, the authors combined the use of test vehicles equipped with an on-board Global Positioning System (GPS) and the application of the Kalman filtering technique to the resulting data. The Kalman filtering technique is a set of mathematical equations that provides an efficient computational (recursive) means of estimating the state of a process in a way that minimizes the mean of the squared error. The integration of these collection and assessment tools has the potential for providing valuable travel-time information to motorists making route choices.

Evaluation of the Effectiveness of Ignition Interlock in California. Report to the Legislature of the State of California in Accord With Assembly Bill 762, Chapter 756, 1998 Legislative Session
California State Dept. of Motor Vehicles, Sacramento. Sep 2004, 32p.
PB2005-110105WTS Price code: PC A04/MF A01

For complete citation see Transportation Safety

Factors Influencing the Use of Booster Seats: A Statewide Survey of Parents
Michigan Univ., Ann Arbor. Transportation Research Inst. Apr 2005, 66p.
PB2005-110110WTS Price code: PC A05/MF A01

For complete citation see Transportation Safety

Forward Collision Warning Requirements Project: Task 4 Final Report
Crash Avoidance Metrics Partnerships, Farmington Hills, MI. Aug 2005, 130p.
PB2005-110425WTS Price code: PC A08

For complete citation see Transportation Safety

Forward Collision Warning Requirements Project: Tasks 2 and 3a Final Report
Crash Avoidance Metrics Partnerships, Farmington Hills, MI. Aug 2005, 84p.
PB2005-110424WTS Price code: PC A06

For complete citation see Transportation Safety

GIS Accident System to Accompany CARE
Alabama Univ. in Huntsville. 30 Jun 2005, 24p.
PB2005-110443WTS Price code: PC A03

For complete citation see Transportation Safety

Guidance for Future Design of Freeways with High-Occupancy Vehicle (HOV) Lanes Based on an Analysis of Crash Data from Dallas, Texas
A. S. Cothron, S. E. Ranft, C. H. Walters, D. W. Fenno, and D. Lord.
Texas Transportation Inst., College Station. May 2004, 24p, PROD-0-4434-P1, FHWA/TX-05/0-4434-P1. Sponsored by Texas Dept. of Transportation, Austin. Research and Technology Implementation Office. and Federal Highway Administration, Austin, TX. Texas Div. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109979WTS Price code: PC A03/MF A01

In Texas, high-occupancy vehicle (HOV) lanes have emerged as an integral part of the state's current and future transportation system to aid urban mobility. As a result, the issue of HOV lane design and the influence of design on safety has become the focus of much attention in the transportation community. This document provides guidance for future design of freeways with HOV lanes based on an analysis of crash data from Dallas, Texas. This guidance indicates desirable corridor characteristics when considering HOV lane implementation and recommends roadway cross-sections when implementing HOV lanes similar to those in operation in Dallas, Texas.

Guidelines for the Use of Countermeasures to Reduce Crashes on Approaches to Signalized Intersections Near Vertical Curves
Texas Transportation Inst., College Station. Sep 2004, 24p.
PB2005-109969WTS Price code: PC A03/MF A01

For complete citation see Transportation Safety

Guidelines for Using Decision Sight Distance at Signalized Intersections Near Vertical Curves
P. A. Barricklow, and M. S. Jacobson.
Texas Transportation Inst., College Station. Sep 2004, 24p, PROD-0-4084-P2, FHWA/TX-05/0-4084-P2. Sponsored by Texas Dept. of Transportation, Austin. Research and Technology Implementation Office. and Federal Highway Administration, Austin, TX. Texas Div. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109978WTS Price code: PC A03/MF A01

Whereas standard roadway design ensures that stopping sight distance (SSD) is provided at all locations along a roadway, there is no standard established for when decision sight distance (DSD) is needed with respect to traffic signals. A reduced decision zone (RDZ) was identified in the research as the location along a roadway with a vertical curve and a traffic signal beyond the curve where SSD is provided but DSD is not. Essentially, motorists within the RDZ are provided with SSD for unexpected stopping but are not provided with the added decision-making and response time that DSD might otherwise provide as they approach the vertical curve and the downstream traffic signal. Contained within this report are techniques for determining whether an RDZ exists along an existing roadway or has the potential to exist in a proposed design. It is suggested that intersections not be located within the RDZ.

Highway Congestion: Intelligent Transportation Systems' Promise for Managing Congestion Falls Short, and DOT Could Better Facilitate Their Strategic Use
Government Accountability Office, Washington, DC. Sep 2005, 74p, GAO-05-943. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110006WTS Price code: PC A05/MF A01

Congestion is a serious and growing transportation problem for the nation. Many strategies--like adding new lanes--have the potential to alleviate congestion but can be costly and have limited application. Another strategy is the use of communications, electronics, and computer technologiesintelligent transportation systems (ITS)to more effectively utilize existing transportation infrastructure by improving traffic flow. Congress established an ITS program in 1991, and the Department of Transportation (DOT) subsequently set an ITS deployment goal. In this report GAO (1) describes the federal role in deployment; (2) assesses DOT's ITS goal and measurement efforts; (3) identifies what ITS studies have found regarding the impacts of ITS deployment; and (4) identifies the barriers to ITS deployment and use.

Highway Safety Information System Guidebook for the Ohio State Data Files
F. M. Council, Y. M. Mohamedshah, and R. B. Patel.
North Carolina Univ. at Chapel Hill. Highway Safety Research Center. Jan 2004, 108p. Sponsored by Federal Highway Administration, McLean, VA. Office of Safety and Traffic Operations Research and Development. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109674WTS Price code: PC A07/MF A02

The Ohio data system that is provided to HSIS includes the following basic files: Accident data (Accident, vehicle and occupant) Roadway Inventory File State Supplemental Inventory, containing curve and grade data Points File (intersections, railroad grade-crossings, underpasses, etc.) Data from all of these files are captured by HSIS. Raw file data are provided to the Highway Safety Research Center where they are retained as backup information. The documentation (variable listings, definitions, etc) for these raw files and for the SAS files that are developed from them is available at FHWA offices. The conversion programs developed by HSRC and LENDIS to convert the files into SQL and SAS formats are also available at the HSIS offices at FHWA.

Highway Statistics 2003
Federal Highway Administration, Washington, DC. Office of Highway Policy Information. 2005, 348p. See also PB2005-102272, Year 2002. Also available on CD-ROM. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110408WTS Price code: PC A16/MF A03

This is an annual report containing analyzed statistical data on motor fuel, motor vehicles, driver licensing, highway user-taxation, State and local highway finance, highway mileage, Federal-aid for highways, as well as information on the Nationwide Personal Transportation Survey, and selected data for international data.

Homeland Security and the Trucking Industry
Minnesota Univ., Minneapolis. Intelligent Transportation Systems Inst. Jul 2005, 108p.
PB2005-110116WTS Price code: PC A07

For complete citation see Transportation Safety

Incident Characteristics and Impact on Freeway Traffic
C. Quiroga, E. Kraus, R. Pina, K. Hamad, and E. S. Park.
Texas Transportation Inst., College Station. Oct 2004, 212p, RPT-0-4745-1, FHWA/TX-05/0-4745-1. Sponsored by Texas Dept. of Transportation, Austin. Research and Technology Implementation Office. and Federal Highway Administration, Austin, TX. Texas Div. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109980WTS Price code: PC A11

Transportationmanagementcenters(TMCs)generateandarchive enormous amounts of data. Many applications of archived

intelligent transportation system (ITS) data nationwide, including Texas, address transportation planning needs. As the number of applications of archived ITS data increases, interest is growing in identifying areas where archived ITS data could result in more effective TMC operations. One area of interest is how to use archived ITS data to help improve incident management practices. Using geographic information system (GIS), traffic engineering, and statistical analysis techniques, this report describes procedures to determine patterns in the spatial and temporal distribution of incidents along freeway corridors. The report describes current incident detection and data archival at several Texas TMCs, a process to develop a data model and geodatabase of ITS equipment and archived ITS data using a variety of data sources at TransGuide, a process to determine patterns in the spatial and temporal distribution of freeway incidents in San Antonio, a procedure to calculate the impact of incidents on traffic conditions, and recommendations for implementation of the research findings.

Increasing Bus Transit Ridership: Dynamics of Density, Land Use, and Population Growth
T. Banerjee, D. Myers, C. Irazabal, D. Bahl, and A. Raghavan.
METRANS Transportation Center, Los Angeles, CA. 13 Dec 2004, 112p. Sponsored by Federal Transit Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110100WTS Price code: PC A07

Los Angeles region has the largest network of bus transit system covering an area of 1,400 sq. miles with 1,433 of road miles of local transit and commuter lines, and 96 miles of Rapid Transit lines. The integrated network currently serves a transit dependent population of 1.4 million daily. The Southern California Association of Governments (SCAG) estimates a continued growth in population, housing, and employment density in the region. Rapid immigration, increase in youth and senior population, and the addition of lower income workers are contributing to an increase in the transit dependent population. This trend is expected to continue as congestion costs and the cost of auto ownership continue to escalate driven largely by Southern California's sprawling development patterns. With current levels of utilization of bus transit (seat miles) at 34% in Los Angeles there is room for increasing ridership with the promotion of more compact developments.

Intellectual Property: A Handbook for Employees of the Virginia Department of Transportation. Fourth Edition
K. Sprinkle, and J. Beaton.
Virginia Transportation Research Council, Charlottesville. Aug 2005, 52p. Sponsored by Virginia Dept. of Transportation, Richmond. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110104WTS Price code: PC A05/MF A01

Intellectual property is a category of intangible rights of ownership protecting commercially valuable products of the human intellect. It consists primarily of trademark, copyright, and patent rights. Both Virginia state law and federal law govern intellectual property rights with regard to VDOT and its employees. Two trends make intellectual property of increasing concern to VDOT. First, research is an increasingly important element of VDOT's work. With the approaching end of the large-scale highway construction era and the growing emphasis on the more efficient use of highways, innovative solutions to transportation issues are valuable to VDOT. An important part of VDOT's commitment to innovation is the growing importance of intelligent transportation systems (ITS). Because of its technology-intensive nature, a key factor in the implementation of ITS is the right to use technology controlled by intellectual property law. Inventions developed by VDOT employees that further VDOT's work might also be commercially valuable. A commercially valuable work is one that can be profitably marketed to private individuals or organizations and/or other public entities. As a result, the Commonwealth has a financial interest in the work as well. Second, there is a growing emphasis on public-private ventures in research and development and in the creation of new transportation infrastructure. Disputes over intellectual property rights in cooperative ventures can be avoided by ensuring that the contract governing the venture is structured to protect the Commonwealth's interest in any resulting intellectual property rights. Intellectual property created in whole or in part by employees of the Commonwealth cannot be contracted away without the authorization of the Commonwealth's Secretary of Administration.

International Perspectives on Road Pricing. Held in Key Biscayne, Florida on November 19-22, 2003. Report of the Committee for the International Symposium on Road Pricing
Transportation Research Board, Washington, DC. 2003, 116p, ISBN-0-309-09375-9. See also PB95-194734. Sponsored by Florida State Dept. of Transportation, Gainesville. and Federal Highway Administration, Washington, DC. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110114WTS Price code: PC A07/MF A02

In November 2003, approximately 160 people assembled in Key Biscayne, Florida, to participate in the International Symposium on Road Pricing. Fifteen countries were represented, and the exchange of information on policies and approaches adopted throughout the world was one of the symposiums most noteworthy features. The conference also benefited from the breadth of sectors represented; participants and speakers included members of academia and researchers, public officials from all levels of government, consultants, interest group and association representatives, and individuals from financial and legal firms. The conference was a collaborative effort of the Transportation Research Board (TRB), the Florida Department of Transportation, the Organisation for Economic Co-operation and Development (OECD), and the Federal Highway Administration. The symposium was conducted under the auspices of TRBs parent organization, the National Research Council (NRC). In cooperation with OECD, a specially appointed NRC committee developed the symposium to explore American and international applications of road pricing strategies in various governmental and socioeconomic settings. The participants discussed the rationale and motivations for implementing pricing strategies, the use of

pricing revenues, and project outcomes. Drawing on resource papers, presentations, and symposium discussions, the conference committee evaluated the current state of practice, assessed future directions and opportunities, and identified research and information needs.

Internett En effektiv metode for a Finne Trafikantenes Preferanser. Dokumentasjonsrapport (Stated Preference Surveys on Internet An Effective Method for Finding Passenger Preferences. Annex Report.)
A. Nossum, I. Brechan, and N. Fearnley.
Transportoekonomisk Inst., Oslo (Norway). cFeb 2005, 128p, TOI-763A/2005. Text in Norwegian; summary in English.
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109472WTS Price code: PC A08/MF A02

This report summarizes the experiences of using Stated Preference surveys on the Internet to find passengers preferences. TOI has carried out analyses of whether the data collection methods used affects the results. The analyses identify whether those who choose to use the Internet have preferences which are different to those who choose paper-based or home-based interviews, or whether it is the form of the interview which affects the results. In addition, we present key characteristics of those who choose the Internet and those who choose paper-based/home-based interviews.

Literature Review on Health and Fatigue Issues Associated with Commercial Motor Vehicle Driver Hours of Work. Commercial Truck and Bus Safety Synthesis 9
Transportation Research Board, Washington, DC. 2005, 206p.
PB2005-110449WTS Price code: PC A11/MF A03

For complete citation see Transportation Safety

Managing Archaeological Investigations
T. H. Klein, L. Sebastian, S. M. Ruscavage-Barz, S. Ford, and J. E. Watkins.
SRI Foundation, Rio Rancho, NM. c2005, 70p, NCHRP-SYN-347. Sponsored by Transportation Research Board, Washington, DC., American Association of State Highway and Transportation Officials, Washington, DC. and Federal Highway Administration, Washington, DC. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-108848WTS Price code: PC A05/MF A01

This National Cooperative Highway research Program (NCHRP) synthesis report focuses on practices that improve the cost, timeliness, and public benefit of archaeological investigations, in addition to those that streamline the overall transportation project delivery process and enhance the stewardship of archaeological resources. Information on these effective practices was obtained through a literature search and a survey of a variety of agencies and organizations. The survey involved state departments of transportation (DOTs), FHWA state division offices, state historic preservation offices (SHPOs), Native American tribes, and cultural resource management firms. Thirty-four state DOTs, five FHWA offices, seven SHPOs, six tribes, and five cultural resource management firms responded to the survey. The literature review and survey identified a wide range of effective practices associated with the management of archaeological investigations. These practices fall into the following categories: Communication; Internal Business Practices; Project Delivery: Integrating Section 106, National Environmental Policy Act (NEPA), and Design; Pre-Project Planning; Innovative Approaches to Section 106 Steps.

Naeringsstruktur og Utvikling i Godstransport (Industry Structure and Freight Transport Development)
S. Johansen.
Transportoekonomisk Inst., Oslo (Norway). cDec 2004, 112p, TOI-756/2004. Text in Norwegian; summary in English.
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109477WTS Price code: PC A07

There has been a continuous increase in freight flows on road, contemporary to increased transport distance, from 1993 to 2003. Consequently, there has been a continuous and strong increase in transport work for road from 1993 to 2003. Freight transport has been more efficient. From 1997 to 2002 traffic work have been reduced for trucks with payloads over 3, 5 tons, because of reduced empty driving, increased vehicle sizes and capacity utilization. The result has been reduced transport costs per tonne km that leading to increased road transport because the extension of centralization is affected by transport cost level. An introduction of MCP in freight transport marked would lead to a general cost increase for the buyer of transport. The result is increased seaborne transport and transport work in total. Higher fees in urban than rural areas, gives a motivation for trucking transport to take a longer way round to drop road links with higher fee.

National Highway Traffic Safety Administration Laboratory Test Procedure for FMVSS No. 109: New Pneumatic Bias Ply and Certain Specialty Tires
National Highway Traffic Safety Administration, Washington, DC. Office of Vehicle Safety Compliance. 1 Jun 2005, 70p, TP-109-09. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110292WTS Price code: PC A05/MF A01

The Office of Vehicle Safety Compliance (OVSC) provides contractor laboratories with Laboratory Test Procedures as guidelines for obtaining compliance test data. The data are used to determine if a specific vehicle or item of motor vehicle equipment meets the minimum performance requirements of the subject Federal Motor Vehicle Safety Standard (FMVSS). The purpose of these OVSC Laboratory Test Procedures is to present a uniform testing and data recording format, and provide suggestions for the use of specific equipment and procedures. These Laboratory Test Procedures do not constitute an endorsement or recommendation for use of a any product or method. If any contractor views any part of the OVSC Laboratory Test Procedures (TP) to be in conflict with a FMVSS or observes deficiencies in a TP, the contractor is required to advise the Contracting Officer's Technical Representative (COTR) and resolve the discrepancy prior to the start of compliance testing. This standard applies to new

pneumatic bias ply and certain specialty tires, specifically new pneumatic radial tires for use on passenger cars manufactured before 1975, new pneumatic bias ply tires, and ST, FI, and 8-12 rim diameter and below ties for use on passenger cars manufactured after 1948. (S2) FMVSS No. 109 specifies laboratory test requirements for physical dimensions (S4.2.2.2), bead unseating resistance (S4.2.2.3), tire strength (S4.2.2.4), endurance (S4.2.2.5), and high speed performance (S4.2.2.6); defines performance requirements (S4.2) including general requirements (S4.2.1) and test requirements (S4.2.2) as well as tire load ratings; and specifies labeling (or marking) requirements (S4.3). FMVSS No. 109 does not apply to any tire that has been altered so as to render impossible its use, or its repair for use, as motor vehicle equipment.

National Transportation Safety Board Highway Accident Report: Motorcoach Median Crossover and Collision with Sport Vehicle in Hewitt, Texas, on February 14, 2003
National Transportation Safety Board, Washington, DC. 12 Jul 2005, 82p.
PB2005-916202WTS
Contact NTIS for subscription information and price.

For complete citation see Transportation Safety

——*Proceedings, Symposia, Etc.*——

Program Development for the Connecticut Transportation Institute. Project Final Report
C. E. Dougan, L. Aultman-Hall, J. H. Hudson, and E. Jackson.
Connecticut Transportation Inst., Storrs. 28 Jun 2004, 46p, CT-2235-F-04-8. Sponsored by Connecticut Dept. of Transportation, Rocky Hill. Office of Research and Materials. and Federal Highway Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110115WTS Price code: PC A04/MF A01

An 18-month study of the organization and structure of the Connecticut Transportation Institute (CTI) was performed. The structure and operations of other transportation research centers were studied. A Peer Exchange, held July 30-August 1, 2003, provided the core recommendations to organize, market and expand CTI research. A brochure describing CTI and a display booth were designed and obtained. A strategic plan was developed that includes specific one- and five-year actions. A series of performance measures developed in this project were recommended to the CTI director. The performance measures tabulated thus far indicate that overall research activities have increased between July 2002-June 2003 and July 2003-June 2004. This project provided the impetus and tools needed to start this growth.

Quiet Pavement Systems in Europe
D. Gibbs, R. Iwasaki, R. Bernhard, J. Bledsoe, and D. Carlson.
American Trade Initiatives, Inc., Alexandria, VA. May 2005, 54p, FHWA/PL-05-011. Sponsored by Federal Highway Administration, Washington, DC. Office of Policy. and American Association of State Highway and Transportation Officials, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107640WTS Price code: PC A05/MF A01

Noise pollution is a growing concern in the United States. A major contributor of highway noise is at the tire-pavement interface, which means that quieter pavements could lead to reduction in traffic-generated noise. The Federal Highway Administration, American Association of State Highway and Transportation Officials, and National Cooperative Highway Research Program sponsored a scanning study of quiet pavement systems used in Europe to reduce traffic noise. All of the countries the scan team studied-Denmark, France, Italy, the Netherlands, and the United Kingdom-have policies requiring consideration of quiet pavement where noise is a concern. The focus is on three technologies-thin-surfaced, negatively textured Gap-graded asphalt mixes, single- and double-layer highly porous asphalt mixes, and exposed aggregate concrete pavements. The countries are conducting extensive research on quiet pavement technology. The team's recommendations for U.S. implementation include evaluating the use of double-layer porous asphalt mixes to reduce noise on high-speed roadways, reducing the size of the aggregate used in mixes applied to the wearing surface, and trying thin-textured surfacing using a small aggregate in urban and other areas with lower traffic speeds.

Red Light Camera Systems Operational Guidelines
National Highway Traffic Safety Administration, Washington, DC. Jan 2005, 64p.
PB2005-110131WTS Price code: PC A05/MF A01

For complete citation see Transportation Safety

Red-Light Running and Limited Visibility Due to LTV's using the UCF Driving Simulator
E. Radwan, X. Yan, H. Klee, and M. Abdel-Aty.
University of Central Florida, Orlando. Center for Advanced Transportation Systems Simulation. Jun 2005, 190p. Sponsored by Florida State Dept. of Transportation, Tallahassee. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-107479WTS Price code: PC A10/MF A02

The UCF Driving simulator was used to test a proposed pavement-marking design. This marking is placed upstream of signalized intersections to assist the motorists with advance warning concerning the occurrence of the clearance interval. The results of the experiment have indicated promising results for intersection safety. Firstly compared to regular intersections, the pavement marking could result in a 74.3 percent reduction in red-light running. In comparison, the pavement marking reduced the number of occurrences where drivers chose to continue through an intersection when it was not safe to proceed compared to without the marking, and this result is correlated to less red-light running rate with marking. According to survey results, all of the tested subjects gave a positive evaluation of the pavement-marking countermeasure and nobody felt confused or uncomfortable when they made stop-go decisions. In comparison between scenarios without marking and with marking, there is no significant difference found in the operation speeds and drivers brake response time, which proved that the marking has no significantly negative effect on driver behaviors at intersections.

Safety Belt and Motorcycle Helmet Use in Virginia: The Summer 2005 Update
Virginia Transportation Research Council, Charlottesville. Sep 2005, 28p.
PB2005-110584WTS Price code: PC A03/MF A01

For complete citation see Transportation Safety

Tale of Three Regions: Influence of Highway Investments on Population and Traffic Growth in Virginia
D. B. Ellington, L. A. Hoel, and J. S. Miller.
Virginia Transportation Research Council, Charlottesville. Jun 2005, 90p, VTRC-05-R23. Sponsored by Federal Highway Administration, Richmond, VA. Virginia Div. and Virginia Dept. of Transportation, Richmond. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110102WTS Price code: PC A06/MF A01

To what extent may highway investments shape population growth and land development. To answer this question, three decades of data were examined in the Virginia locations of Fairfax County, Spotsylvania County, and Newport News. In each location, a highway investment was proposed by some as an instrument for increasing, shaping, or decreasing population or development growth. The case study approach was used, considering Fairfax County's decision not to build Monticello and other freeways proposed in 1960s comprehensive plans, Spotsylvania's efforts to manage Route 3 traffic congestion, and Newport News' desire for the construction of I-664. By comparing what planners intended these transportation decisions to accomplish with what transpired, the adequacy of using highway investments to manage influence growth may be assessed. The results suggest that in many ways, transportation investments are a blunt policy instrument. They can and do affect short-term travel and longer term location choices, but it is difficult to use investments to manage growth precisely. In fact, in none of the three case studies were all planners' intentions realized: when planned roads were not built in order to stop growth, growth continued, and when roads were built to encourage development or redevelopment in a specific location, growth occurred elsewhere. Yet, the three case studies suggest several findings that, if applied to planning practice, can yield future plans that are more realistic: (1) view transportation improvements in a supply/demand context; (2) quantify expected impacts where possible; (3) give transportation plans a realistic implementation mechanism; and (4) present forecasts as ranges rather than point values.

Technical Methods for Analyzing Pricing Measures to Reduce Transportation Emissions
Environmental Protection Agency, Washington, DC. Aug 1998, 262p, EPA/231/R-98/006. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110152WTS Price code: PC A13/MF A03

State transportation and air quality planners have requested the Environmental Protection Agency (EPA) and the Department of Transportation (DOT) for assistance in how to quantify the impacts of transportation pricing measures in their regional transportation models. They need this assistance to develop regional transportation plans, transportation improvement programs, and state implementation plans. The modeling enhancements may also be useful for demonstrating conformity. This report, jointly funded by the EPA and the DOT, responds to those inquiries and provides technical assistance on best practice approaches for analyzing various transportation pricing policies. This document is intended strictly to provide technical recommendations and does not advocate the use of any specific policy measures.

——*Foreign Technology*——

Ungdom og Transportmiddelbruk. En Sammenfatning av Undersokelser i Norden (Young People and Transport Mode Choice. A Summary of Nordic Surveys)
S. Nordbakke, and A. Ruud.
Transportoekonomisk Inst., Oslo (Norway). cFeb 2005, 60p, TOI-760/2005. Text in Norwegian; summary in English. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109468WTS Price code: PC A05/MF A01

The report is a review of 14 Nordic studies of conditions influencing young people's transport mode choice. Structural and cultural explanations are used. Transport mode choice is related to transport resources and to people's attitude to transport modes. Above all, the choice is pragmatic, related to use of time and required mobility. To influence young people's choice of more environmental friendly transport it is necessary to visualize the independence that public transport represents. The review indicates the need of utilization of existing data as well as new studies.

Urban Intersection Design Guide: Volume 1 - Guidelines
K. Fitzpatrick, M. D. Wooldridge, and J. D. Blaschke.
Texas Transportation Inst., College Station. Feb 2005, 384p, PROD-0-4365-P2-V1, FHWA/TX-05/0-4365-P2-V1. Sponsored by Texas Dept. of Transportation, Austin. Research and Technology Implementation Office. and Federal Highway Administration, Austin, TX. Texas Div. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109982WTS Price code: PC A18/MF A03

Intersections are an important part of a highway facility because the efficiency, safety, speed, cost of operation, and capacity of the facility depend on their design to a great extent. Each intersection involves through- or cross-traffic movements on one or more of the highways and may involve turningmovementsbetweenthesehighways.Suchmovementsmay be facilitated by various geometric designs and traffic controls, depending on the type of intersection. The main objective of intersection design is to facilitate the convenience, comfort, and safety of people traversing the intersection while enhancing the efficient movement of motor vehicles, buses, trucks, bicycles, and pedestrians. In order to design intersections that are both functional and effective, designers need current information regarding intersection design that is easily accessible and in a user-friendly format.

Vehicle Safety Communications Project Task 3 Final Report: Identify Intelligent Vehicle Safety Applications Enabled by DSRC
Crash Avoidance Metrics Partnerships, Farmington Hills, MI. Mar 2005, 160p.
PB2005-110423WTS Price code: PC A09

For complete citation see Transportation Safety

Transportation Safety

Annual Report of the California DUI Management Information System, 2005. Annual Report to the Legislature of the State of California in Accord With Assembly Bill 757, Chapter 450, 1989 Legislative Session
H. N. Tashima, and C. J. Helander.
California State Dept. of Motor Vehicles, Sacramento. Jan 2005, 152p, CAL-DMV-RSS-05-211. See also PB2004-105589. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110118WTS Price code: PC A09/MF A02

In this fourteenth annual legislatively mandated report, 2002 and 2003 DUI data from diverse sources were compiled and cross-referenced for the purpose of developing a single comprehensive DUI data reference and monitoring system. This report presents cross tabulated information on DUI arrests, convictions, court sanctions, administrative actions and alcohol involved accidents. In addition, this report provides 1-year proportions of DUI recidivism and accident rates for first and second DUI offenders arrested in each year over a time period of thirteen years. Also, the long-term recidivism curves of the cumulative proportions of DUI reoffenses are shown for all DUI offenders arrested in 1994. Analyses were conducted on the effectiveness of alcohol education programs upon the 1-year postconviction records of those convicted of the reduced charge of alcohol-related reckless driving, and on the effectiveness of the 3-month versus 6-month alcohol education programs on the 1-year postconviction records of first offenders. The proportions of 2002 convicted first and second offenders who completed their alcohol education/treatment program requirement are also presented.

Automotive Collision Avoidance System Field Operational Test: Final Program Report
General Motors Research and Development Center, Warren, MI. Mar 2005, 116p, DOT-HS-809-886. See also Methodology and Results, PB2005-110300. Sponsored by National Highway Traffic Safety Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110422WTS Price code: PC A07

The Automotive Collision Avoidance System field operational test (or ACAS FOT) program was led by General Motors (GM) under a cooperative agreement with the U.S. Department of Transportation. This report summarizes the activities of the entire program, with an emphasis on efforts that occurred after the last program Annual Report. The ACAS system consisted of Adaptive Cruise Control (ACC) and Forward Collision Warning (FCW) systems that were developed and integrated by GM and Delphi Corporation in preparation for the FOT conducted by the University of Michigan Transportation Research Institute. The FOT involved exposing a fleet of 11 ACAS-equipped Buick LeSabre cars to 12 months of naturalistic driving (137,000 miles of driving were accumulated). The 96 test participants were lay drivers from southeastern Michigan who drove these cars as their personal vehicles for several weeks. Data gathered included over 300 data signals, including video samples of the forward driving scene and driver's face. ACC was found to be benign from a traffic safety perspective. Both ACC and FCW reduced the occurrence of short (e.g., less than 1 sec) headways, with the ACC reductions being substantially more marked and robust across driving conditions. While incidents were found during manual driving in which the FCW may have contributed to a timely driver response to an emerging rear-end crash conflict, the frequency or magnitude of such conflicts were unaffected by FCW presence. Questionnaire, interview, and focus group data indicated that ACC was widely accepted, whereas FCW acceptance was mixed. These data have suggested numerous methods for reducing the occurrence of FCW false alarms that should lead to broader FCW customer acceptability.

Automotive Collision Avoidance System Field Operational Test Report: Methodology and Results
Michigan Univ., Ann Arbor. Transportation Research Inst. Aug 2005, 522p, DOT-HS-809-900. See also Appendices, PB2005-110421, and Final Program Report, PB2005-110422. Prepared in cooperation with General Motors Research and Development Center, Warren, MI. Sponsored by National Highway Traffic Safety Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110300WTS Price code: PC A23

The Automotive Collision Avoidance System field operational test (or ACAS FOT) project was led by General Motors (with Delphi playing a major supporting role) under a cooperative agreement with the U.S. Department of Transportation. The work conducted by the University of Michigan Transportation Research under this project is the subject of this two-volume report. This work involved developing the FOT methodology, gathering the FOT data, and the analysis and interpretation of this massive dataset. The FOT involved exposing a fleet of 11 ACAS-equipped Buick LeSabre passenger cars to 12 months of naturalistic driving by lay drivers from southeastern Michigan. The ACAS system included both a forward crash warning (FCW) system and an adaptive cruise control (ACC) system. The goal of the FOT was to examine the suitability of the ACAS system for widespread deployment from the perspectives of both driving safety and driver acceptance. Ninety-six drivers participated in the project, with an accumulation of 137,000 miles of driving. Data included over 300 data signals collected at 10 Hz with corresponding samples of video of the forward driving scene and the driver's face. A set of subjective instruments were uses to capture information about the driver and their self-reported tendencies, as well as postdrive questionnaires, interviews (which included video replays of alert experiences), and focus groups. Results indicated that ACC was widely accepted by drivers, whereas the acceptance of FCW was mixed (due to false alarms) and was not found to be significantly related

to FCW alert rate. ACC was found to be benign from a traffic safety perspective, with possible benefits resulting from the marked reduction in short (less than 1 second) headways and reduced passing behavior observed during ACC driving. While incidents were found in which the FCW may have contributed to a timely driver response to an emerging rear-end crash conflict, the frequency or magnitude of such conflicts in manual driving was unchanged when FCW was enabled. In addition, headways in manual driving with FCW enabled were found to increase on freeways and also during daytime driving.

Automotive Collision Avoidance System Field Operational Test Report: Methodology and Results. Appendices
Michigan Univ., Ann Arbor. Transportation Research Inst. Aug 2005, 434p, DOT-HS-809-901. See also Main Report, PB2005-110300 and Final Program Report, PB2005-110422. Prepared in cooperation with General Motors Research and Development Center, Warren, MI. Sponsored by National Highway Traffic Safety Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110421WTS Price code: PC A20

The Automotive Collision Avoidance System field operational test (or ACAS FOT) project was led by General Motors (with Delphi playing a major supporting role) under a cooperative agreement with the U.S. Department of Transportation. The work conducted by the University of Michigan Transportation Research under this project is the subject of this two-volume report. This work involved developing the FOT methodology, gathering the FOT data, and the analysis and interpretation of this massive dataset. The FOT involved exposing a fleet of 11 ACAS-equipped Buick LeSabre passenger cars to 12 months of naturalistic driving by lay drivers from southeastern Michigan. The ACAS system included both a forward crash warning (FCW) system and an adaptive cruise control (ACC) system. The goal of the FOT was to examine the suitability of the ACAS system for widespread deployment from the perspectives of both driving safety and driver acceptance. Ninety-six drivers participated in the project, with an accumulation of 137,000 miles of driving. Data included over 300 data signals collected at 10 Hz with corresponding samples of video of the forward driving scene and the driver's face. A set of subjective instruments were uses to capture information about the driver and their self-reported tendencies, as well as postdrive questionnaires, interviews (which included video replays of alert experiences), and focus groups. Results indicated that ACC was widely accepted by drivers, whereas the acceptance of FCW was mixed (due to false alarms) and was not found to be significantly related to FCW alert rate. ACC was found to be benign from a traffic safety perspective, with possible benefits resulting from the marked reduction in short (less than 1 second) headways and reduced passing behavior observed during ACC driving. While incidents were found in which the FCW may have contributed to a timely driver response to an emerging rear-end crash conflict, the frequency or magnitude of such conflicts in manual driving was unchanged when FCW was enabled. In addition, headways in manual driving with FCW enabled were found to increase on freeways and also during daytime driving.

Aviation Safety: FAA Management Practices for Technical Training Mostly Effective; Further Actions Could Enhance Results
Government Accountability Office, Washington, DC. Sep 2005, 96p.
PB2005-109994WTS Price code: PC A06/MF A01

For complete citation see Air Transportation

Aviation Safety: Oversight of Foreign Code-Share Safety Program Should Be Strengthened
Government Accountability Office, Washington, DC. Aug 2005, 64p.
PB2005-110005WTS Price code: PC A05/MF A01

For complete citation see Air Transportation

Aviation Security: Flight and Cabin Crew Member Security Training Strengthened, but Better Planning and Internal Controls Needed
Government Accountability Office, Washington, DC. Sep 2005, 54p.
PB2005-109997WTS Price code: PC A05/MF A01

For complete citation see Air Transportation

Evaluation of the Effectiveness of Ignition Interlock in California. Report to the Legislature of the State of California in Accord With Assembly Bill 762, Chapter 756, 1998 Legislative Session
D. J. DeYoung, H. N. Tashima, and S. V. Masten. California State Dept. of Motor Vehicles, Sacramento. Sep 2004, 32p, CAL-DMV-RSS-04-210. See also PB2003-104211. Sponsored by California Office of Traffic Safety, Sacramento. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110105WTS Price code: PC A04/MF A01

This study is one of two studies of ignition interlock in California mandated by the California Legislature (AB 762). The first study, published in 2002, was a process evaluation that examined the degree to which ignition interlock has been implemented in California. This current study is an outcome evaluation that examines the effectiveness of ignition interlock in reducing alcohol-related crashes and convictions, and crashes overall (alcohol and non-alcohol). The results of the study show that interlock works for some offenders in some contexts, but not for all offenders in all situations. More specifically, ignition interlock devices work best when they are installed, although there is also some evidence that judicial orders to install an interlock are effective for repeat DUI offenders, even when not all offenders comply and install a device. Californias administrative program, where repeat DUI offenders install an interlock device in order to obtain restricted driving privileges, is also associated with reductions in subsequent DUI incidents. One group for whom ignition interlock orders do not appear effective is first DUI offenders with high blood alcohol levels.

Factors Influencing the Use of Booster Seats: A Statewide Survey of Parents
C. R. Bingham, D. W. Eby, H. M. Hockanson, and A. I.

Greenspan.
Michigan Univ., Ann Arbor. Transportation Research Inst. Apr 2005, 66p, UMTRI-2005-14. See also PB2005-105211. Sponsored by National Center for Injury Prevention and Control, Atlanta, GA. and Michigan Dept. of Community Health, Lansing. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110110WTS Price code: PC A05/MF A01

This study gathered telephone interview data on attitudes, knowledge and motivations regarding booster seat use from a representative stratified random sample of parents with children between the ages of 4 and 8 years living in the State of Michigan. Interviews were completed between December 1 and December 15, 2004, with parents of children in 350 households. Due to demographic differences between this sample and the National Household Travel Survey (NHTS), weights were calculated using NHTS data, and both unweighted and weighted analyses were conducted. No differences were found between the conclusions drawn from the weighted and unweighted analyses; therefore, unweighted results were reported. Analyses examined the sample, overall, part-time booster seat users, and booster seat non-users. Numerous differences were identified based on parental sex, and booster seat use. Results indicated that the lack of legislation mandating booster seat use was a key variable determining level of use and the motivation to use booster seats. Nearly 70% of part-time users said that they used booster seats because they believed it was the law. Similarly, 60% of part-time and non-booster seat users said that they would be more likely to use booster seats if use were mandated by law, with non-users being more than three times as likely as part-time users to agree that a law would increase their booster seat use. Finally, over 90% of part-time and non-booster seat users said it would be easier for them to use booster seats if a law required it, and non-users were almost three times more likely than part-time users to agree that a law would make use easier.

Forward Collision Warning Requirements Project: Task 4 Final Report
R. C. Curry, J. A. Greenberg, and R. J. Kiefer.
Crash Avoidance Metrics Partnerships, Farmington Hills, MI. Aug 2005, 130p, DOT-HS-809-925. See also Task 2 and 3a, PB2005-110424. Sponsored by National Highway Traffic Safety Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110425WTS Price code: PC A08

Drivers' last-second braking and last-second steering judgments have been studied extensively by the Crash Avoidance Metrics Partnership (CAMP) Forward Collision Warning (FCW) Requirements project. This previous work was conducted under closed-course conditions using a realistic surrogate target lead vehicle. In the current research, a subset of these tests involving more than 4000 individual test runs has been replicated in the National Advanced Driving Simulator (NADS) facility for comparison purposes. The major conclusions from this research are as follows: scenarios need to pay careful attention to ensure initial headway conditions prior to the critical approach event correspond to those that are typically experienced in real world driving. More generally, scenarios should have real-world validation; scenarios should emphasize high lead vehicle decelerations. The 0.39-g deceleration levels gave the best results and have been used in previous CAMP surprise trial research; scenarios should emphasize cases where the relative speed differential is high, particularly when the lead vehicle is stationary; scenarios should emphasize last-second hard braking or hard steering over last-second 'normal' maneuvers; and crash rates should not be used as a metric, and instead, attention should be focused on the interpretation of last-second maneuver onset behavior.

Forward Collision Warning Requirements Project: Tasks 2 and 3a Final Report
R. J. Kiefer, M. T. Cassar, C. A. Flannagan, C. J. Jerome, and M. D. Palmer.
Crash Avoidance Metrics Partnerships, Farmington Hills, MI. Aug 2005, 84p, DOT-HS-809-902. See also Task 4, PB2005-110425. Sponsored by National Highway Traffic Safety Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110424WTS Price code: PC A06

This project continues to build upon the foundation provided by the human factors experimentation conducted in the previous Crash Avoidance Metrics Partnership (CAMP) Forward Collision Warning (FCW) system efforts. As in the previous CAMP FCW research, this work was conducted with a surrogate target, test-track methodology, which allows driver behavior to be observed under controlled, real approach, rear-end crash scenario conditions. The surrogate target, test-track methodology involves three vehicles-a lead vehicle, a mock vehicle (or surrogate target vehicle), and a subject vehicle that is driven by the test participant. The real driving conditions created with the surrogate target, test track methodology are likely to increase the chance that the crash alert timing approach developed will generalize to real-world conditions. The major conclusions from this research are as follows: based on test driver intervention rates during surprise trials, the alert timing approach evaluated, coupled with a single-stage, dual-modality (auditory plus visual) FCW alert, was found to be robust, effective, and judged appropriate across the wide range of conditions evaluated; the benefits of the FCW alert during surprise trials were restricted to tasks involving head-down glance activity and were not evident for the eyes-forward distraction tasks examined; results from the time-to-collision (TTC) and first look visual occlusion studies suggest that, provided the driver is looking toward the lead vehicle, the driver can quickly assess TTC and make the appropriate crash avoidance maneuver under the alert timing assumptions evaluated; across all the actual FCW alert or simulated FCW alert (via visual occlusion) conditions examined, there is generally a lack of both age and gender effects. This suggests that FCW alerts may be an effective means of equalizing a driver's abilities to avoid rear-end crashes; and the 'first look' method appears to be a valid, efficient, and promising method for exploring the consequences of later FCW alert timing (e.g., crash avoidance versus crash mitigation).

GIS Accident System to Accompany CARE
S. E. Gholston, and M. D. Anderson.
Alabama Univ. in Huntsville. 30 Jun 2005, 24p, UTCA-

03304. Sponsored by University Transportation Center for Alabama, Tuscaloosa. and Federal Highway Administration, Montgomery, AL. Alabama Div. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110443WTS Price code: PC A03

This project developed a geographic information system (GIS) interface to access the crash data exported using the CARE software package. With advanced spatial query and display capabilities, the GIS-based system will enhance crash data query and display features. The system includes instant graphical access, enabling viewing and selecting of desired network locations (nodes and links). In addition to the interface development, this project examined the quality of incorporating data extracted using CARE on to a roadway network. The quality of data within the system was evaluated to see if the system was providing accurate tools for analysis to ensure proper decisions regarding application of safety funds for roadway improvements. The final focus of this project was examination of tools and statistical procedures to identify high accident locations within the case study counties.

Guidelines for the Use of Countermeasures to Reduce Crashes on Approaches to Signalized Intersections Near Vertical Curves
P. A. Barricklow, and M. S. Jacobson.
Texas Transportation Inst., College Station. Sep 2004, 24p, PROD-0-4084-P1, FHWA/TX-05/0-4084-P1. Sponsored by Texas Dept. of Transportation, Austin. Research and Technology Implementation Office. and Federal Highway Administration, Austin, TX. Texas Div. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109969WTS Price code: PC A03/MF A01

The research described herein documents an investigation into countermeasures that can be used to provide motorists with advance notification of traffic signals or queues from those signals that are located beyond the motorists line of sight due to a vertical curve. A reduced decision zone (RDZ) was identified in the research as the location along a roadway with a vertical curve and a traffic signal beyond the curve where stopping sight distance (SSD) is provided but decision sight distance (DSD) is not. Essentially, motorists within the RDZ are provided with SSD for unexpected stopping but are not provided with the added decision-making and response time that DSD might otherwise provide as they approach the vertical curve and the downstream traffic signal. Contained within this report are techniques for determining whether an RDZ exists along an existing roadway. In cases where a traffic signal or queue from a signal is located within the RDZ, guidance is provided on both the type and location of countermeasures that can be used.

Highway Safety Information System Guidebook for the Ohio State Data Files
North Carolina Univ. at Chapel Hill. Highway Safety Research Center. Jan 2004, 108p.
PB2005-109674WTS Price code: PC A07/MF A02

For complete citation see Road Transportation

Homeland Security and the Trucking Industry
M. Donath, D. Murray, and J. Short.
Minnesota Univ., Minneapolis. Intelligent Transportation Systems Inst. Jul 2005, 108p, CTS-05-08. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110116WTS Price code: PC A07

The University of Minnesotas Intelligent Transportation Systems (ITS) Institute was contracted by International Truck to undertake an analysis of commercial vehicle operations (CVO) and to determine how new technologies and post-9/11 security programs and policies may impact the operational environment of the trucking industry. The University of Minnesota and the American Transportation Research Institute, the research arm of the trucking industry, conducted a series of interviews, literature scans and analyses on security programs, industry trends and technology systems. The following report attempts to document existing and developing trends in CVO economics and technology investment with an emphasis on onboard systems, and their inter-relationships with security preparedness and issues and implications associated with homeland security imperatives. An in-depth review of smart card applications, biometric verification systems and cargo management devices are included.

Literature Review on Health and Fatigue Issues Associated with Commercial Motor Vehicle Driver Hours of Work. Commercial Truck and Bus Safety Synthesis 9
P. Orris, S. Buchanan, A. Smiley, D. Davis, and D. Dinges.
Transportation Research Board, Washington, DC. 2005, 206p, TRB/CTBSSP/SYN-9, ISBN-0-309-08826-7. Prepared in cooperation with Illinois Univ. at Chicago. School of Public Health. and Pennsylvania Univ., Philadelphia. School of Medicine. Sponsored by Federal Motor Carrier Safety Administration, Washington, DC. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110449WTS Price code: PC A11/MF A03

This synthesis will be useful to commercial vehicle operators, federal and state agencies, and others interested in improving commercial vehicle safety. The report provides a review of literature relevant to health and fatigue issues associated with commercial vehicle driver hours of service. This literature review was specifically requested by the Federal Motor Carrier Safety Administration (FMCSA) to provide information related to their issuance of Hours of Service regulations in January 2004. Soon after the issuance of these regulations, a lawsuit was filed challenging the regulations. As a result of this lawsuit, a federal court ordered the new regulations to stay in effect while the FMCSA reviewed the regulations and presented its case in support of the regulations and/or prepared a new set of agreed upon Hours of Service regulations. To assist the FMCSA in conducting its review, the CTBSSP was asked to conduct a two-part literature review of relevant material. Part I contains a general literature review of the health and fatigue issues associated with commercial vehicle driver hours of service. For fatigue issues, the focus is on research that occurred after the Hours of Service regulations were published, as a literature review was performed to support these regulations. The literature review relating to health issues is more extensive, and covers studies conducted from 1975 to the

present. Part II contains a literature review of references that were cited in response to a related FMCSA Notice of Proposed Rulemaking.

National Transportation Safety Board Highway Accident Report: Motorcoach Median Crossover and Collision with Sport Vehicle in Hewitt, Texas, on February 14, 2003
National Transportation Safety Board, Washington, DC. 12 Jul 2005, 82p, NTSB/HAR-05/02. Paper copy available in original stock only. Available on Standing Order. Microfiche reproduction is in black and white. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-916202WTS
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On February 14, 2003, about 959 a.m. central standard time, a 1996 Dina Viaggio motor coach, operated by Central Texas Trails, Inc., and occupied by a driver and 34 passengers, was traveling northbound on Interstate 35 near Hewitt, Texas. The weather was overcast with reduced visibility due to fog, haze, and heavy rain. As the motor coach approached the crest of a hill, the bus driver said he observed brake lights ahead of him and began to brake lightly. The bus driver said that has he moved from the right lane into the left lane, another vehicle ahead of the bus also moved over, so he braked harder and the rear of the bus skidded. The bus driver was unable to maintain control of the bus as it departed the left side of the roadway, crossed the grassy median, entered the southbound lanes, and collided with a 2002 Chevrolet Suburban sport utility vehicle (Suburban) occupied by a driver and two passengers. The motorcoach then overturned on its right side, rotated, and slid to final rest facing south against a concrete embankment on the side of the road. The Suburban rotated 180 degrees, began to climb the embankment, slid back down, and came to rest facing north and against the roof of the bus. Five motorcoach passengers, the Suburban driver, and one Suburban passenger sustained fatal injuries. The bus driver sustained serious injuries; the remaining passengers on the bus and in the Suburban sustained injuries ranging from minor to serious. Major safety issues identified in this accident include: sight distance and speed as they relate to roadway design; roadway and tire friction interaction, particularly between commercial vehicle tires and wet pavement; the effect on vehicle stability of differing front and rear tire tread depths; and the need to better identify areas with a high risk of wet weather accidents and implement the necessary roadway improvements. As a result of this investigation, the National Transportation Safety Board makes recommendations to the Federal Highway Administration, the National Highway Traffic Safety Administration, and Federal Motor Carrier Safety Administration, and the Texas Department of Transportation.

Red Light Camera Systems Operational Guidelines
National Highway Traffic Safety Administration, Washington, DC. Jan 2005, 64p. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110131WTS Price code: PC A05/MF A01

The purpose of these guidelines is to assist jurisdictions who are considering the implementation of red light camera systems and help them avoid inconsistent or incorrect application of such systems. Questions have been raised regarding the contracting, design, implementation, operation of red light camera systems, and the legality and intent of photo enforcement systems. In a broader perspective, for continued use of red light camera systems and other technologies to improve transportation operations and safety, it is vital these technologies are perceived as accurate and reliable and are applied fairly.

Red-Light Running and Limited Visibility Due to LTV's using the UCF Driving Simulator
University of Central Florida, Orlando. Center for Advanced Transportation Systems Simulation. Jun 2005, 190p.
PB2005-107479WTS Price code: PC A10/MF A02

For complete citation see Road Transportation

Return to Flight Task Group, Final Report. Assessing the Implementation of the Columbia Accident Investigation Board Return-to-Flight Recommendations
Columbia Accident Investigation Board. Jul 2005, 224p. See also PB2004-100872. Prepared in cooperation with John A. Volpe National Transportation Systems Center, Cambridge, MA. Research and Special Programs Administration., Department of the Navy, Washington, DC. and Department of the Air Force, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-109974WTS Price code: PC A11

This final report is organized into an executive summary, six numbered sections, various appendices, and one annex. The Executive Summary provides an overview of the efforts by NASA toward implementing the return-to-flight recommendations of the Columbia Accident Investigation Board (CAIB) and a summary of the Task Groups assessments of each. Also included is an assessment of a raising the bar action that the Space Shuttle Program assigned to itself above and beyond the CAIB recommendations. The Executive Summary was delivered to the NASA Administrator and posted on the RTF TG website on June 28, 2005; however, the version contained herein has been slightly edited without affecting its content. Section 1 is a short, general introduction to the Space Shuttle Program and its current place in the Agencys long-term plans. Section 2 attempts to show the interrelationships among the various recommendations since, in many cases, the implementation and assessment crossed multiple CAIB recommendations. This section also contains an assessment from the Task Groups Integrated Vehicle Assessment Sub-Panel that cuts across several recommendations. Section 3 is the Task Groups formal assessment of each of the CAIB return-to-flight recommendations, in numerical order. First, the original language of the CAIB recommendation is provided, followed by the Task Groups interpretation of that recommendation. Next is any relevant background information that might assist the reader in understanding the recommendation. This is followed by an explanation of the steps NASA took to implement the recommendation. For the most part, the NASA implementation comes from NASAs Implementation Plan for Space Shuttle Return to Flight and Beyond, using whatever edition was current on the date the Task Group deliberated closing their assessment. Additional information from the closure packages submitted by NASA, requests for information, and fact-finding activities are also included as necessary to ensure an adequate description. This is followed by the Task Groups assessment

of the Agencys progress up to the date of the deliberation, and the final status of the assessment. Observations and minority views, if any, regarding a particular recommendation follow the assessment. Section 4 describes open work the RTF TG will transition to the Aerospace Safety Advisory Panel (ASAP) or other appropriate organizations. Section 5 introduces the Task Group, its function, the members, and the staff who supported it. Also discussed is the organization of the Task Group, a bit of its history and changes in personnel, policies, procedures, and processes, and a brief summary of the three interim reports issued by the Task Group prior to this final report. Section 6 provides a summary of the 11 plenary meetings of the Task Group. This gives a brief insight into the progress made along the way to this final report. Various appendices contain the charter, short biographies of the members, a list of the staff who supported the Task Group, dates of fact-finding activities, and an acronym list. Annex A contains a set of observations by individual Task Group members that are provided to assist the NASA Administrator in understanding any issues or other items they may have observed during the assessments. This section allows members of the Task Group an opportunity to make observations on safety or operational readiness as allowed by the RTF TG charter.

Safety Belt and Motorcycle Helmet Use in Virginia: The Summer 2005 Update
C. W. Lynn, and J. L. Kennedy.
Virginia Transportation Research Council, Charlottesville. Sep 2005, 28p, VTRC-06-R4. See also Summer 2004 Update, PB2005-101576. Sponsored by Transportation Safety Administration, Richmond, VA. Virginia Dept. of Motor Vehicles. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110584WTS Price code: PC A03/MF A01

Since the mid-1970s, the Virginia Transportation Research Council has worked with the Virginia Department of Motor Vehicles (DMV) to monitor safety belt and motorcycle helmet use rates. Research has shown safety belts can reduce the risk of death of front seat occupants of passenger motor vehicles by 45 percent and decrease the risk of serious injury for front seat occupants of passenger motor vehicles by 50 percent. In addition, inpatient hospital care costs for an unbelted crash victim are 55 percent higher than those for a crash victim wearing a safety belt. By promoting the use of safety restraints, DMV has hoped to reduce morbidity and mortality in Virginia.

Small Aircraft Transportation System, Higher Volume Operations Concept: Normal Operations
T. S. Abbott, K. M. Jones, M. C. Consiglio, D. M. Williams, and C. A. Adams.
Booz-Allen and Hamilton, Inc. Aug 2004, 29p, NASA/TM-2004-213022, L-18368. Publicly available Unlimited. CASI. Product reproduced from digital image. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
N20040110780WTS Price code: PC A03/MF A01

This document defines the Small Aircraft Transportation System (SATS), Higher Volume Operations (HVO) concept for normal conditions. In this concept, a block of airspace would be established around designated non-towered, non-radar airports during periods of poor weather. Within this new airspace, pilots would take responsibility for separation assurance between their aircraft and other similarly equipped aircraft. Using onboard equipment and procedures, they would then approach and land at the airport. Departures would be handled in a similar fashion. The details for this operational concept are provided in this document.

——*Foreign Technology*——

Ungdom og Transportmiddelbruk. En Sammenfatning av Undersokelser i Norden (Young People and Transport Mode Choice. A Summary of Nordic Surveys)
Transportoekonomisk Inst., Oslo (Norway). cFeb 2005, 60p.
PB2005-109468WTS Price code: PC A05/MF A01

For complete citation see Road Transportation

Vehicle Safety Communications Project Task 3 Final Report: Identify Intelligent Vehicle Safety Applications Enabled by DSRC
Crash Avoidance Metrics Partnerships, Farmington Hills, MI. Mar 2005, 160p, DOT-HS-809-859. Sponsored by National Highway Traffic Safety Administration, Washington, DC. Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
PB2005-110423WTS Price code: PC A09

The Crash Avoidance Metrics Partnership (CAMP) Vehicle Safety Communications Consortium (VSCC) comprised of BMW, DaimlerChrysler, Ford, GM, Nissan, Toyota, and Volkswagen, in partnership with USDOT, established the Vehicle Safety Communications (VSC) project to: estimate the potential benefits of communication-based vehicle safety applications and define their communications requirements; ensure that proposed DSRC communications protocols meet the needs of vehicle safety applications; investigate specific technical issues that may affect the ability of DSRC to support deployment of vehicle safety applications; and, estimate the deployment feasibility of communications-based vehicle safety applications. A comprehensive list of communications-based vehicle safety and non-safety application scenarios was compiled. More than 75 application scenarios were identified and analyzed resulting in 34 safety and 11 non-safety application scenario descriptions. Preliminary communications requirements were developed and an analysis of alternative wireless technologies was completed. Potential advantages of DSRC technology are the capability for (1) very low latency communications, and (2) transmission of broadcast messages. Each safety application scenario was further defined to include an initial estimate of potential safety benefits. Eight high potential benefit safety application scenarios were selected for further study: Traffic Signal Violation Warning, Curve Speed Warning, and Emergency Electronic Brake Lights, Pre-Crash Warning, Cooperative Forward Collision Warning, Left Turn Assistant, Lane Change Warning and Stop Sign Movement Assistance. These are representative of the range of communications requirements for vehicle safety applications. These scenarios were further analyzed and more detailed communications requirements were developed. Task 3 analysis suggests that DSRC is a potential enabler for a number of vehicle safety applications.

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