



International Technology Scanning Program

OUTDOOR ADVERTISING CONTROL PRACTICES

IN AUSTRALIA, EUROPE, AND JAPAN



M A Y 2 0 1 1

Sponsored by:



U.S. Department of Transportation
Federal Highway Administration

In cooperation with:

American Association of State Highway and Transportation Officials
National Cooperative Highway Research Program

1. Report No. FHWA-PL-10-031	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Outdoor Advertising Control Practices in Australia, Europe, and Japan		5. Report Date May 2011	
		6. Performing Organization Code	
7. Author(s) Mary Jane Daluge, Matthew DeLong, Laurie Hanig, Hari Kalla, Charlie Klauer, Kenneth Klein, Susan Klekar, Lyle McMillan, Cesar Quiroga, Jeffrey Soule, Mary Tracy, and Barbara Wessinger		8. Performing Organization Report No.	
9. Performing Organization Name and Address American Trade Initiatives P.O. Box 8228 Alexandria, VA 22306-8228		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No.	
12. Sponsoring Agency Name and Address Office of International Programs Office of Policy Federal Highway Administration U.S. Department of Transportation American Association of State Highway and Transportation Officials		13. Type of report and period covered DTFH61-99-C-005	
		14. Sponsoring Agency Code	
15. Supplementary Notes FHWA COTR: Hana Maier, Office of International Programs			
16. Abstract Although the Highway Beautification Act (HBA) has been credited with reducing the number of nonconforming signs and removing illegal signs throughout the country, the law is controversial and costly to administer. Many have questioned whether it has controlled outdoor advertising or met the intent of the U.S. Congress. The Federal Highway Administration, American Association of State Highway and Transportation Officials, and National Cooperative Highway Research program sponsored a scanning study of Australia, Sweden, the Netherlands, and the United Kingdom to learn how they regulate outdoor advertising both inside and outside the roadway right-of-way. The scan team also conducted a desk scan of outdoor advertising practices in Japan. In its study, the scan team observed the following: (1) context-sensitive and safety-oriented laws and regulations, (2) no regulation of nonconforming signs or distinction between on-premise and off-premise signs, (3) emphasis on safety and environmental impacts in guidelines and permit requirements, and (4) more collaboration between outdoor advertising stakeholders than in the United States. The scan team assembled implementation ideas under the following improvement goals: streamlining the program, improving efficiency, improving transparency, adopting a context-sensitive approach, and enhancing safety.			
17. Key Words Advertising, billboards, city planning, Highway Beautification Act, illegal signs, landscape, nonconforming signs, outdoor advertising control, revenue generation	18. Distribution Statement No restrictions. This document is available to the public from the: Office of International Programs, FHWA-HPIP, Room 3325, U.S. Department of Transportation, Washington, DC 20590 <i>international@fhwa.dot.gov</i> <i>www.international.fhwa.dot.gov</i>		
19. Security Classif.(of this report) Unclassified	20. Security Classif.(of this page) Unclassified	21. No. of Pages 88	22. Price Free

OUTDOOR ADVERTISING CONTROL PRACTICES

IN AUSTRALIA, EUROPE, AND JAPAN

Prepared by the International Scanning Study Team

Mary Jane Daluge (Co-Chair)
FHWA

Matthew DeLong (Co-Chair)
Michigan DOT

Laurie Hanig
Maryland State Highway Administration

Hari Kalla
FHWA

Dr. Charlie Klauer
Virginia Tech Transportation Institute

Kenneth Klein
Outdoor Advertising Association of America

Susan Klekar
FHWA

Lyle McMillan
Utah DOT

Dr. Cesar Quiroga (Report Facilitator)
Texas Transportation Institute

Jeffrey Soule
American Planning Association

Mary Tracy
Scenic America

Barbara Wessinger
South Carolina DOT

for

Federal Highway Administration,
U.S. Department of Transportation

American Association of State Highway
and Transportation Officials

National Cooperative Highway
Research Program

May 2011

Acknowledgments

The study team members give a special thanks to the following host agencies from Australia, Denmark, Finland, Japan, Sweden, the Netherlands, and the United Kingdom:

- Roads and Traffic Authority, New South Wales, Australia
- Department of Transport and Main Roads, Queensland, Australia
- Roads Corporation, Victoria, Australia
- Outdoor Media Association, Sydney, New South Wales, Australia
- Danish Road Directorate (Vejdirektoratet), Denmark
- Finnish Transport Agency (Liikennevirasto), Finland
- Swedish Road Administration (Vägverket), Sweden
- Directorate of Public Works and Water Management (Rijkswaterstaat), the Netherlands
- Highways Agency, England, United Kingdom
- Transport Scotland, Scotland, United Kingdom

These agencies prepared and delivered a myriad of documents and spent many hours describing their organizations, sharing valuable information, and patiently answering questions. The study team expresses its gratitude to all the individuals from these agencies for their hospitality and contributions to the success of the scanning study.

Although the study team was not able to visit Japan as part of the scan, they are grateful for the valuable information provided by Japan's Ministry of Land, Infrastructure, Transport, and Tourism, which is included in the appendix of this report.

The team thanks the Federal Highway Administration Office of International Programs, the National Cooperative Highway Research Program, and the American Association of State Highway and Transportation Officials for their encouragement, guidance, and support.

International Technology Scanning Program

The International Technology Scanning Program, sponsored by the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the National Cooperative Highway Research Program (NCHRP), evaluates innovative foreign technologies and practices that could significantly benefit U.S. highway transportation systems. This approach allows for advanced technology to be adapted and put into practice much more efficiently without spending scarce research funds to re-create advances already developed by other countries.

FHWA and AASHTO, with recommendations from NCHRP, jointly determine priority topics for teams of U.S. experts to study. Teams in the specific areas being investigated are formed and sent to countries where significant advances and innovations have been made in technology, management practices, organizational structure, program delivery, and financing. Scan teams usually include representatives from FHWA, State departments of transportation, local governments, transportation trade and research groups, the private sector, and academia.

After a scan is completed, team members evaluate findings and develop comprehensive reports, including recommendations for further research and pilot projects to verify the value of adapting innovations for U.S. use. Scan reports, as well as the results of pilot programs and research, are circulated throughout the country to State and local transportation officials and the private sector. Since 1990, more than 85 international scans have been organized on topics such as pavements, bridge construction and maintenance, contracting, intermodal transport, organizational management, winter road maintenance, safety, intelligent transportation systems, planning, and policy.

The International Technology Scanning Program has resulted in significant improvements and savings in road program technologies and practices throughout the United States. In some cases, scan studies have facilitated joint research and technology-sharing projects with international counterparts, further conserving resources and advancing the state of the art. Scan studies have also exposed transportation professionals to remarkable advancements and inspired implementation of hundreds of innovations.

The result: large savings of research dollars and time, as well as significant improvements in the Nation's transportation system.

Scan reports can be obtained through FHWA free of charge by e-mailing international@dot.gov. Scan reports are also available electronically and can be accessed on the FHWA Office of International Programs Web site at www.international.fhwa.dot.gov.



International Technology Scan Reports

International Technology Scanning Program:

Bringing Global Innovations
to U.S. Highways

■ Safety

- Assuring Bridge Safety and Serviceability in Europe* (2010)
- Pedestrian and Bicyclist Safety and Mobility in Europe* (2010)
- Improving Safety and Mobility for Older Road Users in Australia and Japan* (2008)
- Safety Applications of Intelligent Transportation Systems in Europe and Japan* (2006)
- Traffic Incident Response Practices in Europe* (2006)
- Underground Transportation Systems in Europe: Safety, Operations, and Emergency Response* (2006)
- Roadway Human Factors and Behavioral Safety in Europe* (2005)
- Traffic Safety Information Systems in Europe and Australia* (2004)
- Signalized Intersection Safety in Europe* (2003)
- Managing and Organizing Comprehensive Highway Safety in Europe* (2003)
- European Road Lighting Technologies* (2001)
- Commercial Vehicle Safety, Technology, and Practice in Europe* (2000)
- Methods and Procedures to Reduce Motorist Delays in European Work Zones* (2000)
- Innovative Traffic Control Technology and Practice in Europe* (1999)
- Road Safety Audits—Final Report and Case Studies* (1997)
- Speed Management and Enforcement Technology: Europe and Australia* (1996)
- Safety Management Practices in Japan, Australia, and New Zealand* (1995)
- Pedestrian and Bicycle Safety in England, Germany, and the Netherlands* (1994)

■ Planning and Environment

- Reducing Congestion and Funding Transportation Using Road Pricing In Europe and Singapore* (2010)
- Linking Transportation Performance and Accountability* (2010)
- Streamlining and Integrating Right-of-Way and Utility Processes With Planning, Environmental, and Design Processes in Australia and Canada* (2009)
- Active Travel Management: The Next Step in Congestion Management* (2007)
- Managing Travel Demand: Applying European Perspectives to U.S. Practice* (2006)
- Transportation Asset Management in Australia, Canada, England, and New Zealand* (2005)
- Transportation Performance Measures in Australia, Canada, Japan, and New Zealand* (2004)
- European Right-of-Way and Utilities Best Practices* (2002)
- Geometric Design Practices for European Roads* (2002)
- Wildlife Habitat Connectivity Across European Highways* (2002)
- Sustainable Transportation Practices in Europe* (2001)
- Recycled Materials in European Highway Environments* (1999)
- European Intermodal Programs: Planning, Policy, and Technology* (1999)
- National Travel Surveys* (1994)

■ Policy and Information

- Outdoor Advertising Control Practices in Australia, Europe, and Japan* (2011)
- Transportation Research Program Administration in Europe and Asia* (2009)
- Practices in Transportation Workforce Development* (2003)
- Intelligent Transportation Systems and Winter Operations in Japan* (2003)
- Emerging Models for Delivering Transportation Programs and Services* (1999)
- National Travel Surveys* (1994)
- Acquiring Highway Transportation Information From Abroad* (1994)
- International Guide to Highway Transportation Information* (1994)

International Contract Administration Techniques for Quality Enhancement (1994)

European Intermodal Programs: Planning, Policy, and Technology (1994)

■ Operations

Freight Mobility and Intermodal Connectivity in China (2008)

Commercial Motor Vehicle Size and Weight Enforcement in Europe (2007)

Active Travel Management: The Next Step in Congestion Management (2007)

Managing Travel Demand: Applying European Perspectives to U.S. Practice (2006)

Traffic Incident Response Practices in Europe (2006)

Underground Transportation Systems in Europe: Safety, Operations, and Emergency Response (2006)

Superior Materials, Advanced Test Methods, and Specifications in Europe (2004)

Freight Transportation: The Latin American Market (2003)

Meeting 21st Century Challenges of System Performance Through Better Operations (2003)

Traveler Information Systems in Europe (2003)

Freight Transportation: The European Market (2002)

European Road Lighting Technologies (2001)

Methods and Procedures to Reduce Motorist Delays in European Work Zones (2000)

Innovative Traffic Control Technology and Practice in Europe (1999)

European Winter Service Technology (1998)

Traffic Management and Traveler Information Systems (1997)

European Traffic Monitoring (1997)

Highway/Commercial Vehicle Interaction (1996)

Winter Maintenance Technology and Practices—Learning from Abroad (1995)

Advanced Transportation Technology (1994)

Snowbreak Forest Book—Highway Snowstorm Countermeasure Manual (1990)

■ Infrastructure—General

Freeway Geometric Design for Active Traffic Management in Europe (2011)

Public-Private Partnerships for Highway Infrastructure: Capitalizing on International Experience (2009)

Audit Stewardship and Oversight of Large and Innovatively Funded Projects in Europe (2006)

Construction Management Practices in Canada and Europe (2005)

European Practices in Transportation Workforce Development (2003)

Contract Administration: Technology and Practice in Europe (2002)

European Road Lighting Technologies (2001)

Geometric Design Practices for European Roads (2001)

Geotechnical Engineering Practices in Canada and Europe (1999)

Geotechnology—Soil Nailing (1993)

■ Infrastructure—Pavements

Warm-Mix Asphalt: European Practice (2008)

Long-Life Concrete Pavements in Europe and Canada (2007)

Quiet Pavement Systems in Europe (2005)

Pavement Preservation Technology in France, South Africa, and Australia (2003)

Recycled Materials in European Highway Environments (1999)

South African Pavement and Other Highway Technologies and Practices (1997)

Highway/Commercial Vehicle Interaction (1996)

European Concrete Highways (1992)

European Asphalt Technology (1990)

■ Infrastructure—Bridges

Assuring Bridge Safety and Serviceability in Europe (2010)

Bridge Evaluation Quality Assurance in Europe (2008)

Prefabricated Bridge Elements and Systems in Japan and Europe (2005)

Bridge Preservation and Maintenance in Europe and South Africa (2005)

Performance of Concrete Segmental and Cable-Stayed Bridges in Europe (2001)

Steel Bridge Fabrication Technologies in Europe and Japan (2001)

European Practices for Bridge Scour and Stream Instability Countermeasures (1999)

Advanced Composites in Bridges in Europe and Japan (1997)

Asian Bridge Structures (1997)

Bridge Maintenance Coatings (1997)

Northumberland Strait Crossing Project (1996)

European Bridge Structures (1995)

All publications are available on the Internet at www.international.fhwa.dot.gov.

Contents

Executive Summary	1	Regulatory Framework	36
Overview and Background	1	Design, Landscape, and Environment	36
Summary of Observations—Similarities	1	Safety	36
Summary of Observations—Differences	2	United Kingdom—England	38
Scan Implementation Ideas	3	Regulatory Framework	38
Chapter 1: Introduction	5	Safety	42
Background	5	Revenue Generation	43
History	5	United Kingdom—Scotland	43
2010 International Outdoor Advertising Scan	7	Regulatory Framework	43
Chapter 2: Outdoor Advertising Control Practices in Australia	9	Design, Landscape, and Environment	43
Australia—New South Wales	9	Safety	45
Regulatory Framework	9	Revenue Generation	46
Design, Landscape, and Environment	11	Chapter 4: Summary of Observations	49
Safety	14	Summary of Observations—Similarities	49
Revenue Generation and Public Benefit	16	Laws, Policies, and Enforcement	49
Australia—Queensland	17	Program Management	49
Regulatory Framework	17	Stakeholder, Community, and Citizen Involvement	49
Safety	19	Environmental Impacts, Economic Benefits, and Revenue Generation	49
Revenue Generation	22	Safety	49
Australia—Victoria	22	Summary of Observations—Differences	50
Regulatory Framework	22	Laws, Policies, and Enforcement	50
Design, Landscape, and Environment	24	Program Management	50
Safety	24	Stakeholder, Community, and Citizen Involvement	52
Revenue Generation	26	Environmental Impacts, Economic Benefits, and Revenue Generation	52
Advertising Industry Information	26	Safety	53
Chapter 3: Outdoor Advertising Control Practices in Europe	31	Chapter 5: Implementation Strategies	55
Denmark	31	Ideas to Streamline Implementation of the HBA	55
Finland	32	Ideas to Improve Program Efficiency and Implement Best Practices	55
Sweden	32	Ideas to Improve Transparency of Process	55
Regulatory Framework	32	Ideas for a More Comprehensive and Context-Sensitive Approach	55
Safety	33	Ideas to Enhance Safety	56
Revenue Generation	34		
The Netherlands	36		

Endnotes	57
Appendix A: Scan Team Members	60
Appendix B: Host Country Contacts	64
Appendix C: Amplifying Questions	68
Appendix D: Outdoor Advertising Control Practices in Japan	71

Appendix E: Studies on the Potential Impact of Outdoor Advertising on Traffic Safety	75
---------------------------------------------------------------------------------------------------	----

Figures

Figure 1. New South Wales signage and outdoor advertising process under SEPP 64.	10
Figure 2. Sequence of signs that would be unacceptable under SEPP 64.	13
Figure 3. TMR advertising device restriction areas (excluding motorways).	20
Figure 4. TMR advertising device restriction areas for motorways.	21
Figure 5. Examples of primary, secondary, and tertiary roadway design elements.	26
Figure 6. Location of proposed electronic sign in East Melbourne, Victoria.	27
Figure 7. Electronic sign at corner of Flinders and St. Kilda Streets in downtown Melbourne, Victoria. ...	28
Figure 8. Examples of signs allowed in Denmark.	31
Figure 9. Trial evaluation of electronic signs on Highway E4 in Stockholm, Sweden.	35
Figure 10. Signs displayed by Rijkswaterstaat along Highway A4 in the Netherlands.	36
Figure 11. Examples of outdoor advertising signs in Rotterdam, Netherlands.	37
Figure 12. Sample of outdoor advertising signs in the London area.	41
Figure 13. Process to determine the need for street furniture along rural roads in Scotland.	44

Figure 14. Checklist for evaluating road furniture along rural roads in Scotland.	45
Figure 15. Exclusion zone next to roads.	46
Figure 16. Examples of advertising signs allowed in the Glasgow area.	47
Figure 17. Tourist attraction panels in Glasgow.	47
Figure 18. Upgraded bus shelters in Glasgow.	48
Figure 19. Public involvement process in Japan.	73

Tables

Table 1. Basic information on countries, states, and cities visited or studied.	8
Table 2. Design assessment criteria in SEPP 64.	12
Table 3. RTA safety assessment matrix.	15
Table 4. Examples of signs covered by Clause 52.05. ...	23
Table 5. Proposed modified design assessment criteria in Victoria.	25
Table 6. Driver experience metrics used on M80 in Melbourne.	25
Table 7. Swedish Road Administration criteria for sign assessment.	34
Table 8. Criteria to assess potential sources of road user distraction.	38
Table 9. Exclusion zones beside roads and clear view distances for advertising signs.	46
Table 10. Host country officials met during scanning study.	65
Table 11. Advertising sign fees in Japan.	74

Abbreviations, Acronyms, and Terms

AASHTO American Association of State Highway and Transportation Officials

AMP advertising management plan

APA American Planning Association

ASA Advertising Standards Authority

AUA advertising utilization area

AU\$ Australian dollar

CEVMS commercial electronic variable message sign

CFR Code of Federal Regulations

DCP development control plan

DOT department of transportation

FHWA Federal Highway Administration

FTA Finnish Transport Agency

HBA Highway Beautification Act

ISTEA Intermodal Surface Transportation Efficiency Act

LED light-emitting diode

LEP local environmental plan

LPA local planning authority

MSHA Maryland State Highway Administration

MDOT Michigan Department of Transportation

MOU memorandum of understanding

MPO metropolitan planning organization

MUTCD Manual on Uniform Traffic Control Devices

NCHRP National Cooperative Highway Research Program

NAHBA National Alliance of Highway Beautification Agencies

NHS National Highway System

OAAA Outdoor Advertising Association of America

OAC outdoor advertising control

OMA Outdoor Media Association

PPG Planning Policy Guidance

£ British pound

RTA Roads and Traffic Authority

SCDOT South Carolina Department of Transportation

SEE statement of environmental effects

SEK Swedish krona

SEP Special Experimental Process

SEPP State Environmental Planning Policy

SRA Swedish Road Administration

SRN Strategic Road Network

TMR Department of Transport and Main Roads

TTI Texas Transportation Institute

UDOT Utah Department of Transportation

US\$ United States dollar

USC United States Code

VicRoads Victoria Roads Corporation

VTTI Virginia Tech Transportation Institute

**Term commonly used
in the United States:**

**Terms commonly used in other English-speaking countries
(in some cases, the equivalence is approximate because
of differences in legal terminology and definitions):**

Advertising sign	Advertisement (New South Wales, Victoria, Australia) Advertising device (Queensland, Australia) Advertisement (England, United Kingdom)
Billboard	Freestanding advertisement (New South Wales, Australia) Hoarding (Queensland, Victoria, Australia) Hoarding (United Kingdom)
Electronic variable message sign	Animated sign (Victoria, Australia) Electronic sign (Victoria, Australia)
Fascia sign	Wall advertisement (New South Wales, Australia)
Intersection	Junction (United Kingdom)
Major highway	Motorway (Australia) Motorway, trunk road (United Kingdom)
On-premise sign	Building identification sign (New South Wales, Australia) Business identification sign (New South Wales, Australia) On-premise advertising device (Queensland, Australia)
Permit	Consent (Australia) Consent (England, United Kingdom)
Poster panel	Advertising panel, poster (Queensland, Australia)
Regional plan	Planning scheme (Victoria, Australia)
Right-of-way	Road reserve (Australia)
Roadway	Carriageway (Queensland, Australia)
Sidewalk	Footway (Australia) Footway (England, United Kingdom)
Toll facility	Tollway (New South Wales, Australia)
Wall mural	Wall advertisement (New South Wales, Australia)
Wallscape	Building wrap advertisement (New South Wales, Australia)

Executive Summary

Overview and Background

The purpose of this scan was to compare and contrast how the United States and other countries efficiently and effectively regulate outdoor advertising both inside and outside the roadway right-of-way. The scan team sought to learn new techniques to balance competing interests—including the public—in developing policy, regulations, and enforcement; addressing safety and environmental concerns; and generating potential revenue.

Forty-five years after passage of the Highway Beautification Act (HBA), the law is controversial, complex, and costly to administer. Many have questioned whether it has controlled outdoor advertising or met the original intent of the U.S. Congress. The HBA is credited with reducing the number of nonconforming signs and proliferation of additional signs and removing illegal signs throughout the country. According to Federal Highway Administration (FHWA) statistics, States reported 298,404 nonconforming signs in 1965. This number had dropped to 73,044 by 1996. On the other hand, the HBA has been criticized for the following:

- Not keeping pace with new technologies and on-premise signs
- Inconsistent inventory practices throughout the country, including a wide range of years since individual States conducted inventories
- Failure to remove remaining nonconforming signs (In 1996, more than 30 years after the HBA was enacted, States reported that 25 percent of nonconforming signs still remained.)
- Lack of adequate funding and staffing resources at the Federal and State levels to fulfill HBA objectives

From March 11-28, 2010, a scan team traveled first to three state transportation agencies in Australia: the Roads and Traffic Authority in Sydney, New South Wales; the Department of Transport and Main Roads in Brisbane, Queensland; and the Roads Corporation in Melbourne, Victoria. Then, in Stockholm, Sweden, the team met with the Swedish Road Administration (Vägverket) and representatives from the Danish Road Directorate

(Vejdirektoratet) and the Finnish Transport Agency (Liikennevirasto). Next, it visited the Directorate of Public Works and Water Management (Rijkswaterstaat) in Rotterdam, Netherlands; the Highways Agency in London, England; and Transport Scotland in Glasgow, Scotland.

On several field visits, the team observed emerging outdoor advertising technologies, advertising in the right-of-way, and signs both in and out of compliance with regulations and permits. In addition to visiting the countries listed, the team conducted a desk scan of outdoor advertising practices in Japan.

Before the trip, the team sent a set of amplifying questions to the host countries to frame the discussion around five major topics:

- Laws, policies, and enforcement
- Program management
- Stakeholder, community, and citizen involvement
- Environmental impacts, economic benefits, and revenue generation
- Safety

Summary of Observations—Similarities

Issues and common interests between the countries visited and the United States included the following:

- Laws, policy, and enforcement:
 - Enforcement between regions and states is inconsistent.
 - Regulators attempt to develop less subjective (more objective) criteria for decisionmakers with mixed success.
- Program management:
 - Interest is growing in commercial advertising (street furniture) in transportation corridors.

- Time and staffing costs exceed funds generated from permit fees.
- Accurate, up-to-date inventories are lacking in many jurisdictions.
- Stakeholder, community, and citizen involvement:
 - Decisionmakers experience political pressure at many levels.
 - Stakeholders question approval and denial decisions.
 - In all countries except Japan, policymaking and permit decisions are between regulators and the regulated with little or no input from communities.
- Environmental impacts, economic benefits, and revenue generation:
 - Local agencies and urban areas form partnerships for significant revenue-generating projects.
 - There is interest in generating revenue inside the right-of-way and removing some of the restrictions to commercial use of the right-of-way.
- Safety:
 - Common interest exists in regulating new technologies to minimize driver distraction, such as use of and rules to govern commercial electronic variable message signs (CEVMS).
 - The major focus is reducing crashes and fatalities.
 - Signs that resemble official signs are prohibited.
 - All are seeking reliable research on the safety impacts of outdoor advertising and CEVMS.
- New laws and amendments are only applied to existing signs when legal permits are renewed, so there are few or no nonconforming signs.
- For regulatory control purposes, signs can be removed without compensation (permit is treated as a privilege, not a property right).
- Sign businesses, site owners, and sign owners can incur penalties for noncompliance.
- Some, but not all, countries reimbursed sign owners for actual removal costs.
- Program management:
 - Agencies in the countries visited rely more on safety factors and the relationship between the sign and the road environment for permitting decisions than agencies in the United States.
 - Agencies have some control over message formatting, such as specifying font size and prohibiting phone numbers and e-mail addresses, to reduce driver distraction and reading time.
 - Permit terms are longer, but finite (most often 5 to 15 years).
 - Outdoor advertising control is not administered by right-of-way or maintenance departments, but by safety, corridor access, urban design, road user, human factors, traffic, spatial planning, or other departments.
- Stakeholder, community, and citizen involvement:
 - Collaboration between regulators and industry is early and continuous, but the understanding is that certain topics are not negotiable.
 - Local planning authorities had more regulatory involvement in and control of sign permits in all countries visited because all areas were under some control, designation, or zoning. There were few unzoned areas because of more rigorous, comprehensive local planning and land use management.
 - England and Japan use comprehensive campaigns to remove illegal signs in neighborhoods as part of a broader economic regeneration and revitalization effort.
 - Japanese law mandates citizen involvement and local community landscape control plans with signing requirements enforced through an outdoor advertising management council.
 - Stakeholder and other advertising management plans are required. One Australian state is reevaluating its policy to formalize and include

Summary of Observations— Differences

Key differences between practices abroad and those in the United States included the following:

- Laws, policies, and enforcement:
 - Where outdoor advertising is allowed in the countries visited, state and federal responsibility is limited to high-level and national routes.
 - For permitting purposes, on-premise and off-premise signs are regulated.
 - The national/federal government has a lesser role in the state's administration and program compliance.

community input on billboards as it does on other transportation projects.

■ Environmental impacts, economic benefits, and revenue generation:

- Use of the right-of-way for commercial billboards is limited, but more prevalent in locally controlled urban jurisdictions. One Australian state generated AU\$15 million with advertising inside the right-of-way, but most countries visited are waiting until more conclusive research is done on driver distraction. Sweden is beginning a pilot.
- The countries visited emphasize context-sensitive design. They give greater consideration to the visual effect outdoor advertising has on viewscapes and how it blends into surrounding landscapes and environments.
- Some countries allow private investment (using a public benefit test) in infrastructure improvements and naming rights, such as pedestrian bridges over freeways or near schools.

■ Safety:

- Signs may be removed after permitted if safety is a concern. In all of the countries visited, traffic and public safety play a more critical role in the permitting process than in the United States. All of the countries have developed criteria to identify unacceptable signs, such as those that resemble traffic control devices, could direct traffic, or could distract or confuse drivers.
- The safety evaluation process is more comprehensive, both in the documentation and burden of proof applicants must provide that a sign will not create a safety hazard and the review process after an application is submitted.

eliminating the control and monitoring of non-conforming signs. This could involve looking at the legal aspects of term or probationary permits or potential criteria for safety or public benefit audits.

- Identify ways to encourage stakeholder agreement on fundamental ways to streamline control.
 - Study control measures for certified cities to use.
- Ideas to improve program efficiency and implement best practices:

- Study fee schedules that would enable agencies to cover regulation and enforcement costs.
- Develop safety criteria that could be used when evaluating permit applications.
- Develop model regulations that synthesize safety criteria with longer fixed-term permits and other criteria observed in the countries visited.
- Study the legal aspects of or develop criteria for term or probationary permits.
- Develop criteria to trigger a safety audit of a sign or public benefit needs.
- Prepare a best-practices document and training materials for agencies to use to maximize revenue from outdoor advertising that could also address public needs.
- Study the feasibility of generating revenue from advertising in the right-of-way, including an evaluation of costs and benefits of advertising and the potential uses or use restrictions of any revenue generated.

■ Ideas to improve transparency of process:

- Develop a process and tools to improve notification and participation of local governments in outdoor advertising control decisions and enforcement.
- Develop methods to encourage public participation at the outdoor advertising control policymaking and permitting stages and improve consultation with jurisdictional authorities.
- Decrease dependence on zoning considerations when issuing permits by emphasizing other decision factors, such as jurisdiction of roads, safety factors, and scenic and public benefit factors.

■ Ideas for a more comprehensive and context-sensitive approach:

Scan Implementation Ideas

The scan team assembled a list of ideas to develop a scan implementation plan.

■ Ideas to streamline implementation of the HBA:

- Simplify the HBA regulations and enforcement process.
- Develop model regulations for States to use.
- Evaluate the effect of reducing the number of controlled advertising miles on State highway agency costs and operations.
- Study potential cost savings that could come from

- Encourage States to work with local public agencies to develop advertising management plans.
 - Develop guidelines to incorporate livability concepts into permit applications in heavy pedestrian and bicycle traffic areas.
 - Develop architectural and graphic design principles to integrate outdoor advertising signs into the context of the surrounding area.
 - Encourage the use of green initiatives and technologies.
 - Launch intensive local campaigns to remove illegal billboards as part of a broader economic revitalization effort.
 - Study the true costs, benefits, and risks of revenue generation in rights-of-way.
 - Research scenic roads and interstates on the HBA system and how scenic roads are regulated by local governments, and conduct a cost-benefit analysis on regulating only scenic roads and interstates.
- Ideas to enhance safety:
- Develop criteria to evaluate permit applications to identify signs that are unacceptable from a safety perspective because they resemble traffic control devices or could distract or confuse drivers.
 - Update the assessment criteria used to review permit applications to reflect design, planning, environmental, and public and traffic safety criteria used by several countries visited.
 - Update permitting requirements to include an analysis of the technical feasibility, benefits, safety impacts, and other effects of a proposed outdoor advertising installation.
 - Conduct research on the safety impacts of outdoor advertising, and possibly require applicants to conduct a safety analysis to demonstrate the design and safety feasibility of proposed installations.
 - Assess whether existing traffic data from intelligent transportation systems or traffic control centers could be used to track traffic patterns and establish the potential impacts of commercial electronic variable message signs on traffic flow.
 - Study the effects of full-motion video on driver attention.

Chapter 1: Introduction

Background

Although the Highway Beautification Act (HBA) of 1965 (23 United States Code (USC) 131)⁽¹⁾ has been credited with reducing the number of nonconforming signs and removing illegal signs throughout the country, the law is highly controversial and costly to administer. Many have questioned whether it has controlled outdoor advertising or met the intent of the U.S. Congress.

At the Federal level, 23 USC 131 provides the Federal Highway Administration (FHWA) with the authority to oversee outdoor advertising control by States. Providing effective control of outdoor advertising is a condition of the Federal-Aid Highway Program that a State must comply with or lose 10 percent of Federal-aid highway funds. FHWA promulgated regulations that contain the administrative details to enforce the HBA, which are in 23 Code of Federal Regulations (CFR) Part 750.⁽²⁾ Signs allowed under the HBA include on-premise commercial signs, off-premise commercial signs, and directional and other official signs. Commercial advertising is not allowed in the right-of-way, with the exception of logo signs and tourist-oriented directional signs.⁽³⁾ In addition to differentiating between legal and illegal signs, the HBA included a third category called nonconforming signs to designate signs that were erected legally but became nonconforming under Federal and State laws or regulations enacted later.

History

Before the HBA, the Federal-Aid Highway Act of 1958 provided for a voluntary program that enabled States to enter into agreements with the Federal government to control outdoor advertising within 660 feet (ft) (201 meters (m)) of the Interstate System.⁽⁴⁾ A bonus payment of 0.5 percent of construction costs was offered for such control. However, by 1965, only 25 States had entered into bonus agreements (with two dropping out of the program shortly after joining).

The intent of the HBA is described in 23 USC 131(a):

The Congress hereby finds and declares that the erection and maintenance of outdoor advertising signs, displays, and devices in areas adjacent to the Interstate System and the primary system

should be controlled in order to protect the public investment in such highways, to promote the safety and recreational value of public travel, and to preserve natural beauty.

Junkyards are also controlled by the HBA (see 23 USC 136).⁽⁵⁾ Another often-overlooked aspect of the HBA is its emphasis on preserving scenic landscapes through the purchase of scenic easements. An internal FHWA review in 2008 revealed that all 50 States, the District of Columbia, and Puerto Rico had obligated \$110 million in Federal-aid funds for landscape and enhancement, which underscores the beautification intent of the HBA as it relates to scenic, zoning, landscaping, and environmental concerns.

A 1967 letter from the undersecretary for transportation to Lady Bird Johnson reported on HBA program costs and the issues involved in establishing standards to control outdoor advertising. The letter highlighted the importance placed on this program at the time because it stated that a high-level position (GS-17 level on the Federal Government pay scale, now Senior Executive Service) had been established for a “highway beauty coordinator” with background in resource conservation and aesthetic considerations in public work projects.

Since the HBA’s passage 45 years ago, many entities have analyzed the act and most have reached similar conclusions and recommendations. Many studies have recognized the difficulty of enacting and administering an outdoor advertising control law that would be satisfactory to all parties concerned because of their widely divergent and incompatible views.

As early as 1974, a study of the HBA for the U.S. Senate Subcommittee on Roads recommended continuing the program with adequate funding “to carry out its purposes within a reasonable length of time, say 5 to 6 years.” That study discussed the alternative of controlling billboards only along the Interstate System to reduce the cost of the program, but did not recommend doing so because it would be a “step backwards and evidence of bad faith to the States and small sign operators who have relied on the Federal mandate of the 1965 Act.” An alternative proposed by the Roadside Business Association would declare 10 to 25 percent of a State’s Federal-aid highway system scenic, where signs would be prohibited. That law was not recommended because

“scenic area designation is subjective and arbitrary, whereas, by comparison, commercial and industrial areas can be determined by much more objective criteria.”

In 1978, the General Accounting Office (GAO, now U.S. Government Accountability Office) concluded that the outdoor advertising control program was not very likely to achieve its objectives because of lack of support, legal complexities, numerous exemptions, and differences in State and local rules.⁽⁶⁾

The National Advisory Committee on Outdoor Advertising and Motorist Information assessed the highway beautification program in 1981 and offered four options for the program’s future direction:⁽⁷⁾

- Complete repeal of the HBA
- Retention of only the bonus controls (affecting the Interstate System in 23 States)
- A reduced program that would impose then-current (1982), but simplified, control and acquisition requirements in all States, but would apply them only to rural interstates and certain scenic primary highways
- Repeal of the requirement to remove or pay for signs, while retaining control requirements in a simplified form

Based on the committee report, in 1982 the FHWA Office of Right-of-Way and Environment drafted an agency position and recommended a legislative proposal to repeal the HBA, leaving the program to be administered by State governments. An option discussed was to retain the bonus program and outdoor advertising control along rural interstates and primary highways designated as scenic. None of these proposals were enacted. FHWA administers the law as enacted by Congress. Repeal or revision of the HBA must come from Congress itself.

A 1985 GAO report concluded the following:⁽⁴⁾

Without additional Federal funding or a change in the compensation requirement of the Highway Beautification Act, as amended, the 1965 act’s goal—to control outdoor advertising along federally funded interstate and primary highways—will not be accomplished. GAO recommends, therefore, that the Congress reassess the outdoor advertising control program. In making this reassessment, the Congress will need to weigh the program’s goals and requirements against program costs and, if warranted, consider

changes to the goal and requirements which reflect an appropriate level of funding.

The Congressional Research Service issued a 1986 report on outdoor advertising control along Federal-aid highways.⁽⁸⁾ It included a 1965 inventory of about 1.1 million off-premise signs, including billboards, farm signs, and political signs. In 1996, an estimated 500,000 billboards were on Federal-aid interstate and primary highways, which encompass less than 10 percent of the total U.S. road mileage.⁽⁹⁾

In December 1984, there were about 43,000 miles (mi) (69,000 kilometers (km)) on the Interstate System and 261,000 mi (420,000 km) on the Federal-aid primary system, for a total of 304,000 mi (489,000 km) of controlled outdoor advertising. In 1991, the National Highway System (NHS) was created with about 164,000 mi (264,000 km). The 141,000 mi (227,000 km) of primary-system roads not on the NHS on June 1, 1991, remain controlled for outdoor advertising and account for nearly one-half of the control route miles.

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) provided that up to 10 percent of surface transportation program funds could be used for transportation enhancement projects, which included the removal of nonconforming signs, but few States chose to use those funds for billboard removal. In a 1992 *Federal Register* notice, FHWA informed the States that, because ISTEA had made removal of nonconforming signs eligible for Federal-aid highway funds, States were required to remove all remaining nonconforming signs. However, Congress halted this effort by amending section 131(n) of the HBA to make use of Federal funds to remove nonconforming signs discretionary for States.

Since ISTEA, FHWA has contemplated issuing advanced notices of proposed rulemaking to solicit input on and attempt to clarify the outdoor advertising rules and regulations. However, the process to revise the regulation is complicated and it was determined that further background studies were needed.

In 2007, FHWA contracted with the U.S. Institute for Environmental Conflict Resolution to assess the outdoor advertising control program.⁽¹⁰⁾ Its report stated the following:

The HBA has engendered conflict on a range of issues over the years from if and how nonconforming billboards are removed to the definition of commercial businesses. Some issues have been addressed legislatively and some through

rulemaking. However, there remain a number of issues that create controversy.

The report reiterated that HBA-related conflicts involve a large number of stakeholders, including the traveling public, the outdoor advertising industry (sign owners, advertisers, suppliers, and landowners), groups concerned about maintaining and improving scenic views, local governments, and State and Federal regulators. It identified organizational, substantive, attitudinal, and relationship issues hindering the effectiveness of the outdoor advertising control program. The following issues were identified as most important to stakeholders and having reasonable potential for agreement:

- Use of new technology in outdoor advertising
- Abuses of signage in commercial and industrial areas
- The future of nonconforming signs
- Control of vegetation around billboards in public rights-of-way
- Inconsistent regulation and enforcement
- Organization of the outdoor advertising control program in FHWA

Based on the conclusions reached in the neutral assessment report, FHWA has completed several activities to address issues that make implementation of the program difficult and inefficient. To help eliminate regulators' confusion on terms not defined in the law, FHWA scheduled stakeholder workshops to develop a definition for "destroyed signs." The resulting guidance was issued in 2009. Additional work has included development of a definition for "customary maintenance" and criteria to determine whether a "substantial change" has occurred that terminates a sign's nonconforming status.

Concurrently, FHWA proposed an international scan to study outdoor advertising control practices in other countries. The scan would identify successful policies and approaches used in other countries to control outdoor advertising both inside and outside the right-of-way. It also would determine to what extent private interests influence advertising and what technologies, such as commercial electronic variable message signs (CEVMS), have been allowed. The purpose was also to gather information that would be needed by decisionmakers to form a solid basis for future actions that could include preparing statutory changes to the HBA for consideration by Congress or regulatory changes by FHWA. It sought to identify more

cost-effective and efficient ways to administer the HBA, build consensus among stakeholders, and develop a more consistent national approach for outdoor advertising control policies at the Federal, State, and local levels.

2010 International Outdoor Advertising Scan

In March 2010, the scan team visited Australia, the Netherlands, Sweden, and the United Kingdom to compare and contrast how other countries regulate outdoor advertising both inside and outside the roadway right-of-way (table 1). As Appendix A shows, the study team included three representatives from FHWA, four from State departments of transportation (DOTs), one from the transportation planning community, one from the Outdoor Advertising Association of America (OAAA), one from Scenic America, and two from academia.

From March 11 to 28, 2010, the team traveled first to three state transportation agencies in Australia: the Roads and Traffic Authority (RTA) in Sydney, New South Wales; the Department of Transport and Main Roads (TMR) in Brisbane, Queensland; and the Roads Corporation (VicRoads) in Melbourne, Victoria. Then, in Stockholm, Sweden, the team met with the Swedish Road Administration (SRA—Vägverket) and representatives from the Danish Road Directorate (Vejdirektoratet) and the Finnish Transport Agency (FTA—Liikennevirasto). Next, it visited the Directorate of Public Works and Water Management (Rijkswaterstaat) in Rotterdam, Netherlands; the Highways Agency in London, England; and Transport Scotland in Glasgow, Scotland. The team also conducted a desk scan of outdoor advertising practices in Japan.

On several field visits, the team observed emerging outdoor advertising technologies, advertising in the right-of-way, and signs both in and out of compliance with regulations and permits. Appendix B lists contacts in the countries the team visited.

A set of questions (see Appendix C) was sent to the host countries before the team visited them to frame the discussion around five major topics:

- Laws, policies, and enforcement
- Program management
- Stakeholder, community, and citizen involvement
- Environmental impacts, economic benefits, and revenue generation
- Safety

Table 1. Basic information on countries, states, and cities visited or studied.

COUNTRY	STATE ROADS (CONTROLLED)* (X 1,000 KM/MI)	CITY VISITED
Australia:	126/78	
• New South Wales	21/13	Sydney
• Queensland	33/20	Brisbane
• Victoria	22/14	Melbourne
Denmark**	4/2	
Finland**	78/49	
Japan***	n/a	
Sweden	98/61	Stockholm
The Netherlands	3/2	Rotterdam
United Kingdom:	n/a	
• England	7/4	London
• Scotland	3/2	Glasgow
<i>United States****</i>	<i>489/304</i>	

* This column represents the length of the state road network for which outdoor advertising control applies.

** The study team did not visit Denmark or Finland. A representative from each country traveled to Sweden and attended the meetings with the Swedish Road Administration (Vägverket) in Stockholm.

*** A visit to Japan was not possible because of scheduling conflicts. The study team sent the amplifying questions to the Ministry of Land, Infrastructure, Transport, and Tourism in Japan.

****Information about the United States is provided as a reference.

Chapter 2: Outdoor Advertising Control Practices in Australia

Australia—New South Wales

Regulatory Framework

In New South Wales, the Roads Act 1993⁽¹¹⁾ determines who controls and manages different types of roads. RTA is the road authority for all freeways and unincorporated roads, totaling some 21,000 km (13,000 mi). Local councils are the road authorities for regional and local roads (except where some other public authority is designated as the road authority).

The Roads Act 1993 includes a requirement to request consent from a road authority before placing any structure in the right-of-way. The law also enables RTA to require the removal of signs and other objects or obstructions that constitute a traffic safety hazard. This authority extends to the removal of signs located on land next to the right-of-way. The action to require removal of a sign can start at RTA or at the request of another public agency, regardless of when the structure was erected or any approval, permit, or license associated with the structure. Road Transport (Safety and Traffic Management) Regulation 1999 prohibits the installation of any object or structure likely to prevent drivers from clearly seeing traffic control devices.⁽¹²⁾

In 2001, New South Wales implemented a policy under the Environmental Planning and Assessment Act 1979⁽¹³⁾ to regulate all signage (including advertising) visible from any public space in the state (unless the signage is exempt under a specific environmental planning instrument). The purpose of this policy, called the State Environmental Planning Policy (SEPP) 64—Advertising and Signage,⁽¹⁴⁾ is as follows:

- Ensure that all signage (including advertising) is compatible with the desired visual character of the area, provides effective communication in suitable locations, and is of high-quality design and finish.
- Regulate signage (but not content) under the Environmental Planning and Assessment Act 1979.
- Provide time-limited consent to advertising.

To complement SEPP 64, in 2007 the Ministry of Planning published a set of best practices called *Transport Corridor*

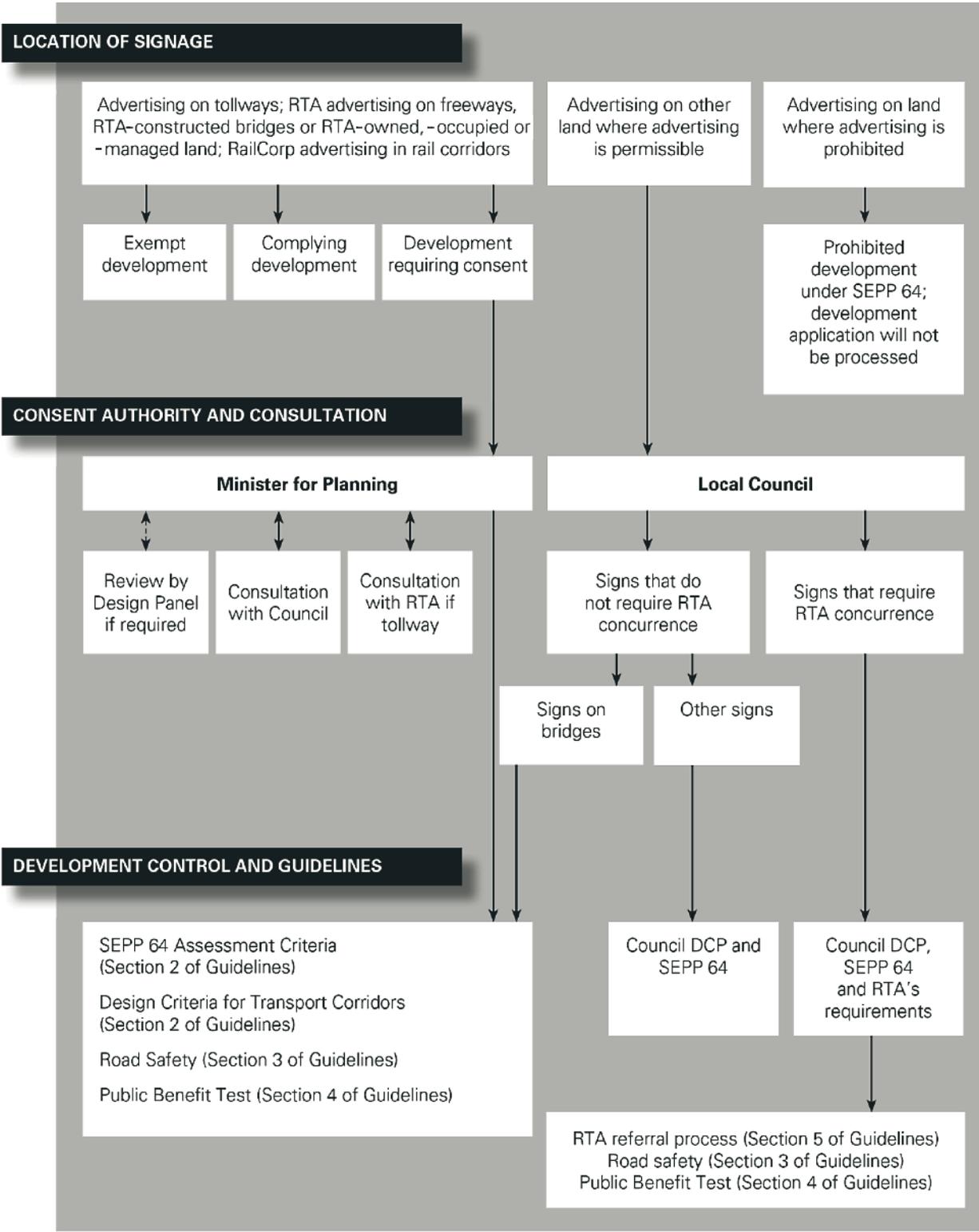
Outdoor Advertising and Signage Guidelines: Assessing Development Applications Under SEPP 64.⁽¹⁵⁾ The guidelines outline best practices for planning and designing outdoor advertising along transportation corridors. These corridors include classified roads, freeways, tolled highways, transit routes, and rail corridors, as well as advertising on bridges and road or rail overpasses. RTA provided much of the content for both SEPP 64 and the guidelines.

SEPP 64 makes a distinction among the following sign categories:

- **Advertisement.** Advertisement is any sign (including its supporting structure) that is subject to the regulatory provisions in SEPP 64. SEPP 64 does not cover building identification signs, business identification signs, exempt signs, or signage on vehicles.
- **Building identification sign.** A building identification sign is one that identifies or names a building. The sign can include the name of a business or building, the street number of the building, the nature of the business, and a logo or other symbol that identifies the business. This type of sign does not include general advertising of products, goods, or services.
- **Business identification sign.** A business identification sign is one that provides information about the business activity, services, and products at the location where the sign is displayed. This type of sign does not include advertising of businesses located elsewhere.

Examples of signs that are considered exempt and are not covered by SEPP 64 include advertising in underground rail stations, rail tunnels, rail or bus stations (as long as the advertising is primarily visible from inside the stations), and election-related signs (as long as the signs meet certain criteria).

Consent by a designated authority is necessary to display advertising signs. As figure 1 (see next page) shows, the consent authority, associated review, and approval process are functions of the type of transportation facility and who controls or manages the land. The Ministry of Planning is



DCP: development control plan

Figure 1. New South Wales signage and outdoor advertising process under SEPP 64.⁽¹⁵⁾

responsible for signs located in the right-of-way of motorways (mainly freeways and tollroads), rail corridors, and structures or land controlled by RTA. Local councils are responsible for signs on other land where advertising is permissible.

The review and approval process can also include consultation with other agencies. For example, the local council is the consent authority in areas outside the right-of-way, but RTA has a concurrence role within 250 m (820 ft) of a “classified road” (as defined in Part 5 of the Roads Act 1993, which can include roads such as main roads, highways, freeways, tollroads, secondary roads, and tourist roads). More specifically, local councils must seek RTA concurrence if any part of an advertising structure located within 250 m (820 ft) of a classified road is visible from the classified road and the sign display area is greater than 20 square m (215 square ft) or higher than 8 m (26 ft) above the ground. The council must forward the application to RTA to provide concurrence along with an AU\$250 (US\$220) concurrence fee payable to RTA. In deciding whether concurrence under SEPP 64 should be granted, RTA must consider the impact of the advertising sign on road safety and other relevant provisions in the guidelines (see section below) or other relevant guidelines (e.g., bridge design guidelines).

Design, Landscape, and Environment

Responsibilities of the consent authority under SEPP 64 include the following:

- Use the design assessment criteria in table 2 to assess the feasibility of the proposed sign.
- For signs on bridges or signs within 250 m (820 ft) of a road requiring RTA’s concurrence, conduct a public benefit test for the proposed sign.
- If the Ministry of Planning is the consent authority, consider all relevant design and road safety requirements, in addition to the public benefit test.

As shown in table 2 (see next page), the design assessment criteria to assess the feasibility of a proposed sign cover items such as character of the area, special area needs, views and vistas, streetscape and landscape, character of the site and building, associated devices and logos, illumination, and safety. These design criteria fall into three general categories: macroscale planning principles, sign clutter controls, and site-specific and structural criteria.

SEPP 64 emphasizes the need to ensure compatibility between the proposed sign and land use characteristics.

Examples of relevant SEPP 64 provisions include the following:

- Outdoor advertising should be consistent with land use objectives outlined in the development control plan (DCP) or the local environmental plan (LEP).
- Outdoor advertising is not allowed in environmentally sensitive areas, heritage areas (excluding rail stations), natural or other conservation areas, open spaces, waterways, residential areas (except mixed residential and business areas), scenic protection areas, or national parks.
- Advertising structures should not dominate or protrude significantly above the skyline or compromise significant scenic views or views that add to the character of the area.
- Advertising structures should not diminish the value of areas of heritage significance.
- Advertising structures should be placed in the context of other built structures.
- Signage should be used to enhance the visual landscape (e.g., to screen unsightly aspects of a landscape, industrial sites, or infrastructure such as rail lines or power lines).

In rural areas where the Ministry of Planning is the consent authority, sign placements are only considered within 5 km (3 mi) of a freeway exit, within 5 km (3 mi) of an urban center (or larger distance if allowed in the local DCP or LEP), or along industrial corridors. In urban areas, the SEPP 64 guideline recommends that advertising be restricted to rail corridors, freeways, tollroads, or other classified roads in or next to strategic corridors passing through enterprise zones, business development zones, commercial zones, mixed-use zones, industrial zones, entertainment districts, or other urban locations where advertising is appropriate.

To reduce sign clutter, the *Transport Corridor Outdoor Advertising and Signage Guidelines* recommend the following strategies:⁽¹⁵⁾

- Discourage multiple advertising signs on a single block of land, structure, or building.
- If there is advertising clutter, reduce the overall number of individual signs on a site. Replacing many small signs with a larger single sign is advantageous if the overall advertising display area does not increase.

Table 2. Design assessment criteria in SEPP 64.^(14,15)

DESIGN ASSESSMENT CRITERIA
<p>Character of the area:</p> <ul style="list-style-type: none"> • Is the proposal compatible with the existing or desired future character of the area or locality where it is proposed to be located? • Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?
<p>Special areas:</p> <ul style="list-style-type: none"> • Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes, or residential areas?
<p>Views and vistas:</p> <ul style="list-style-type: none"> • Does the proposal obscure or compromise important views? • Does the proposal dominate the skyline and reduce the quality of vistas? • Does the proposal respect the viewing rights of other advertisers?
<p>Streetscape, setting, or landscape:</p> <ul style="list-style-type: none"> • Are the scale, proportion, and form of the proposal appropriate for the streetscape, setting, or landscape? • Does the proposal contribute to the visual interest of the streetscape, setting, or landscape? • Does the proposal reduce clutter by rationalizing and simplifying existing advertising? • Does the proposal screen unsightliness? • Does the proposal protrude above buildings, structures, or tree canopies in the area or locality? • Does the proposal require ongoing vegetation management?
<p>Site and building:</p> <ul style="list-style-type: none"> • Is the proposal compatible with the scale, proportion, and other characteristics of the site or building, or both, on which the proposed signage is to be located? • Does the proposal respect important features of the site or building, or both? • Does the proposal show innovation and imagination in its relationship to the site or building, or both?
<p>Associated devices and logos with advertisements and advertising structures:</p> <ul style="list-style-type: none"> • Have any safety devices, platforms, lighting devices, or logos been designed as an integral part of the signage or structure on which it is to be displayed?
<p>Illumination:</p> <ul style="list-style-type: none"> • Would illumination result in unacceptable glare? • Would illumination affect safety for pedestrians, vehicles, or aircraft? • Would illumination detract from the amenity of any residence or other form of accommodation? • Can the intensity of the illumination be adjusted, if necessary? • Is the illumination subject to a curfew?
<p>Safety:</p> <ul style="list-style-type: none"> • Would the proposal reduce the safety of any public road? • Would the proposal reduce the safety for pedestrians or bicyclists? • Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sight lines from public areas?

- In rural areas and along freeways and toll roads, do not allow more than one advertising structure to be visible along a given sight line.

The guidelines include specific design and location criteria for different types of signs, including wall signs, rooftop signs, freestanding billboards, bridge signs, posters, and special promotion signs. To assist with the presentation and discussion of topics, the guidelines include pictures with examples of acceptable (and unacceptable) sign configurations. As an illustration, figure 2 shows a sequence of signs that would be unacceptable according to the SEPP 64 guidelines under the premise that too many signs contribute to clutter (although each individual sign, if not presented in a sequence, might be acceptable on the grounds that it does not protrude above buildings or dominate the skyline).



Figure 2. Sequence of signs that would be unacceptable under SEPP 64.

Note: These signs are located along Joyce Drive on the east side of the Sydney International Airport, which is owned by the government of Australia, not New South Wales.

The SEPP 64 guidelines include the following requirements for new advertising sign applications:

- Completed application form.
- Statement of environmental effects (SEE) detailing the proposed development and its impacts. The SEE should include elements such as the following:
 - Summary statement.
 - Details of the proposed sign location, including information about zoning, permissibility and planning controls for the specific site, location of existing buildings, structures and vegetation near the sign, and surrounding land use, including any trends in changing land uses.
 - Description of the proposed sign, including site details, color pictures or photomontages, and proposed sign management. Color pictures should show views of the proposed sign when viewed at ground level within 1 km (0.6 mi) of the site and all critical viewpoints. The pictures should also show any traffic control devices located within 100 m (328 ft) of approaches to the proposed site and any traffic control devices that would be visible beyond the proposed site. Photomontages should show accurate perspectives of the proposed sign at driver's eye level, taken from critical viewing points before the sign in each approaching direction. If

view corridors or vistas are impacted, the photomontage should clearly demonstrate the impact of the proposed sign.

- If the Ministry of Planning is the consent authority, an assessment of how the proposed sign addresses relevant SEPP 64 provisions, land use compatibility requirements, design criteria for transportation corridors, road safety considerations, and the public benefit test.
- If a local council is the consent authority, an assessment of how the proposed sign addresses relevant SEPP 64 provisions, relevant DCP requirements, road safety considerations, a public benefit test (if it is a proposal for an advertising sign on a bridge or requires RTA's concurrence), and RTA requirements (if RTA concurrence is required). The application should also include an assessment of other advertising proposals in or next to the transportation corridor.
- A justification for the proposal that considers the design assessment criteria (table 2) and any mitigation or management measures to minimize the potential impacts of the proposed advertisement.

Typically, consent for approved signs is given for 15 years (or less under certain circumstances, such as if the area is undergoing changes in response to an environmental planning initiative).

Safety

SEPP 64 recognizes that advertising signs visible from the road are designed to attract the attention of drivers and passengers. SEPP 64 also recognizes that drawing driver attention away from the road has the potential to create a traffic safety hazard. To minimize this hazard and improve road safety for all drivers, the SEPP 64 guidelines include a set of minimum traffic, bicycle, and pedestrian safety assessment criteria that must be addressed for all outdoor advertising proposals. The safety assessment criteria include items such as sign location and design, variable message signs, moving signs, video and animated electronic signs, illumination and reflectance, crash history, and sign content. To assist with the analysis, RTA uses the safety assessment matrix in table 3.

Examples of sign location and design safety criteria include the following:

- An advertising sign must not obstruct a driver's view of the road, other vehicles, bicycle riders, or pedestrians, particularly at crossings.
- An advertising sign must not obstruct a pedestrian's or cyclist's view of the road.
- The placement of a sign should not distract a driver at a critical time. In particular, signs should not obstruct a driver's view of a road hazard, an intersection, a traffic control device, or an emergency vehicle access point or driveway.
- An advertising sign must not distract a driver from or reduce the visibility and effectiveness of traffic control devices, or obscure information about the road alignment.
- An advertising sign should not give visual clues to the driver suggesting that the road alignment is different from the actual alignment.
- An advertising sign should not be located less than the safe sight distance from intersections, ramps, traffic control signals, or sharp curves; less than the safe stopping sight distance from pedestrian or bicycle crossings or hazards in the road environment; or so that it is visible from the stem of a T intersection.
- An advertising sign must not interfere with the effectiveness of a traffic control device (e.g., by imitating a traffic control device, by including content that can be construed as giving traffic instructions, or by using flashing lights in the vicinity of traffic lights).
- An advertising sign should not draw a driver's attention away from the road environment for an extended time period. For example, a driver should not have to turn his or her head away from the road and the components of the traffic stream to view the sign display or message. When viewing a sign, all drivers should be able to see both the road and the main components of the traffic stream in peripheral view. Likewise, the sign should not create headlight reflections in the driver's line of sight.
- An advertising sign must not create a physical obstruction or hazard. For example, a sign must not obstruct the movement of pedestrians or bicycle riders and should not protrude horizontally or vertically in a way that it could be struck by tall or wide vehicles.
- Signs with nonbreakaway supports must be placed outside the clear zone or behind an approved crash barrier. If a sign is proposed within the clear zone but behind an approved crash barrier, the sign must comply with relevant standards on lateral clearances, dynamic deflection, and width.

Variable message (nonscrolling) sign safety criteria include the following:

- The speed limit of the road must not be greater than 70 kilometers per hour (km/h) (44 miles per hour (mi/h)).
- The time to change the display must not be greater than 1 second.
- The display must be completely static from its first appearance to the start of the transition to another display.
- The illumination level must adjust to ambient light levels.
- The sign must not contain any scrolling messages (e.g., text or graphics that move up, down, or across the screen).
- Other criteria may apply as described in RTA's *Guidelines for the Location and Placement of Variable Message Signs*.⁽¹⁶⁾

Scrolling sign safety criteria include the following:

- The speed limit of the road must not be greater than 70 km/h (44 mi/h).

Table 3. RTA safety assessment matrix.

Considerations	← Less Risk Guide to Risk Ratings More Risk →				
	1	2	3	4	5
It obscures a drivers view of a road hazard	Does not obscure any road hazard	Partly obscures a road hazard but does not hide the nature of a hazard.	Partly obscures a road hazard but motorist may be warned that there may be a hazard.	Partly obscures a road hazard and provides no warning that a hazard exists.	Completely Obscures a serious road hazard.
It distracts a driver at a critical time.	It is not located near any decision points	Is located between 200 & 300m from a decision point	Is located between 100 & 200m upstream of a decision point.	Is located < 100m upstream from a decision point.	Is located at a significant decision/ manoeuvre point
It interferes with the effectiveness and safety of a traffic control device.	Does not interfere with any traffic control device	It may reduce the effectiveness of a class 3# traffic control device.	It may reduce the effectiveness of a class 2# traffic control device.	It reduces the effectiveness of a class 2# traffic control device.	It reduces the effectiveness of a class 1# traffic control device.
It gives instructions to traffic such as "Stop" or "Halt"	It does not give any instructions.	It provides motorists with advance warning of an action.	It instructs motorists to perform an action.	It instructs motorists to perform an illegal action.	It instructs motorists to perform a dangerous or illegal action.
It attempts to imitate a traffic control device	Does not imitate	Imitates the colour of a traffic control device	Imitates the colour and shape of a traffic control device	Imitates the colour, shape and legend of a traffic control device.	Imitates the colour, shape, legend and layout of a traffic control device
The brightness and contrast of the sign is inappropriate.	The sign is unlit or retroreflective.	The sign cannot vary brightness but is set to match the minimum ambient light levels expected.	The sign varies its brightness to match the ambient light.	The sign does not vary brightness to match the ambient light but intensity is unlikely to cause night blindness.	The sign does not vary brightness to match the ambient light and may cause discomfort or temporary night blindness.
Animation and movement	The message is not animated or changeable.	The message changes instantaneously and remains static for at least 5 minutes.	The messages take 1-2 seconds to transition or the message stays static less than 5 minutes.	The message is animated and flashes.	The message is animated, flashes and scrolls.
It distracts the drivers attention for too long a period	Provides instant recognition.	Provides a simple static message and easily recognisable graphic.	Provides a complex static message and easily recognisable graphic.	Provides a complex static message and graphics.	Provides a moving message that takes longer than 4 seconds to completely appear.
Volume of traffic Impacted	AADT < 10,000	AADT between 10,000 & 25,000	AADT between 25,000 & 40,000	AADT between 40,000 & 60,000	AADT > 60,000

- The display must be completely static from its first appearance to the start of the transition to another display.
- Under normal driving conditions, a driver should not expect to see more than one message during the exposure period.

The current policy on video and animated electronic signs, including signs that contain any portion of video or animated content, is that those signs are not approved if they face the road and are visible to drivers. New South Wales is revising the policy on electronic signs with input from various stakeholders, including RTA, local councils, and advertisers.

Although SEPP 64 does not regulate the content displayed on the sign (subject to community obscenity objections), it does provide content guidelines, including the following:

- An advertising sign must not imitate a traffic control device, must not instruct drivers to perform an action such as stop or yield, and must not invite traffic to move contrary to any traffic control device or turn where there is fast-moving traffic.
- An advertising sign must not contain reflectors that could be mistaken for a traffic control device at night. The permissible level of reflectance of a sign also applies to the sign content.
- An illuminated sign should not contain large areas of red display. At night, particularly in wet conditions, an illuminated red display could be confused with a traffic signal, a stop sign, or the taillights of a moving vehicle.
- Messages should not be distracting or inconsistent with road safety.
- Signs should be legible. The font size should be at least 150 millimeters (6 inches) tall.
- To minimize the time to read and understand a sign, the sign should not contain more than six units of information in total, using the following measures as a guideline:
 - Word up to eight letters long = one unit
 - Number up to four digits long = 0.5 unit
 - Number five to eight digits long = one unit
 - Symbol, picture, logo, or abbreviation = 0.5 unit
- An advertising sign should not spread the message across more than one adjoining sign.

According to the SEPP 64 guidelines, RTA may review crash records after 3 years to determine whether a sign on a new site has had an adverse impact on road safety. In addition, as mentioned previously, the Roads Act 1993 enables RTA to require the removal of signs and other elements that constitute a traffic hazard. This act defines a traffic hazard as a structure or object that is likely to limit or obscure the driver's view, be mistaken for a traffic control device, cause inconvenience or danger in the use of a public road, or otherwise be hazardous to traffic.

Revenue Generation and Public Benefit

The public benefit test in SEPP 64 is an assessment of how the local community could benefit from the deployment of a proposed advertising sign. The public benefit test applies if the sign is by or on behalf of RTA or RailCorp, or if the sign is to be displayed along a tollroad or on a bridge. It also applies if the proposed sign requires RTA concurrence under SEPP 64.

The public benefit, which can be in the form of a monetary or an in-kind contribution, is to be negotiated between the consent authority and the applicant. Both monetary and in-kind contributions must be linked to improvements in local community services and facilities (e.g., improved traffic safety, improved public transportation services, improved public amenity in or next to the transportation corridor, and support for school safety infrastructure and programs).

For advertising applications for which the council is the consent authority, advertising proposals are subject to standard application fees (including the AU\$250 (US\$220) concurrence fee payable to RTA) and upfront or annual fees for the duration of the consent (normally 15 years). However, the council may not require fee payments if the council is satisfied that adequate public benefits will be generated. Councils are responsible for collecting, distributing, and spending revenue from the fees. These fees must fund a public program developed in partnership with RTA or the Ministry of Transport in areas that require investments in safety, public transportation, or amenity improvements.

For signs installed by or on behalf of RTA and RailCorp, the agencies must demonstrate that revenue raised from outdoor advertising is directly linked to a public benefit. On tollroads, the operator must enter into an agreement with RTA to meet public benefit requirements. The requirements may include payment of an annual or upfront fee negotiated with RTA. RTA and RailCorp must record the total amount of outdoor advertising revenue received each year in their financial accounts and annual reports. These reports must also outline investments in

transportation safety or other relevant improvements. RTA must consult with the relevant councils to identify and prioritize any improvements to be delivered through the program on a regional or subregional basis (in the Sydney metropolitan area).

Typically, RTA writes a letter to the local council to communicate its intent to use an advertising sign in the right-of-way to fund an infrastructure improvement (e.g., a pedestrian bridge). The council uses a newspaper ad to provide written notice to the community. At a council meeting, RTA has an opportunity to present and discuss the proposal and the public has an opportunity to provide comments. For the discussion, RTA lists items that are not negotiable (usually constraints that cannot be modified, such as the location of an existing school or road) and items that are negotiable. RTA's task is to demonstrate a direct benefit or nexus of the sign to the community (e.g., if a pedestrian bridge to a school is needed, RTA must demonstrate the advantage of using a well-designed advertising sign on the pedestrian bridge to help pay for the bridge).

RTA owns and operates a number of billboards in the right-of-way. RTA outsources the marketing displayed, sign maintenance, and compliance with planning regulations. There are currently three major operators and a few smaller ones. The basis for selection is maximum valuation, which in practice is the highest bid. The duration of a typical license to build and maintain signs is 15 years. RTA is a member of Australia's Outdoor Media Association (OMA), which gives RTA access to data to estimate the value of signs under various conditions. In practice, RTA bundles signs into packages, which limits RTA's ability to determine the value of individual signs precisely.

From 2007 to 2010, the number of RTA-owned sites in the right-of-way increased from 40 to 75 and revenue increased from AU\$9 million to AU\$15 million (US\$8 million to US\$13 million). Signs in the Sydney metropolitan area account for 54 percent of the total number and 99 percent of the revenue. This revenue goes to the state's general fund, unless the license provides for a specific use of the revenue. Until recently, RTA did not have a community consultation process for billboards in the right-of-way. RTA is now developing this process.

For transparency purposes, contracts are normally fixed-income rather than profit-sharing arrangements. This business model worked well before the recent recession. The global financial crisis hit the outdoor advertising market hard, resulting in a downward pressure on rent. RTA is exploring ways to operate the signs it owns to reduce its reliance on outdoor advertising companies. Part of the plan includes upgrading some traditional signs to electronic signs to consolidate information and reduce clutter.

Australia—Queensland

Regulatory Framework

In Queensland, TMR controls about 33,000 km (21,000 mi) of roadways, or 17 percent of the roadway network. Local governments control about 156,000 km (97,500 mi) of local roads.

Outside the right-of-way of state-controlled roads, the Integrated Planning Act 1997⁽¹⁷⁾ does not include outdoor advertising as a trigger for consultation with TMR. However, according to the Transport Infrastructure Act 1994,⁽¹⁸⁾ all "ancillary works and encroachments," which include traffic and service signs as well as advertising devices, are subject to provisions related to driver distraction and operation and maintenance responsibilities. In particular, a local government must obtain TMR's approval if it intends to approve an advertising device outside the right-of-way that would be visible from a motorway and would reasonably create a traffic hazard on the motorway. This requirement does not extend to nonmotorway state-controlled roads. However, the Transport Operations (Road Use Management) Act 1995⁽¹⁹⁾ prohibits the use of any sign that may be confused with an official traffic sign, reduces the clarity or effectiveness of an official traffic sign, or encourages traffic to move contrary to an official traffic sign. Also, the Transport Operations (Road Use Management—Accreditation and Other Provisions) Regulation 2005⁽²⁰⁾ enables TMR to require modification or removal of a sign if, in TMR's opinion, it is a traffic hazard.

In practice, proving in court that a sign is a distraction or a traffic hazard is not always straightforward. According to TMR officials, they use court cases from other jurisdictions to help prove their case.

In the right-of-way, the Transport Infrastructure Act 1994 and the Transport Infrastructure (State-Controlled Roads) Regulation 2006 specify types of structures or activities that require a road corridor permit.^(18,21,22) Examples of structures that require a permit include advertising signs, bicycle paths, bridges, culverts, utility facilities, mailboxes, solar panels, monuments, statues, fences, and gates. Examples of activities that require a permit include clearing, drilling, landscaping, promotional activities, tree removal, and painting. Currently, TMR waives permit fees except for those on some roadside advertising.

In 2002, TMR published a guide to assist with the evaluation of proposals for roadside advertising, both inside and outside the right-of-way of state-controlled roads. The guide, now called the *Roadside Advertising Guide*,⁽²³⁾ focuses mainly on safety and traffic efficiency while recognizing the role of advertising in promoting business and economic

activity. In general, the policy aims to control advertising sign structures and spacing, but not content (which is self-regulated by the advertising industry).

The guide uses the term “advertising device” to represent the sign and the structure that supports it. The guide makes a distinction among the following categories of advertising devices:

- **Category 1.** This category includes large freestanding devices, devices attached to buildings or overhead transportation infrastructure, and temporary charity and event banners. Examples include billboards, trivision signs, and signs on overhead bridges (which may be in the right-of-way of a state-controlled road or next to, but visible from, a state-controlled road). TMR does not have a policy on electronic signs.
- **Category 2.** This category includes static illuminated signs on street name posts (located within state-controlled roads).
- **Category 3.** This category includes devices attached to transportation infrastructure other than overhead transportation infrastructure (e.g., bus shelters and seats).
- **Category 4.** This category includes business signs, community signs, road user signs, and small miscellaneous signs on (or above) state-controlled roads. Examples include devices on premises, awnings, and fences (except those considered Category 1 devices) and sidewalk, real estate, charity prize home, roadside vendor, service organization, welcome, neighborhood watch, safety house, road service club, election, and utility signs.

The guide describes specific permission criteria for each sign category and outlines procedures for compliance, enforcement, and removal of unauthorized devices. The guide also describes review processes, outlines various fees in connection with advertising devices, provides details on the private sponsorship of pedestrian bridges, includes a template for a license agreement for advertising signs in the right-of-way, and provides information about the advertising industry self-regulation process. Not included in the guide is a license agreement template that TMR developed recently to handle Category 2 signs.

Outdoor advertising control is decentralized. TMR is divided into 12 regions that coordinate activities with 74 local governments, each with different attitudes toward and policies on outdoor advertising. This amount of coordination makes it necessary to adopt standardized protocols and procedures while being sensitive to the needs of local

agencies. Although TMR uses a road corridor permit system to facilitate the management of corridor permits at the district level, outdoor advertising review and enforcement is a fairly manual process. Using corridor video logs, TMR can identify the local and surrounding environment associated with each sign. TMR also has a geographic information system viewer that enables officials to pinpoint the approximate location of individual signs.

The guide describes a tool called advertising management plans (AMPs) for implementing outdoor advertising policies in concert with local agencies and other stakeholders. The purpose of AMPs is to develop a structure and document processes to manage and control advertising, set parameters against which proposals are assessed, address vegetation and landscaping concerns, and ensure that the location of all proposed devices is consistent with the location of both existing and anticipated advertising devices. Ultimately, the goal of implementing AMPs is the following:

- Reduce the uncoordinated proliferation of Category 1 advertising devices both in and outside the right-of-way.
- Increase the effectiveness of a select number of Category 1 advertising devices in an aesthetically pleasing manner.
- Reduce clutter.
- Facilitate regional, trade, and economic development.
- Provide financial returns to the relevant state and local agencies.

The current outdoor advertising policy was developed after legislation was enacted in the 1990s. The restriction distances in the current guide were established in 2002. TMR officials have identified the need to review the guide to address new technologies and developments more effectively. For example, they are examining restriction areas (see next section) with Australia’s Outdoor Media Association. They have also identified the need for greater guidance in the case of on-premise signs and the need to address the limitation of not being able to apply the guide retroactively to existing approved signs. They are also evaluating examples of policies from other jurisdictions, including New South Wales.

While TMR has adequate control on outdoor advertising on motorways, the level of control is much lower on corridors with posted speed limits of 80 km/h (50 mi/h) or lower, where there is a multiplicity of signs, and it is frequently difficult to bring signs up to current standards.

TMR is considering whether to develop a guideline to supplement the guide and work with local councils to allow them to take on the responsibility to handle those cases on behalf of TMR. In general, for signs inside the right-of-way, TMR specifies a sunset clause (e.g., 15 years). TMR was not aware of sunset clauses applied at the local level.

Safety

According to the *Roadside Advertising Guide*, an advertising device may be considered a traffic hazard if any of the following apply:

- Interferes with road safety or traffic efficiency
- Interferes with the effectiveness of a traffic control device
- Distracts a driver at a critical time (e.g., while making a decision at an intersection)
- Obscures a driver's view of a road hazard (e.g., at corners or bends in the road)
- Gives instructions to traffic to stop, halt, yield, or merge
- Imitates a traffic control device
- Is a dangerous obstruction to a road or other infrastructure, traffic, pedestrians, cyclists, or other road users
- Is in an area where several devices are located and the cumulative effect of those devices may be potentially hazardous

In general, the traffic hazard potential depends on sign size, location, luminance, background, and distance from the road. The guide also recognizes that (1) frequent changes to advertising content are more likely to distract a driver than a static sign and (2) well-known symbols and logos are less likely to distract a driver than words.

To maintain safety and traffic efficiency for road users, the guide recommends controlling two critical aspects:

- **Site location.** Site selection includes control for lateral and longitudinal placement. To control for **lateral placement**, the guide uses the clear zone guidelines in the American Association of State Highway and Transportation Officials' *Roadside Design Guide*.⁽²⁴⁾ With the exception of corridors with wide medians in which oncoming traffic is not visible because of topography or dense vegetation, advertising on medians is not allowed. To control

for **longitudinal placement**, the guide considers advertising device density constraints and restriction distances on designated traffic situations and official traffic signs. To assist with analysis of specific situations, the guide includes diagrams and restriction areas and distances for a variety of road speeds, device locations, and device types and sizes (figures 3 and 4, see next page).

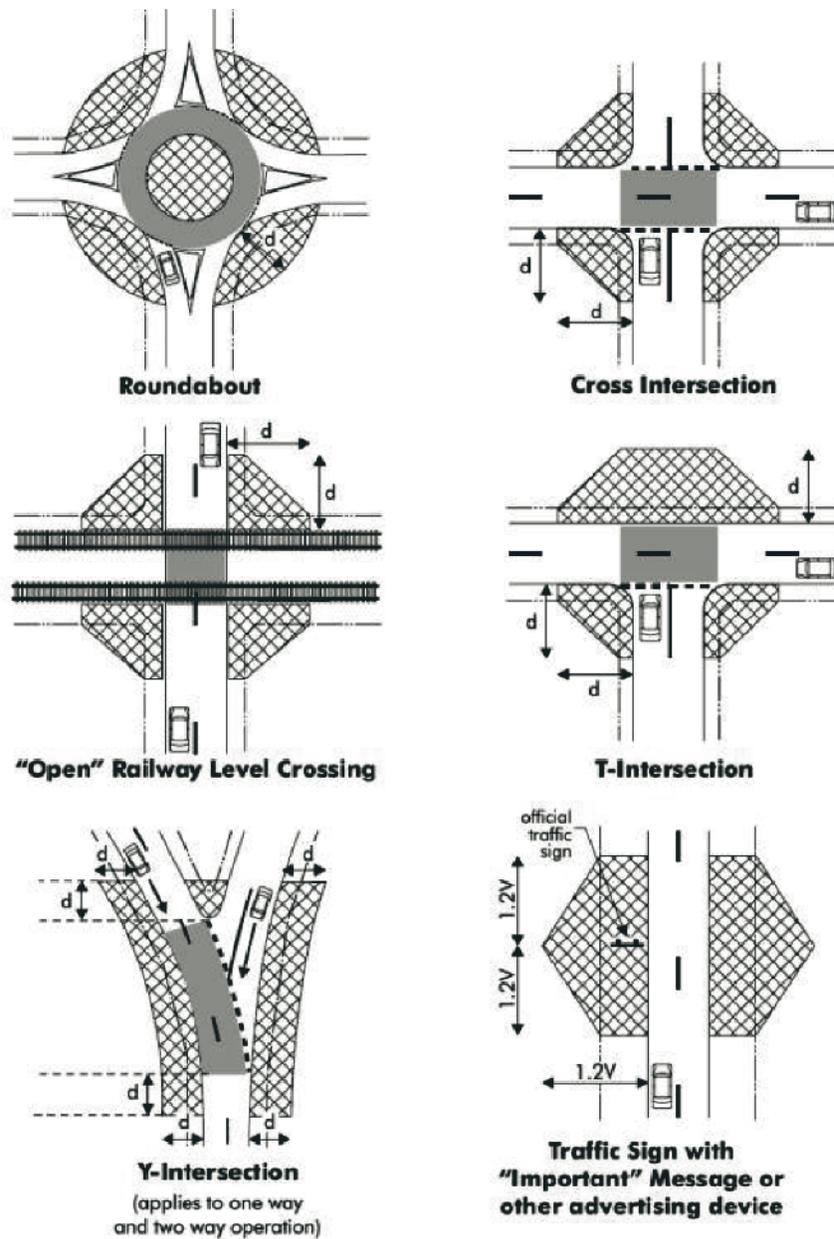
- **Physical characteristics.** Physical characteristics include shape, illumination, color, and font size.

Where both lateral and longitudinal placement requirements are provided for by a particular restriction distance, the guide recommends using the greater value. The guide also highlights that, in addition to the restriction areas identified in figures 3 and 4, further restrictions may be warranted if additional driver attention and decisionmaking are required. Examples of this type of situation include the following:

- High-speed diverging, merging, or weaving at intersections, such as Y intersections or large high-speed roundabouts
- Near intersections where lanes merge or a divided motorway becomes a two-way road
- Complex intersections or road sections that require an increased level of driver concentration (e.g., five-way intersections, back-to-back horizontal curves)
- Advertising on the outside curve of a divided road that is directed at traffic traveling in the opposite direction
- Sections of road displaying several traffic control devices that, when considered individually or in combination, are significantly more complex than normal
- Sections of road with a crash history higher than the system average
- Pedestrian crossing facilities

The restriction areas identified in figures 3 and 4 apply to all Category 1 advertising devices. The restriction areas do not apply in other cases (e.g., most Category 2, 3, or 4 devices and roadway project signs).

TMR is now updating the restriction area diagrams. One change involves renaming restriction areas outside the right-of-way as "device distraction areas" because those areas are controlled by local governments.



Use this Figure	C5
Outside boundaries but visible from SCR (Not Motorways) (<i>d</i> from C2, C3 and C4)	<input checked="" type="checkbox"/>
Outside boundaries but visible from SCR (Motorway)	<input type="checkbox"/>
Within boundaries (<i>d</i> from C1)	<input checked="" type="checkbox"/>
Non-illuminated or illumination not changing	<input checked="" type="checkbox"/>
Illumination changing	<input checked="" type="checkbox"/>
Variable message	<input checked="" type="checkbox"/>
Get distances ' <i>d</i> ' from Figures C1, C2, C3, C4	

- Conflict Area
- Device Restriction Area
- d* Device Restriction Distance (m). See Figure C1 for devices in road reserve. See Figures C2, C3, C4 for devices adjacent to the road reserve.
- Real Property Boundary
- V Speed Limit

Notes

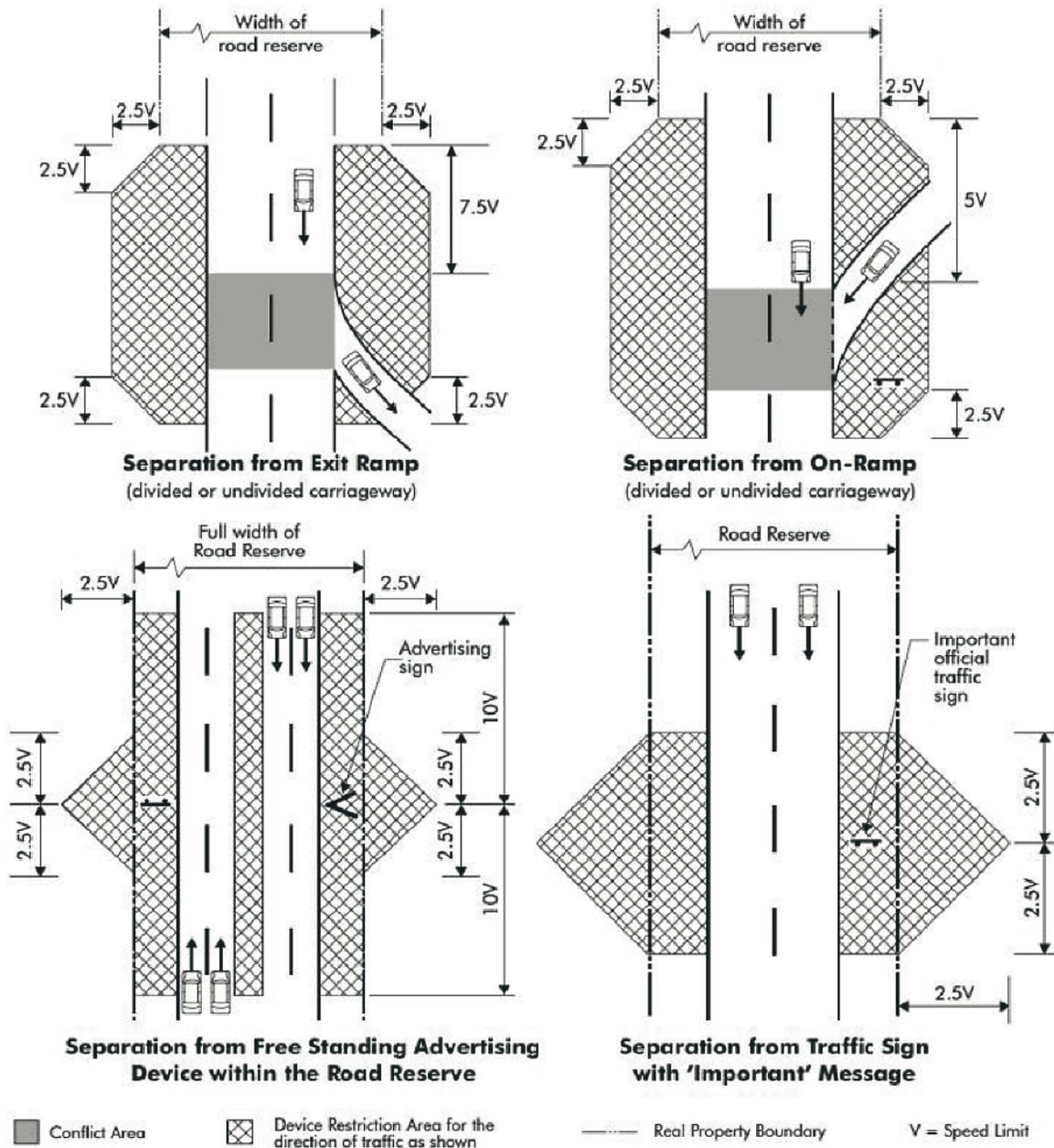
An 'important' official traffic sign includes a major guide, regulatory or warning sign.

In addition to the above situations it may be necessary to designate restriction areas for other critical traffic situations.

Advertising Devices not permitted in medians or on traffic islands.

Note: Device restriction distance is in meters. Posted speed limit is in kilometers per hour.

Figure 3. TMR advertising device restriction areas (excluding motorways).⁽²³⁾



Use this Figure	C6
Outside boundaries but visible from SCR (Not Motorways)	<input checked="" type="checkbox"/>
Outside boundaries but visible from SCR (Motorway)	<input checked="" type="checkbox"/>
Within boundaries	<input checked="" type="checkbox"/>
Non-illuminated or illumination not changing	<input checked="" type="checkbox"/>
Illumination changing	<input checked="" type="checkbox"/> Not permitted
Variable message	<input checked="" type="checkbox"/> Not permitted

Notes:

'Important' official traffic signs convey a message that if missed by motorists could have a safety impact. Examples include guide signs located in advance of motorway exits, warning signs and most regulatory signs. Speed limit repeater signs and geographical feature signs would generally not be considered as 'important' traffic signs. A reduced device restriction distance of 1.2V can be adopted for service and tourist signs.

In addition to the above situations it may be necessary to designate restriction areas for other critical traffic situations. For example, larger restriction distances can be applied if there are crashes that can be attributed to increased driver demand in the vicinity of interchanges.

Advertising Devices not permitted in medians or on traffic islands.

Note: Device restriction distance is in meters. Posted speed limit is in kilometers per hour.

Figure 4. TMR advertising device restriction areas for motorways.⁽²³⁾

Revenue Generation

TMR does not charge for road corridor permits. TMR's perspective is that it should be able to charge an amount consistent with the level of effort involved in the review and monitoring process. TMR has seven sites in which billboards are allowed in the right-of-way. The pricing for these locations is based on a competitive bid process with the bid value as the evaluation factor.

Some 700 Category 2 devices are in the right-of-way of state-controlled roads across the state. As part of the license agreement between TMR and the sign provider, the provider pays AU\$600 (US\$507) for an application fee and AU\$600 (US\$507) for an annual license renewal fee for each sign. The license agreement is for 5 years with an option to extend it for 5 more years. The license agreement covers technical, insurance, and indemnity provisions. The revenue from Category 2 signs goes to TMR.

Australia—Victoria

Regulatory Framework

In Victoria, VicRoads controls about 22,000 km (14,000 mi), or 14 percent, of roadways, which carry 82 percent of all travel in the state. Local governments control the remaining 86 percent of roadways.

As in New South Wales and Queensland, planning legislation provides the foundation for advertising control in Victoria. The Planning and Environment Act 1987⁽²⁵⁾ contains provisions for implementing local and regional plans (called planning schemes) throughout the state. The act requires planning schemes that include state provisions (i.e., provisions selected from the series of Victoria Planning Provisions) and local provisions (which apply only to the area covered by the planning scheme). The intent of requiring state-level provisions is to standardize practices across the state.

Several Victoria planning provisions are relevant to advertising control. According to Victoria Planning Provision Clause 36.04, Road Zone,⁽²⁶⁾ a permit is required for any sign located inside the road right-of-way or within 0.6 m (2 ft) of the right-of-way line. For other areas in the immediate vicinity of a road, the conditions in Victoria Planning Provision Clause 52.05, Advertising Signs,⁽²⁷⁾ apply. The requirement to apply for a permit for signs located inside the right-of-way is also described in the Road Management Act 2004.⁽²⁸⁾ In addition, the act describes the authority to remove illegal signs and request reimbursement for this activity.

The purpose of Victoria Planning Provision Clause 52.05 is to regulate signs, provide for signs that are compatible with the existing (or desired future) visual appearance of an area, ensure that signs do not contribute to excessive visual clutter, and ensure that signs “do not adversely affect the natural or built environment or the safety, appearance, or efficiency of a road.”

Clause 52.05 defines four categories of advertising control that may apply at the zone level:

- Category 1—Business areas
- Category 2—Office and industrial areas
- Category 3—High-amenity areas
- Category 4—Sensitive areas

For each category, Clause 52.05 describes types of signs that do not need a permit, signs that need a permit, and signs that are not allowed (table 4). It also includes specific conditions (e.g., the maximum total area of signage per premise allowed and, in the case of internally illuminated signs, the minimum distance from a residential area or pedestrian or traffic lights).

Local councils are responsible for reviewing and approving advertising sign applications. In practice, the level of compliance varies widely. VicRoads officials noted that a Victoria Auditor General report found that 78 percent of council assessments failed to properly consider regulatory requirements.

VicRoads is a referral authority for outdoor advertising applications. VicRoads' role is to advise councils whether VicRoads (1) does not object to the granting of the permit, (2) does not object provided certain conditions are met, or (3) objects to the granting of the permit on specific grounds.⁽²⁵⁾ For roads classified as freeways or arterials under the Road Management Act 2004,⁽²⁸⁾ the Planning and Environment Act 1987 requires the referral of a permit application for an animated or an electronic sign within 60 m (197 ft) of the road to the referral authority specified in Victoria Planning Provision Clause 66, Referral and Notice Provisions.⁽²⁹⁾ These requirements apply to signs outside the right-of-way, regardless of whether they are on-premise or off-premise signs. It is worth noting that VicRoads used to be a referral authority for a wider range of sign types. However, VicRoads had only three reviewers at the time (same as now), which prompted a change in policy to enable the agency to focus on advertising signs considered to have the greatest potential for driver distraction.

Table 4. Examples of signs covered by Clause 52.05.⁽²⁷⁾

SIGN CATEGORY	PERMIT NOT REQUIRED	PERMIT REQUIRED	PROHIBITED
<p>Category 1—Business areas. The purpose is to provide for signs that add vitality and color to business areas.</p>	<ul style="list-style-type: none"> • Bed and breakfast sign • Business identification sign • Home occupation sign • Directional sign • Internally illuminated sign less than 1.5 square m (16 square ft) 	Any other sign	Does not apply
<p>Category 2—Office and industrial areas. The purpose is to provide for signs that are appropriate to office and industrial areas.</p>	<ul style="list-style-type: none"> • Bed and breakfast sign • Business identification sign • Home occupation sign • Pole sign • Directional sign • Internally illuminated sign less than 1.5 square m (16 square ft) 	Any other sign	Does not apply
<p>Category 3—High-amenity areas. The purpose is to ensure that signs in high-amenity areas are orderly and of good design and do not detract from the appearance of the building on which a sign is displayed or the surrounding area.</p>	<ul style="list-style-type: none"> • Bed and breakfast sign • Home occupation sign • Directional sign 	<ul style="list-style-type: none"> • Above-veranda sign • Business identification sign • Floodlit sign • High-wall sign • Internally illuminated sign • Pole sign • Promotional sign • Reflective sign 	Any other sign
<p>Category 4—Sensitive areas. The purpose is to provide for unobtrusive signs in areas requiring strong amenity control.</p>	<ul style="list-style-type: none"> • Bed and breakfast sign • Home occupation sign • Directional sign 	<ul style="list-style-type: none"> • Business identification sign • Floodlit sign 	Any other sign

In some situations, local councils notify VicRoads of an outdoor advertising application even if, according to the advertising control regulations, referral is not necessary. For example, if a proposed development has the potential to affect adjoining properties, under current regulations any adjoining property owner who may be affected by the proposed development (including VicRoads) must be notified.

Normally, permits are issued for 15 years. Different expiration dates may be possible, but generally cannot be less than 10 years or more than 25 years from the date the

permit was issued. Applicants may appeal rejected applications at the Victoria Civil and Administrative Appeals Tribunal. Property owners can also appeal within 30 days if they do not agree with the issuance of an advertising sign permit.

Requirements in Clause 52.05 for submitting permit applications include the following:

- A report, including a site plan and pictures, describing the location of the proposed sign on the site or building, distance from property limits, details of other signs on the site, details of other signs on

adjoining properties, location of traffic control signs, and identification of view lines or vistas that could be affected by the proposed sign

- Dimensions, height above the ground, and extent of projection of the proposed sign
- Height, width, depth of the total sign structure, method of support, and description of other structures, such as safety devices and service platforms
- Illumination details
- Sign color, lettering style, and materials
- Display size
- Location of any corporate logo box and proportion of display area occupied by that box
- For animated or electronic signs, a report addressing the decision guidelines in Clause 52.05 on road safety. (For electronic signs, VicRoads also asks applicants to provide information about security measures, such as encryption levels and off default settings.)
- Landscaping details
- For signs more than 18 square m (194 square ft) in area, a description of the existing character of the area; location of other signs more than 18 square m in area; location of other scrolling, electronic, or animated signs within 200 m (656 ft) of the site; dwell and change time for nonstatic images; and relationship to significant views and vistas

Design, Landscape, and Environment

As mentioned previously, the Planning and Environment Act 1987⁽²⁵⁾ contains provisions for implementing local and regional plans and requirements to develop and adopt provisions to contribute to the standardization of practices across the state.

Clause 52.05 requires agencies to use a specific set of criteria to assess the feasibility of proposed advertising signs. The criteria are similar to those used in New South Wales (table 2). In recent years, there has been increasing concern that the guidelines are not sufficient to address the needs of Victorian society (e.g., in areas related to driver stress, land use, and quality of life). Two recent efforts to address these issues are a 2007 paper prepared by an advisory committee that reviewed advertising sign provisions for planning schemes in Victoria and an analysis completed on Highway M80 (the main corridor for growth

areas north and west of Melbourne) that evaluated the visual experience of drivers on that corridor.

The 2007 advisory committee that reviewed advertising sign provisions in Victoria proposed a revised set of decision criteria for Clause 52.05 (table 5). The revised criteria were based on a recommendation to use higher order urban design principles to manage outdoor advertising along transportation corridors.

The analysis on M80 involved identifying sections along the corridor that provided four levels of driver experience to motorists, including degraded, unremarkable, average, and good, (table 6) and defining improvement strategies based on primary, secondary, and tertiary urban design elements (figure 5, see page 26). VicRoads is using the results of the analysis as a prototype for corridor development and preservation management, which could be used, among other purposes, to identify exclusions zones for outdoor advertising.

Safety

Clause 52.05 includes a 10-point checklist to help reviewers determine whether a sign is a safety hazard. VicRoads is developing a guidance document to help interpret the safety checklist. This document is expected to include examples with pictures showing what to allow and what not to allow. According to Clause 52.05, a sign is a safety hazard in the following situations:

- Obstructs a driver's line of sight at an intersection, curve, or property driveway
- Obstructs a driver's view of a traffic control device, or is likely to create a confusing or dominating background that might reduce the clarity or effectiveness of a traffic control device
- Could dazzle or distract drivers because of its size, design, coloring, illumination, reflectivity, animation, or flashing
- Is at a location where more driver concentration is required (e.g., at an intersection with high pedestrian volume)
- Is likely to be mistaken for a traffic control device
- Requires close study from a moving or stationary vehicle at a location where the vehicle would be unprotected from passing traffic
- Invites drivers to turn where there is fast-moving traffic or is so close to the turning point that there is no time to signal and turn safely

Table 5. Proposed modified design assessment criteria in Victoria.

DESIGN ASSESSMENT CRITERIA
<p>Character of the area:</p> <ul style="list-style-type: none"> • Sensitivity of the area in terms of the natural environment, heritage values, waterways and open space, rural landscape, or residential character • Compatibility of the proposed sign with the existing or desired future character of the area or locality in which it would be located • Consistency with any identifiable or particular item for outdoor advertising in the locality
<p>Impacts on views and vistas:</p> <ul style="list-style-type: none"> • Potential to obscure or compromise important views from the public realm • Potential to dominate the skyline or protrude above the predominant building line • Potential to impact the quality of significant public views • Potential to impede views to existing signs
<p>Relationship to the streetscape, setting, or landscape:</p> <ul style="list-style-type: none"> • Proportion, scale, and form of the proposed sign relative to the streetscape, setting, or landscape • Position of the sign, including the extent to which it protrudes above existing buildings or landscape and natural elements • Ability to screen unsightly built or other elements • Ability to reduce the number of signs by rationalizing or simplifying signs • Ability to include landscaping to reduce the visual impact of parts of the sign structure
<p>Relationship to site and/or building:</p> <ul style="list-style-type: none"> • Scale and form of the sign relative to the scale, proportion, and any other significant characteristics of the host site and/or host building • Relationship to any important or significant features of the building and/or site • Extent to which the sign displays innovation relative to the host site and/or host building

Table 6. Driver experience metrics used on M80 in Melbourne.

DRIVER EXPERIENCE	EXAMPLES
Degraded	<ul style="list-style-type: none"> • Buildings close to the road • Poor quality of industrial buildings • Freeway signage and advertising infrastructure dominates the visual field at all scales—fore-, mid-, and background • Visual disorder • Degraded landscape, no tree canopy • Industrial trash outside corridor • Highly visible graffiti • Overhead visual clutter—power poles, power lines, towers
Unremarkable	<ul style="list-style-type: none"> • Industrial sheds set back from the road, partially screened by planting • Large, simple built forms of industrial buildings • Limited signage and advertising • Minimal visual clutter • Minimal vegetation and trees • Gentle to flat topography • Bland
Average	<ul style="list-style-type: none"> • No or minimal advertising • Average vegetation cover, trees dominate • Changing topography adds visual interest • Road furniture not visibly prominent • Vegetated edge condition frames views along corridor
Good	<ul style="list-style-type: none"> • Long dramatic views into valley or distant landscape • Dramatic topographical changes add visual interest • No advertising

Primary elements: Large-scale sculptural elements that function as primary wayfinding or civic markers



Secondary elements: Roadside corridor and adjacent land use markers



Tertiary elements: Elements that provide rhythm and link to highway segments



Figure 5. Examples of primary, secondary, and tertiary roadway design elements. (Courtesy of VicRoads)

- Is within 100 m (328 ft) of a rural railway crossing
- Has insufficient clearance from vehicles on the road
- Could mislead drivers or be mistaken as an instruction to drivers

An example of a location where VicRoads objected to the placement of an electronic sign is shown in figure 6. The shopping center on the northeast corner proposed installing an electronic sign to promote businesses and products offered at that location. VicRoads objected on the grounds that the location for the proposed sign was in an intersection with a complex geometry (two signalized intersections in close proximity) that normally requires special attention by drivers. An electronic sign could divert drivers' attention away from the intersection traffic control devices.

A rooftop electronic sign was approved and installed in downtown Melbourne at a corner location that already had a high concentration of businesses and advertising (figure 7, see page 28). Given the location of the sign, it is more likely that pedestrians (as opposed to drivers) will see it.

As mentioned previously, certain signs do not require a permit according to the Planning and Environment Act 1987.⁽²⁵⁾ Examples include directional signs (frequently located in the right-of-way), event signs, and small advertising signs. However, these signs still need to comply with Road Management Act 2004 and Road Management (General) Regulation 508 provisions,^(28,30) including not obscuring the field of view of a road user or distracting a driver's attention from the road or traffic control devices.

Revenue Generation

Permit fees, now AU\$100 (US\$83), go to local councils. VicRoads does not charge for outdoor advertising permits or receive any portion of the permit fee, which in the view of VicRoads officials is inadequate because there is no other revenue stream to cover costs.

Advertising Industry Information

As mentioned previously, the study team met with representatives of Australia's Outdoor Media Association. OMA provides services to members in areas such as marketing and research, government relations and regulatory affairs, revenue reporting, community and environmental sustainability, and occupational health and safety.

Plan view



Panoramic view



Figure 6. Location of proposed electronic sign in East Melbourne, Victoria.

Outdoor advertising in Australia proliferated until the mid-1990s, when the introduction of two major forces resulted in a significant consolidation of the industry, fewer signs, and higher levels of government regulation. The first was the 1995 ban on tobacco advertising. The second was the 2000 Olympics in Sydney, which prompted the establishment of new laws and regulations to control outdoor advertising.

According to OMA officials, a public opinion survey conducted in 2007 found that most people in Australia

were not aware that outdoor advertising funds or maintains public infrastructure. In 2006–2007, outdoor advertisers funded more than AU\$205 million (US\$182 million) of public infrastructure in Australia (e.g., bus shelters, park benches, and pedestrian bridges). Outdoor advertisers also maintain this infrastructure at a cost of about AU\$13.5 million (US\$12 million).

The advertising industry has developed a comprehensive inventory of advertising signs in Australia, including signs on street furniture and inside shopping centers.



Figure 7. Electronic sign at corner of Flinders and St. Kilda Streets in downtown Melbourne, Victoria.

The inventory was possible through the development of the Measurement of Outdoor Visibility and Exposure (MOVE) system.⁽³¹⁾ MOVE contains about 60,000 individual advertising faces. Each face has a unique set of characteristics, including location (coordinates obtained using Global Positioning System receivers), size, orientation, and whether the face is illuminated. The industry uses these characteristics to develop measures such as “opportunity to see,” which estimates total audience, and “likelihood to see,” which estimates actual audience. Individual results are combined to provide total contacts and reach and frequency results for face packages or other media campaigns.

OMA recently started a national recycling program for used billboard skins. Other OMA member initiatives include use of biodegradable skins, environmentally friendly printing inks, solar power and other green lighting solutions to power illuminated signs, and carbon audits and offsets.

As part of its government relations and regulatory program, OMA conducts regular meetings with federal and state regulators and participates in discussions on developing and implementing outdoor advertising control policies. OMA officials noted that effective discussions and negotiations with regulators are facilitated when regulators clearly state areas that are negotiable and those that are not.

OMA officials highlighted the following issues in their interaction with Australian states:

- Advertising control policies are not consistent across Australia.

- Existing policies generally do not encourage the use of new and innovative technologies, such as digital technology.
- The level of regulation is more strict and comprehensive for off-premise signs than on-premise signs.
- The industry’s position is that the evidence is inconclusive that billboards contribute to crashes or cause driver distraction.
- The industry’s position is that road safety regulations on outdoor advertising sometimes are not based on evidence.

To help address this issue, OMA has published a number of position papers, including the following:⁽³²⁾

- **“Fact sheet: Vegetation management around outdoor advertising signs.”** This document is a summary of regulations on vegetation management around advertising signs in New South Wales, Queensland, and Victoria.
- **“Digital billboards and road safety: An analysis of current policy and research findings.”** This document is a summary of policies on electronic signs in other countries, including the United States, an annotated bibliography of studies on the relationship between electronic signs and traffic safety, and recommendations for standards.
- **Letter on restriction distances for outdoor advertising in Queensland.** This document summarizes areas in which OMA agrees and

disagrees with TMR's proposed changes to the restriction area diagrams in Queensland's *Roadside Advertising Guide*.⁽²³⁾

OMA is also conducting driving studies to assess the safety impact of different forms of outdoor advertising on driving. It recently completed an instrumented vehicle study using a Mobile Eye™ tracker, which can identify the location and direction of gaze. OMA recruited 44 participants, who drove on preidentified test routes. For this study, analysis focused on whether participants looked at signs, pedestrians, or passengers for a minimum of 200 milliseconds. The study found that 78 percent of drivers did not look at billboards at all for 200 milliseconds or more. OMA plans to conduct a followup study using an instrumented vehicle and similar eye-tracking device to calculate length of glance, number of glances, and percentage of time that eyes are not focused on the roadway, along with parametric data such as lane tracking, vehicle speed, and speed variations. Data collection and analysis were expected to be completed in 2010.

Outdoor advertising content regulation in Australia is the responsibility of the Advertising Standards Bureau, which manages an advertising self-regulation system based on several industry-developed codes of practice and ethics, and two national boards:⁽³³⁾

- **Advertising Standards Board.** This board handles complaints about issues such as language, discrimination, concern for children, violence, sexuality and nudity, health and safety, and marketing of food and beverages to children. Advertising Standards Board decisions are subject to appeal through an independent reviewer. The review process is available to the advertiser and the complainant, and decisions are available on the Advertising Standards Bureau's Web site.
- **Advertising Claims Board.** This board handles complaints about issues such as truth, accuracy, and legality of advertising. It is a mechanism to resolve disputes between competitors and challenges to advertising that might otherwise result in litigation. This service operates on a user-pays, cost-recovery basis.



Chapter 3: Outdoor Advertising Control Practices in Europe

Denmark

The outdoor advertising policy in Denmark is very restrictive. Following the Danish Road Directorate's *Signs and Advertising on Public Roads*,⁽³⁴⁾ traffic safety is the Road Directorate's main concern. Relevant legislation includes road legislation (which discusses special conditions for a permit), nature conservation legislation (which prohibits advertising on open land), and traffic legislation (which enables police agencies to remove distracting signs).

In urban areas, municipalities issue permits. In rural areas, the only signs allowed in the right-of-way are general information and service signs (figure 8). The number of signs at any given site is limited to prevent road user overload. Signs providing directions to tourist or recreational attractions are allowed, but they must follow the same standards as other directional signs. Billboards are not allowed in the right-of-way. Outside the right-of-way,

Service					
M 53	UNESCO verdensarvsmonument		M 100	Mindre virksomheder	
M 57	Industriområde		M 100,1	Dagligvareforretning	
M 61,1	Udendørs information		M 100,2	Værelser til leje	
M 61,2	Indendørs information				

Direction		
F 11	Pilvejviser til geografiske mål samt til havne, lufthavne og lignende.	
F 13	Pilvejviser til seværdigheder, serviceanlæg og lignende.	
F 30	Pilvejviser til særlig servicevejvisning	

Figure 8. Examples of signs allowed in Denmark.

the only signs allowed are on-premise signs. In general, these signs should not predominate on the landscape and should not be visible over long distances. The regulations include specific requirements for size, content, and location.

Recently, the Road Directorate began a study to measure the impact of road signage on road user attention in urban areas, which will include the use of an instrumented vehicle with an eye tracker device onboard. However, the study does not include the impact of electronic signs. The study was expected to be completed in 2011.

Finland

The state controls outdoor advertising on 78,000 km (49,000 mi), or about 75 percent, of public roads in Finland. The remaining 25 percent is controlled at the local level. There are also 350,000 km (218,000 mi) of private and forest roads in Finland, but they are minor roads with no advertising relevance.

Several pieces of legislation in Finland are relevant to outdoor advertising, such as a new Highways Act signed in 2006,⁽³⁵⁾ which assigns the responsibility to control roadside advertising to road authorities, and the Land Use and Building Act,⁽³⁶⁾ which defines advertising in areas with a city plan and assigns levels of regulatory responsibility. Also relevant are the Road Traffic Act,⁽³⁷⁾ which assigns responsibilities for installing traffic signs, and the Road Traffic Regulation,⁽³⁸⁾ which defines official traffic signs and prohibits their use for advertising purposes.

The Finnish approach to outdoor advertising is that it can affect traffic safety by creating a sight barrier, creating the possibility of driver confusion and distracting driver attention from traffic or traffic control devices. Policy objectives to address this issue include developing an aesthetic traffic environment and not allowing advertising without a permit. In general, the goal is to combine traffic safety and a pleasant traffic environment, while at the same time providing useful information to road users about services and activities along the road.

In Finland, advertising is prohibited in areas with no city plans (mostly rural areas). In areas with a city plan (built up or not), advertising is not allowed in the right-of-way. For directional signs (i.e., tourism or service road signs), it is necessary to apply for a new permit every 5 years. This requirement applies to signs located in a protected 20-m (66-ft) right-of-way on either side of the road centerline. Other than directional signs, commercial advertising is not allowed in this area, although exceptions may be possible if the road authority considers the sign useful for reasons such

as traffic guidance or tourism (in this case, exceptions may be granted for a 3- to 5-year period).

Outside the protected 20-m corridor on either side of the road centerline, permitting is the responsibility of local authorities. Municipalities use a range of practices on zoning and outdoor advertising policies. The Finnish Transport Agency typically has the opportunity to review permit applications submitted locally for issues related to traffic safety and aesthetics, but the decision to approve permit applications is made at the local level.

Before the new Road Act was enacted in 2006, regional environmental centers were responsible for issuing advertising permits. In 2006, road authorities collected these permits and started an inventory of advertising signs along roads. In 2006, a national center was set up with the goal of allowing only official tourist and service signs in the right-of-way. All advertising in the right-of-way was removed, particularly in southern Finland.

In 2009, local business owners (particularly small business owners) in northern Finland complained about the new policy. In response, the Ministry of Transport and Communications set up a working group that included road authorities and an organization of business owners. The purpose of the working group was to identify ways to add flexibility to the regulations without forcing a change in legislation. A revised version of the advertising policy was expected in fall 2010.

Owners of illegal signs are responsible for the cost of removing the sign. If the sign is on the right-of-way, the state removes the sign and requests reimbursement. If the sign is located outside the right-of-way (in an area of local government jurisdiction), the Center for Economic Development has the right to remove the illegal sign (typically through the regional councils) and get reimbursement.

Sweden

Regulatory Framework

The state controls outdoor advertising on 98,000 km (61,000 mi), or about 68 percent, of the roads in Sweden. The remaining 32 percent is controlled at the local level.

Pursuant to the Swedish Road Administration's *Roadside Advertising Guidelines*,⁽³⁹⁾ one objective for travel and transportation in Sweden is a safe transportation system. To system users who travel on roads maintained by SRA, advertising could be perceived as positive as long as it provides information that appears relevant to those users. However, advertising could also be perceived as distracting or even dangerous if not correctly designed or located.

Because the interests of businesses might not be aligned with the interests of road users, SRA's responsibility is to ensure that advertising along transportation corridors does not conflict with transportation safety policy objectives.

SRA recognizes that the purpose of advertising signs is for the signs to be seen and read as frequently as possible. To read roadside advertising signs, drivers must shift their attention from traffic to the roadside. This issue is particularly sensitive in difficult and demanding traffic environments. Under these conditions, SRA's policy is that outdoor advertising should not be directed at road users. In less complicated traffic environments (e.g., along straight stretches of road without traffic signs or other elements that drivers must have time to observe) roadside advertising may be permissible. Under these conditions, SRA's position is that a static, short, simple advertising sign that can be seen quickly provides ample time for drivers to choose when to read the sign safely. SRA's policy is to not allow outdoor advertising in the right-of-way.

Several pieces of legislation are relevant to outdoor advertising in Sweden. Of particular interest are the Planning and Building Act (1987:10) and the Roads Act (1971:948).^(40,41) Other relevant laws include the Act on Special Provisions for Street Cleaning and Signage (1998:814) and the Ordinance on Street Cleaning and Signage (1998:929).^(42,43)

According to Clause 43 of the Roads Act, the road authority can regulate advertising in the right-of-way, including issuing and revoking permits. For advertising outside the right-of-way, Clause 45 of the Roads Act indicates that the county administrative board is the consent authority for situations that can affect traffic safety or the condition or use of the road. In particular, Clause 45 prohibits installation of any structure or light that can have a negative impact on traffic conditions. Likewise, Clause 46 indicates that the county administrative board is responsible for issuing outdoor advertising permits within 50 m (164 ft) of the road. However, if the area is covered by a local plan, the municipality is the agency responsible for issuing outdoor advertising permits. If the location of the sign in the local plan is in an area where SRA or the county administrative board is responsible, a permit from one of these agencies is also required.

Advertising is allowed at designated locations in rest areas. Maintenance and upkeep practices can vary from region to region. In some cases, there are agreements with municipalities to handle specific maintenance activities at the rest area.

If an illegal sign is in the right-of-way, SRA can require removal. If the sign is not removed, SRA can remove it and

seek reimbursement. In 1992, SRA started issuing road maintenance contracts. Included in the scope of work for maintenance contractors is identifying inadmissible advertising in the right-of-way. After receiving confirmation of a sign's illegal status, the maintenance contractor takes a picture of the sign and the location, removes the device, and stores it for 3 months or discards it, depending on the value of the sign.

Safety

SRA's position is that a correctly designed sign may be acceptable even on busy roads. In general, messages should be short, simple, and clear so they can be understood quickly. The text should be as short as possible and not include phone numbers or Web addresses. The sign should not be confused with or have the same meaning as a road sign. Signs parallel to the road are not allowed. SRA also imposes limitations on distances from the right-of-way as a function of the posted speed limit. Moving or changing messages place greater demand on road users. SRA evaluates picture change rates on a case-by-case basis.

The *Roadside Advertising Guidelines*⁽³⁹⁾ include criteria to help assess the feasibility of a proposed sign (table 7, see next page). The criteria apply regardless of whether the proposed sign is located in or outside the right-of-way.

Around 2006, a private company contacted SRA with a request to install electronic billboards in the right-of-way. Normally, this type of request would have been denied. However, SRA decided to proceed with a trial evaluation in the Stockholm area, with a goal of examining potential safety impacts of this type of installation. A 2007 agreement between SRA and the private company allowed for the installation of 12 electronic signs on Highway E4, which carries 70,000 to 100,000 vehicles per day and is the most heavily traveled corridor in Sweden. The posted speed limit on this corridor varies from 70 to 100 km/h (44 to 62 mi/h).

Of the 12 signs originally proposed, eight are in place and SRA has issued a permit for a ninth (although it has not been installed yet). The remaining three signs most likely will not be installed because of lack of space on E4 where the signs could be located at a reasonable distance from ramps or other official road signs. As figure 9 shows, the signs are located immediately next to the roadway (with guardrail protection). The signs installed use light-emitting diode (LED) technology and are full color. The content consists of still frames that change at a nominal change rate of 4 seconds per frame. It is worth noting that SRA's guideline for road signs specifies that a road sign should be static (i.e., shown for at least one minute). For advertising messages, the *Roadside Advertising Guidelines* specify that the

Table 7. Swedish Road Administration criteria for sign assessment.⁽³⁹⁾

ASSESSMENT CRITERIA
<p>Place:</p> <ul style="list-style-type: none"> • What is the traffic environment? Is there anything the road user must have time to or be able to see? • Does anything special happen on the road, which may require a maneuver such as a lane change or braking? • Does the road user have ample time to see the advertising sign? • Can inexperienced vehicle drivers deal with the advertising sign? • Can the advertising sign be reached from a local road? • Is visual guidance affected?
<p>Design:</p> <ul style="list-style-type: none"> • Is the message static? • Is the text short? • Can the message be understood quickly? • Are the sign and message easily understandable? • Is the design unusual or particularly eye-catching? • Can it attract exceptional attention? • Will some form of moving, changing, or rolling pictures be shown? • Can the sign obstruct visibility? • Can the sign dazzle? • Can the sign be struck by a vehicle and cause injuries? • The text size should at least conform to the requirements for directional signs.

time an image is visible should be longer than the time it takes for a road user to pass the sign from where it is visible at the posted speed limit.

SRA must approve every message, following the rules for other outdoor advertising signs. As part of the agreement, SRA can use 10 percent of the sign operating time for its traffic safety campaigns. SRA's messages are typically short, such as "wear your seatbelt."

The trial evaluation on E4, which started in February 2010 and was scheduled for completion in 2011, addresses the following items:

- **Current literature.** The body of knowledge is not satisfactory, although studies suggest that under similar conditions, electronic billboards can be distracting and are not a countermeasure for fatigue. Studies also indicate that location is a very important factor in deciding where to place the signs.

- **Driver opinion polls.** SRA conducted an opinion poll that included 572 drivers who often travel past the signs. The drivers were assumed to be owners of the vehicles selected using information from the official vehicle registry. The drivers were interviewed by phone. SRA will conduct two followup driver opinion polls over the next year. Results from the initial poll indicated the following:

- Thirty percent of drivers who noticed the signs had a positive or very positive attitude toward the signs, 30 percent were neutral, and 39 percent had a negative or very negative attitude. One percent of drivers did not have an opinion.
- Sixty percent of drivers indicated that the signs did not affect their perception of other signs and/or traffic-related information. However, 32 percent of drivers reported being affected by the signs. Eight percent of drivers did not have an opinion.
- When asked whether the signs should be removed or kept in place, 25 percent of drivers said the signs should be kept, 45 percent of drivers said the signs should be removed, and 27 percent were indifferent. Three percent of drivers had no opinion.

This initial poll took place during the sign calibration period when there were a number of complaints on the luminance levels of some of the signs. Some complaints were also about the signs in general.

- **Crashes and effects on traffic flow.** Using archived traffic sensor data for the past 10 years, SRA will compare traffic patterns before and after installation of the signs. SRA will also evaluate crash rates in the vicinity of the signs.

- **Visual distraction.** SRA will use an instrumented vehicle to collect standard driving performance measures, including vehicle speed, acceleration, lane position, eyeglance location, and video of the driver and driving environment. SRA will compare these performance measures against similar sections of roadway without electronic signs to determine if there is any impact from electronic billboards. Drivers will drive during daylight and nighttime hours (but not during rush hours).

Revenue Generation

The application fee for advertising signs in the right-of-way is SEK2,000 (US\$272). The application fee for advertising signs outside the right-of-way is SEK600 (US\$77). There is

Electronic signs located far from traffic control devices



Electronic signs in immediate vicinity of traffic control devices



Figure 9. Trial evaluation of electronic signs on Highway E4 in Stockholm, Sweden.

no application fee in connection with the pilot project mentioned above, although SRA is reimbursed about SEK6,000 (US\$817) for maintenance costs. No insurance is required by the sign companies under the pilot project.

Off the right-of-way, municipalities decide whether to allow advertising within their roads. If an SRA road goes through a municipality, both entities decide what type of advertising, if any, is allowed in the right-of-way. While SRA's position is that no advertising is allowed in the right-of-way, most municipalities are less stringent than SRA. Sign content is regulated for ethical requirements by a separate, independent entity.

The Netherlands

Regulatory Framework

The state controls outdoor advertising on 3,100 km (2,000 mi), or about 2 percent, of the roads in the Netherlands. The remaining 98 percent is controlled at the local level.

In the Netherlands, Rijkswaterstaat is responsible for maintaining the road right-of-way. The default maintenance zone is 15 m (49 ft) from the edge of the road, although it can vary depending on factors such as how much development there is in the area. Following Rijkswaterstaat's *Signage Guidelines*,⁽⁴⁴⁾ outdoor advertising in the maintenance zone is not allowed because of the risk of road user distraction. Typically, only traffic control devices are allowed in the maintenance zone, although Rijkswaterstaat does use the right-of-way to display messages on roadway projects and driver safety campaigns (figure 10). For example, the driver safety message "Bob blijft Bob tot hij weer thuis is" ("Bob remains Bob until he gets home") is part of a designated driver public awareness campaign. In

the campaign, Bob represents a highly reliable, sober person who is the designated driver.

Outside the maintenance zone, responsibility for outdoor advertising control sits with municipalities (in urban areas) or provinces (in rural areas). Practices vary from jurisdiction to jurisdiction (figure 11). The guidelines emphasize that outdoor advertising should not resemble traffic control devices or become a traffic safety hazard.

Design, Landscape, and Environment

Routeontwerp (route design) is a joint initiative of the ministries of Transport, Public Works, and Water Management; Housing, Spatial Planning, and Environment; and Agriculture, Nature, and Food Quality.⁽⁴⁵⁾ The focus of route design is to create consistency in the design of highways and increase the spatial quality of the roadway environment and its surroundings. One goal of the initiative is to reduce clutter along motorway corridors.

The first application of the route design approach is along Highway A12, from The Hague to the German border. For the analysis, the corridor was divided into 11 landscapes grouped into four categories: city, meadow, forest, and mosaic. For each landscape, the goal is to develop guiding design principles that can translate into consistent policies for conservation and land use management, including outdoor advertising control.

Safety

The Netherlands has one of the best traffic safety records in the world. For example, in 2007 the number of traffic fatalities per million inhabitants was 43, compared to 50 in the United Kingdom, 52 in Sweden, 60 in Germany, 72 in



Figure 10. Signs displayed by Rijkswaterstaat along Highway A4 in the Netherlands.



Figure 11. Examples of outdoor advertising signs in Rotterdam, Netherlands.

Finland, 75 in Denmark, 77 in Australia, and 142 in the United States.⁽⁴⁶⁾ In 2010, the forecast was for traffic fatalities to total about 750, and the goal is to reduce this number to 500 by 2020.

In the 1990s, the Netherlands began implementing a “sustainable safety” policy. The policy goals are to prevent serious crashes and to minimize the severity of crashes if they do occur. The policy involves an integrated approach that includes infrastructure, drivers, and vehicles and considers principles such as road functionality, road design standardization, predictability of road user behavior, and a forgiving physical environment.

In practice, applying a sustainable safety policy involves designing to address the least favorable situation and the needs of the least capable road user (as opposed to just addressing average situations and the needs of average road

users). At Rijkswaterstaat, this recognition resulted in the identification of 10 “golden rules” to help characterize road users and how they react to information they receive:⁽⁴⁷⁾

- **Rule 1: The road user is self-centered.** Road users pursue their own goals, not necessarily what is safe or socially acceptable.
- **Rule 2: The road user cannot do everything at once.** People can process only a limited amount of information at one time. It takes time to process information, make decisions, and act accordingly.
- **Rule 3: You can advise the road user, but will the road user comply?** It is not realistic to expect too much change in behavior from just communication, but communication does strengthen the effect of other measures.

- **Rule 4: The road user only accepts measures the user perceives as useful.** Policies should be perceived by users as logical and sensible.
- **Rule 5: The road user will surprise you.** Road design and measures can have unintended consequences in the way road users behave. Users who feel safer (e.g., because of a system improvement) sometimes take more risks.
- **Rule 6: The road user has expectations and behaves accordingly.** People do not like surprises on the road. Make sure that reality matches user expectations.
- **Rule 7: What if things go wrong with the system or the road user?** If something fails with the system or the road user makes a mistake, the system should keep functioning and the error or failure should be corrected or mitigated.
- **Rule 8: Tell the road user only what is really important.** Road users who are bombarded with too much information might choose the wrong information. Therefore, it is critical to present only information that is strictly necessary.
- **Rule 9: Do not confuse the road user.** All information presented to road users, such as routing, signs, and pavement markings, should be consistent and correct.
- **Rule 10: Information presented to the road user must be visible, clear, and understandable.**

Several of these golden rules can be applied to outdoor advertising control.

Recently, Rijkswaterstaat started a project to develop guidelines to address potential sources of road user distraction, considering the impact of new developments such as digital technology, public art, wind turbines, and buildings with an uncommon design. In developing the guidelines, Rijkswaterstaat recognized that relatively little is known about the potential relationship between outdoor advertising and crash rates. However, it also recognized that distractions could have a negative effect on safety, particularly under demanding traffic situations.

As part of the study, Rijkswaterstaat developed a set of criteria to categorize potential sources of road user distraction. The criteria include considering traffic characteristics (e.g., driving demand and road user expectations), object characteristics (e.g., conspicuity and processing time), and other principles (e.g., field of view and risk of blinding) (see table 8). Rijkswaterstaat evaluated objects along several

road corridors in the Netherlands and concluded that only a small percentage of objects satisfied all criteria: 10 percent of all billboards and 50 percent of all road information boards. Rijkswaterstaat is evaluating whether to revise the application of the criteria in table 8.

Table 8. Criteria to assess potential sources of road user distraction.

<p>Placement in relation to other objects on the road:</p> <ul style="list-style-type: none"> • Is the object located within 200 m (656 ft) of an exit or entrance ramp, or before or after a sign or other traffic control devices?
<p>Placement in relation to driving-relevant information:</p> <ul style="list-style-type: none"> • More than 13 m (43 ft) from the side of the road • Not on a curve where it might incorrectly give the impression that the road extends in the direction of the sign
<p>Conspicuity:</p> <ul style="list-style-type: none"> • No moving objects, images, or text • No retroreflective colors • Not much brighter than the surrounding area
<p>Processing time:</p> <ul style="list-style-type: none"> • No more than six items in the main message and six items for other information • No controversial content, vagueness, or too many different types of signs at one location • No similarities to traffic control devices
<p>Route or road assessment:</p> <ul style="list-style-type: none"> • Object must not cause road users to assess the road alignment or route incorrectly
<p>Lighting:</p> <ul style="list-style-type: none"> • Object is not blinding (e.g., by using bright lights at night)

United Kingdom—England

Regulatory Framework

The Highways Agency is responsible for operating and maintaining the Strategic Road Network (SRN) in England, which includes motorways and all-purpose trunk roads, covering some 7,000 km (4,000 mi). For the most part, motorways and trunk roads in the London area are the responsibility of local jurisdictions.

Several laws and regulations are relevant to outdoor advertising control in England. The Town and Country Planning Act 1990 provides the framework for regulating outdoor advertising on the basis of public safety and public

amenity.⁽⁴⁸⁾ The act also establishes the power to regulate outdoor advertising at the local level and the powers needed to enforce the regulations. Public safety is not limited to road safety; crime prevention and detection are also important (e.g., if an advertising sign obscures surveillance cameras or speed cameras). As in the HBA in the United States, the definition of outdoor advertising in the Town and Country Planning Act 1990 is quite broad, resulting in case law confirmations that innovations such as advertising beamed onto a building or a recognizable symbol or letter can be considered advertising in the United Kingdom.

The Highways Act 1980 enables road authorities to remove structures that cause obstructions and unauthorized signs from the highway right-of-way.⁽⁴⁹⁾ Commercial advertising is not allowed in the SRN right-of-way. The Town and Country Planning (Control of Advertisements) (England) Regulations 2007 establish the conditions for deemed consent (automatically granted by legislation) and express consent (applies to other advertising for which it is necessary to submit an application).⁽⁵⁰⁾ All outdoor advertising, whether enabled by deemed consent or express consent, must comply with the following five standard conditions:⁽⁵¹⁾

- It is kept clean and tidy.
- It is kept in a safe condition.
- It has the permission of the owner of the site where it is displayed (including the road authority if the sign is to be placed on highway land).
- It does not obscure or hinder the interpretation of official transportation signs or otherwise make any means of transportation hazardous.
- It must be removed carefully when required by the planning authority.

Expressed consents may have additional conditions (e.g., that a display should be removed by a certain date). The regulations also describe the conditions for discontinuance of deemed consent and revocation of express consent (usually on amenity or safety grounds). Removal of illegal advertising signs in the right-of-way of local roads is the responsibility of local highway authorities (which might not be the same as the local planning authorities (LPAs) that issue express consent).

Several supporting documents assist in interpreting and applying the laws and regulations. For example, Planning Policy Guidance 19 (PPG19) provides additional information on the use of outdoor advertising control to help improve the appearance of cities, towns, and the

countryside.⁽⁵²⁾ The guidance covers application discussions and procedures, exemptions from detailed control, and temporary and permanent advertising. Spatial Planning Advice Note SP 03/10 is a guide that helps Highways Agency staff review outdoor advertising proposals.⁽⁵³⁾ The guide describes the advertising control process and recommended practices on how Highways Agency staff should assess and respond to outdoor advertising applications. SP 03/10 is a revision of a previous version (SP 02/09) that clarifies with examples cases that require expressed consent, cases that require expressed consent and planning permission (e.g., public art that includes an advertising display), and cases that only require planning permission (e.g., public art with no advertising display). The revised version also describes the regulatory framework in more detail and highlights the need to review advertising applications in a public safety context.

The regulations include 16 classes of advertising for which deemed consent applies, a sample of which includes on-premise signs; flag advertising; signs used to screen buildings or construction sites; temporary advertising; advertising on highway structures or land, such as bus shelters, information kiosks, pavement, and pedestrian areas; and advertising inside buildings. Illumination is allowed in several classes, although restrictions generally apply.

Of the 16 classes of advertising for which deemed consent applies, two involve express consent. One class involves advertising that has been displayed continuously for the preceding 10 years without express consent, provided the advertising sign, device, or display has not undergone alterations such as illumination, moving elements, enlargement, or change from a static to a digital display. The second class is advertising that has been displayed continuously and for which the expiration period of an express consent (normally 5 years) has passed. In other words, after a sign has been displayed for 5 years under express consent, the regulations automatically enable the sign to continue to be displayed under deemed consent. The only exception is if an LPA prohibits the continued display of the advertising.

The Highways Act 1980 establishes that local authorities can issue permits for advertising located on certain structures in the highway right-of-way (e.g., on pedestrian bridges, sidewalks, and subways).⁽⁴⁹⁾ Sponsorship of certain roundabouts, bus shelters, and other sites is allowed, subject to local assessment.

LPAs are required to consult with other appropriate agencies before granting an express consent (although the final decision on whether to grant or deny a proposal sits with the LPA). For example, LPAs must consult with a highway authority on any advertising that includes moving

parts or flashing lights or that is visible from a highway. LPAs must consult with the Highways Agency if the LPA believes that granting consent might affect safety on any trunk road.

There is no statutory requirement for LPAs to request public comment on advertising sign proposals. However, LPAs often request public comment if an application is likely to affect the amenity of the area in a significant way. Landscaping is usually not included in advertising sign proposals because LPAs do not consider landscaping a factor that can reduce the overall amenity impact of signs. Most LPAs tend to discourage permanent billboards (they were more common in the past), which further reduces the need to include landscaping in the advertising proposal.

The Highways Agency does not have information on the operational and environmental impacts and costs associated with new advertising technologies. However, LPAs are beginning to consider the environmental impact of electronic displays when reviewing applications for express consent.

As mentioned, Spatial Planning Advice Note SP 03/10 describes outdoor advertising review practices and procedures in the Highways Agency.⁽⁵³⁾ The process includes the following major phases:

- **Preapplication.** Preapplication discussions normally take place between the applicant and the LPA. The Highways Agency normally is not involved in this phase, except in some cases related to public safety in which the prospective applicant contacts the Highways Agency. Currently, the level of preapplication inquiries to the Highways Agency is low.
- **Submission.** In this phase, the LPA receives the application and determines whether its content and accuracy are sufficient. The LPA is required to consult with the Highways Agency if the LPA believes a grant of consent may affect the safety of SRN users. The LPA is also required to consult with the Highways Agency about applications for signs with moving features, moving parts, or flashing lights visible from a highway.
- **Assessment to recommendation.** Approval or rejection can be issued only in the interest of amenity and public safety. LPAs and the Highways Agency typically do not regulate advertising content. This responsibility sits with the Advertising Standards Authority (ASA), a self-regulatory organization of the advertising industry in the United Kingdom. ASA acts through codes of advertising practice and a protocol to investigate complaints.⁽⁵⁴⁾ LPAs can

control advertising formatting such as color, size of lettering or symbols, amount of text, and type of materials as long as it is in the interest of amenity and public safety.

- **Responding to consultations.** The Highways Agency's response to the LPA should address the following elements:
 - References to relevant sections of planning policy to emphasize that any considerations are based on sound policy support
 - References to general information and research into crashes caused by driver distraction, in particular current crash and traffic data, to make an assessment of potential impact on public safety
 - Review of local circumstances that may apply to the specific proposal in question, particularly in situations that demand special road user attention (e.g., in relation to complexity of road sections, intersections, and driver environment and overload)
 - References to precedent or planning history if the planning agency intends to recommend refusal of an application
- **Planning determination, resolution, and decision.** The LPA must notify the applicant of its decision within 8 weeks of the receipt of a valid application. Although not a requirement, the Highways Agency has found that monitoring the progress of the application is a good practice, particularly in situations that may involve public safety issues.
- **Appeal.** An applicant has the right to appeal a refusal for express consent, a grant approval subject to conditions, or a discontinuance notice within 8 weeks of the date of the LPA's decision unless an extension has been agreed on. Appeal of a discontinuance notice must be made before the notice takes effect.
- **Postdecision.** Once approval for express consent has been issued, the LPA retains an oversight role. In most cases, the Highways Agency's role is limited, but it can challenge the LPA's decision in court through a judicial review process within 3 months of the LPA decision date. The challenge can relate only to the legality of the decision, not the merits of the case.
- **Development and enforcement of conditions.** Once an outdoor advertising sign has been displayed, the LPA's role is to assess whether the sign has been displayed in accordance with all of the

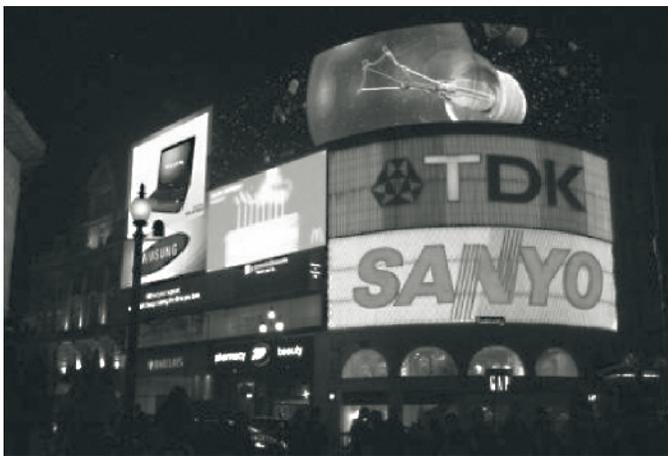
conditions in the consent. The Highways Agency suggests special monitoring by agency personnel whenever it has recommended specific consent conditions or obligations, particularly in situations in which the LPA's resources limit effective monitoring (even though it is the LPA's responsibility to ensure proper monitoring).

Although outdoor advertising control works in most situations, regulators face a number of challenges. For example, the displays in figure 12(a) are located at the iconic Piccadilly Circus intersection in London. This site has never been granted express consent by regulators. Planning authorities fought but could not block an update from neon to digital technology. Although the signs are recognized as a tourist attraction, the signs are at best tolerated by regulators and are, therefore, strictly controlled to stop them from spreading to neighboring buildings.

Likewise, the displays in figures 12(b), (c), and (d) were refused by the LPAs (on amenity and safety grounds), but gained temporary consent on appeal by the English Planning Inspectorate. The twin signs in figure 12(b) are located on a relatively straight section of road with historically low crash rates. The sign in figures 12(c) and 12(d) (called "The Torch") is on a local street, but can be clearly seen from highway M4. Note the large number of words on the display.

Displaying outdoor advertising without consent (deemed or express) is a criminal offense in the United Kingdom. The maximum fine per display is £2,500 (US\$4,000) in England. Minor advertising signs are usually subject to fines in the region of £100 (US\$160). However, court actions have been as high as £39,000 (US\$62,000) in a single prosecution. Higher penalties apply for third convictions for certain forms of advertising in London (e.g., up to

(a) Signs at Piccadilly Circus



(b) Twin signs en route to Heathrow Airport



(c) "Torch" sign along Highway M4



(d) Closer view of the "Torch"



Figure 12. Sample of outdoor advertising signs in the London area.

£20,000 (US\$32,000) for building wraps). Each unlawful display can be fined independently. This is particularly relevant in the case of digital billboards on which different images rotate every few seconds because each image is treated as a separate offense.

Safety

As mentioned, LPAs must consult with the Highways Agency if the LPA believes granting consent might affect public safety on any trunk road (therefore leaving it to the LPA to make that determination). To provide guidance to LPAs, Communities and Local Government Circular 03/2007 lists signs and conditions that might “cause danger” to road users and should trigger a consultation with the Highways Agency, including the following:⁽⁵⁵⁾

- Signs that obstruct or impair sight lines at corners, curves, junctions, or highway access points
- Signs that obstruct a road user’s view, reduce the clarity or effectiveness of a traffic control device, or are likely to distract road users
- Signs that leave insufficient lateral or vertical clearances
- Illuminated signs (using either flashing or static lights) with illumination that is directly visible from the road, that could be confused with a traffic control device, or that could dazzle or distract road users, particularly in wet weather
- Signs that include moving or apparently moving elements in the display, or successive individual frames that do not display the whole message
- Signs that require close study (such as public information panels) and are located so that readers would be insufficiently protected from passing vehicles or passing pedestrians are obstructed
- Signs that resemble traffic control devices
- Signs that include directional elements and might cause confusion (e.g., if they contain a large arrow, invite drivers to turn on a main road or where there is fast-moving traffic, invite drivers to turn but are located so close to the turning point that there is not enough time to signal and turn safely, or are very close to other signs or official traffic signs)

Spatial Planning Advice Note SP 03/10 includes a series of questions to help reviewers assess public safety conditions associated with advertising sign applications in the context of the road, traffic, and advertising environment.⁽⁵³⁾

Road-related questions include the following:

- What is the speed limit?
- Has the speed limit been lowered to reduce or prevent crashes?
- Would the proposed sign be located at or close to an intersection?
- Does the stretch of road feature multiple intersections?
- Are there pedestrian crossings nearby?
- What is the road alignment?
- Are visibility and forward stopping distance up to standard?
- Would the sign have a negative impact on sight lines?
- Would the sign obscure official road signs or traffic signals?
- Would the sign be confused with official road signs and signals or would directional or warning signs be missed?
- Are any special conditions in place or planned that demand higher levels of driver attention (e.g., active traffic management)?
- Would the sign cause distraction because of conflict with countdown markers, merges, or splits?
- Is the road prone to ice or flooding?

Additional considerations for higher order highways include the following:

- Are traffic flows particularly high?
- What is the crash rate on the highway section next to a specific site?
- Is the site in the area of influence of an interchange?
- Is the site in a decisionmaking zone?
- Will the sign compete with warning signs, overhead gantry signs, or variable message signs?
- Is there a full hard shoulder?
- Are lane widths particularly narrow?
- Is the section elevated (providing less margin for error)?

Traffic-related questions include the following:

- Crashes:
 - Does the road have a higher-than-average crash rate?
 - Is an intersection or interchange a crash black spot?
 - Is there a crash cluster near the proposal?
 - Have any road safety improvements been completed or are any planned?
- Speed:
 - Does speed vary considerably between peak and offpeak periods?
 - How does recorded speed vary from the posted speed limit?
 - Is the section of road high speed?
- Weaving:
 - Does traffic weave because of congestion or proximity to intersections?
- Congestion:
 - Is there stop-and-go traffic, which might result in rear-end crashes, requiring greater driver concentration?
- Traffic composition:
 - Is heavy commercial vehicle traffic significant enough to obscure the view of advertising signs, making it difficult for drivers to absorb advertising messages in one pass?

Advertising sign-related questions include the following:

- How large is the sign? A large sign is not necessarily detrimental because it may be easier for viewers to assimilate its message.
- Is the application for fixed content or a changeable message display?
- From what distance is it visible? If the sign is only visible for a short time period, it will be more difficult to read it.
- Does the sign have moving parts or multiple messages that may divert attention for a longer period?

- Where is the sign located in relation to the road and right-of-way?
- What is the sign's angle in relation to the road (i.e., do drivers have to look away from the road to read the sign)?

Revenue Generation

LPA's charge a fee for assessing advertising proposals. Application fees are £95 (US\$137) for on-premise signs and £335 (US\$482) for other advertising, such as billboards. Billboards on buildings affect the taxable value of the property.⁽⁵⁶⁾

United Kingdom—Scotland

Regulatory Framework

The state controls outdoor advertising on 3,400 km (2,000 mi), or about 6 percent, of the roads in Scotland. The remaining 94 percent is controlled at the local level.

The Town and Country Planning (Scotland) Act 1990 provides the framework for regulating outdoor advertising on the basis of public safety and public amenity.⁽⁵⁷⁾ As in England, responsibility for outdoor advertising control is at the local level. Policies on outdoor advertising vary from jurisdiction to jurisdiction.

The basic policy in Scotland is not to allow outdoor advertising on public roads, and most applications are refused. With some exceptions (e.g., directional tourist signs, which are not considered advertising signs), outdoor advertising is not allowed in the right-of-way of the trunk road network. Outside the right-of-way of trunk roads, local authorities request Transport Scotland's opinion on advertising proposals located within 240 ft (73 m) of the road. To evaluate proposals, Transport Scotland uses a policy similar to the one developed by Glasgow City Council.⁽⁵⁸⁾

Design, Landscape, and Environment

Scotland is increasingly aware of the visual effects caused by the proliferation of signs and other items along rural roads. This issue is particularly important in Scotland, which considers rural scenery one of its main assets. Furniture such as road signs of various types, light poles, fences, marker posts, and bus shelters are typically the responsibility of the road authority. While street furniture serves a clear purpose, Scotland's position is that its intrusive visual effects should not diminish road users' experience of the countryside.

To minimize this impact, Transport Scotland has published two guidelines: *Road Furniture in the Countryside* and *Trunk Road and Motorway Tourist Signposting Policy and Guidance*.^(59,60) Together, they provide best practices for designing signs and other items to help maintain safety and provide useful information to road users while

avoiding adverse visual effects. As figure 13 shows, the planning and design process involves a series of steps that include conducting an analysis to determine the need for the street furniture (including an evaluation of potential alternatives) and developing a vision and plan to implement the most appropriate design solution. The level of

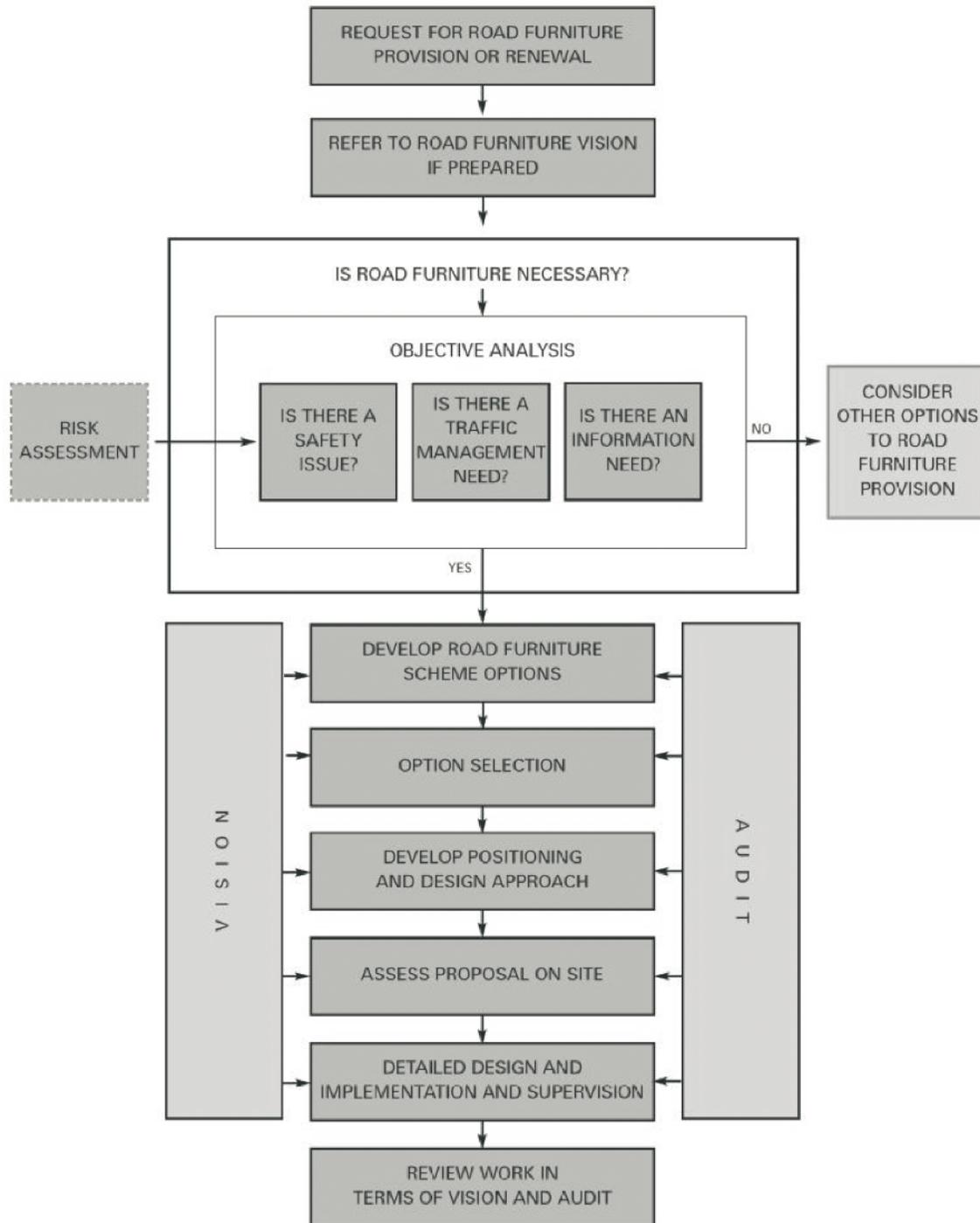


Figure 13. Process to determine the need for street furniture along rural roads in Scotland.⁽⁵⁹⁾ (Courtesy of Transport Scotland)

detail of the analysis depends on factors such as whether the road is new or existing, project scale, landscape setting, and road importance.

To apply the guideline, the process includes a checklist of activities (figure 14) that should be completed. A critical set of activities involves evaluating the proposed street furniture (e.g., a road sign) in the context of other existing and proposed signs and the overall road environment to minimize visual impacts. Examples of potential solutions that need to be evaluated include combining signs, eliminating unnecessary signs, relocating signs, and painting the back of signs with a color that resembles the landscape. In the case of tourist signs, approval by the road authority is conditional on the removal of existing tourist advertising signs where they are considered a distraction to road users.⁽⁶⁰⁾

Safety

The Glasgow City Council policy recognizes that while distractions can occur, the sources of distraction should be controlled, kept to a minimum, and restricted to locations where they are less likely to cause crashes.⁽⁵⁸⁾ As a result, it is imperative for advertising signs not to distract drivers or interfere with the visibility of intersections, the road ahead (particularly at curves), road signs, traffic signals, and pedestrian crossings.

The policy includes criteria for controlling advertising signs at straight alignments, unsignalized intersections, roundabouts, and traffic signals. The policy also includes criteria for moving displays. For example, the criteria for straight alignments are as follows (figure 15, see next page):

- Advertising signs must not interfere with the visibility of any road sign. This restriction results in a minimum distance D from the edge of the road (table 9, see next page), beyond which signs may be permissible.
- Advertising signs should not be sources of distraction to drivers. Therefore, signs should be located outside the cone of peripheral vision. This restriction results in a minimum distance G from the edge of the road (table 9), beyond which signs may be permissible.
- In general, D is smaller than G. Therefore, if a sign is approved on the basis of D only, it is necessary to control the risk of distraction. This is done by determining the time it takes to read the advertising sign while driving and adding the corresponding clear view distance (V in table 9) to a safe stopping distance to avoid a potential hazard down the road.

CHECKLIST

Context

1. Establish reason for road furniture proposal
2. Confirm problems to be addressed and objectives to be met
3. Establish if furniture provision is warranted
4. Undertake objective analysis and, if necessary, an appropriate risk assessment
5. Consider request against road furniture vision
6. Establish if tangible benefits will result
7. Confirm if provision is justified or if alternative methods of meeting needs are appropriate

Provision

8. Site visit
 - Record existing furniture provision (including type, location, condition any other relevant details)
 - Review local functional context
 - Review local landscape and visual context
 - Identify any special problems at the particular location
9. Outline range of potential options
10. Consider alternative options in relation to furniture vision and audit
11. Check level of provision at similar locations on route
12. Select most appropriate option for detailed development

Positioning and Design

13. Establish all relevant positional and design parameters:
 - Distance from edge of carriageway
 - Linear spacing criteria
 - Mounting or fixing heights
 - Material options
 - Design/type options
 - Size/shape/colour criteria
14. Consider potential for use of backdrop to minimize visual impact
15. Consider detailed positioning in relation to existing provision
16. Coordinate new elements with existing provision
17. Consider potential for amalgamation with existing elements
18. Consider potential for use of customization or nonstandard element, if appropriate
19. Develop detailed design proposals and review on site—modify as necessary/desirable
20. Prepare appropriate drawings/specifications
21. Implement
22. Check work on site

Figure 14. Checklist for evaluating road furniture along rural roads in Scotland.⁽⁵⁹⁾ (Courtesy of Transport Scotland)

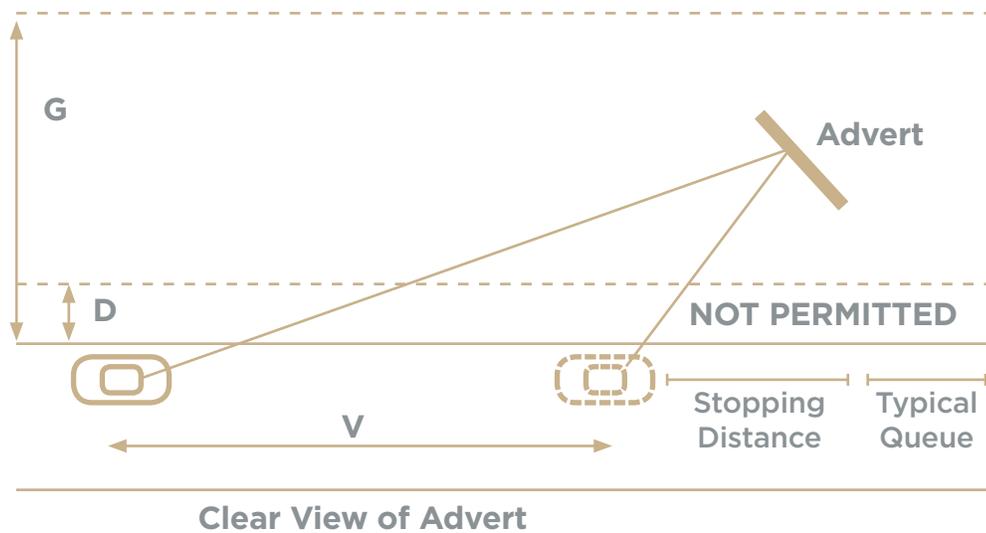


Figure 15. Exclusion zone next to roads.⁽⁵⁸⁾ (Courtesy of Glasgow City Council)

Examples of potential hazards include a standing queue, an intersection, or a curve. The policy assumes that drivers can read the advertising sign if the angle between the driver and the face of the display is between 20° and 90°.

For roundabouts, the policy includes a distance of 15 m (49 ft) around the roundabout within which advertising signs are not allowed. For signalized intersections, advertising signs are not allowed within a 130° angle behind any signal head. Advertising signs are also not allowed if they block the signal head in any way.

Table 9. Exclusion zones beside roads and clear view distances for advertising signs.⁽⁵⁸⁾

Speed, mi/h (km/h)	D, ft (m)	G, ft (m)	V, ft (m)
20 (32)	4 (1.2)	98 (30)	34 (10)
30 (48)	6 (1.8)	98 (30)	50 (15)
40 (64)	8 (2.4)	98 (30)	67 (20)
50 (80)	n/a	165 (5)	84 (26)
60 (97)	n/a	200 (61)	100 (30)
70 (113)	n/a	240 (73)	117 (36)

Revenue Generation

Figure 16 shows a sample of advertising signs allowed in the Glasgow area. Glasgow has implemented a program in which it uses empty lots on a temporary basis to generate revenue through advertising. Bids are received for individual sign sites on a flat-rate lease basis. The contracts, which expire in 6 years, include elements such as landscaping and fencing needs.

In the downtown area, Glasgow used advertising to improve its tourist information panels. The original panels were unattractive and difficult to read. An agreement with a major advertiser enabled Glasgow to install much more attractive tourism panels (figure 17). As part of the agreement, the company installed or upgraded 249 tourist information panels and was allowed to install 76 commercial advertising panels at new locations throughout the city. In general, the tourism signs (mainly in the downtown area), which did not have advertising, were well received by the public. Complaints received were mostly about signs that had advertising (e.g., if there was not enough space to walk or ride a bicycle around a sign or if a sign was too big).

A major initiative in Glasgow, which started in the late 1990s, was the upgrade of bus shelters. The city was interested in a system that would maximize value and revenue and reduce maintenance expenditures. Glasgow's expectation was to receive about £100 (US\$144) per shelter per year, for a total of £36,000 (US\$51,786) per year.



Figure 16. Examples of advertising signs allowed in the Glasgow area. (Courtesy of Transport Scotland)



Figure 17. Tourist attraction panels in Glasgow.

Nine companies expressed interest, three of which were selected to bid. The basis for comparison was a revenue formula in which the net annual income would be calculated by subtracting any maintenance costs incurred by the council from the annual income. The proponents were instructed to bid on a per-shelter basis, considering the need to provide for future connections such as changeable message signs to display bus arrival times (the city would provide the panels). The total bids received were £1.1 million, £1.8 million, and £2.9 million (US\$1.5 million, US\$2.6 million, and US\$4.2 million), all in excess of what the city originally expected.

The contract was awarded to the highest bidder, with a total duration of 15 years and reviews every 5 years. The first shelters were installed in 2000. The company selected was responsible for obtaining planning, advertising, and road permits for each sign location. The total turnaround time for completing the permits, removing an existing shelter, and installing a new one was targeted at 8 weeks to minimize disruption. To accelerate the process, the city made sure that two officials were assigned to assist with the permitting process. Without this teaming arrangement, the process would have been much longer (typically 3 to 6 months). The contract included a liability insurance requirement and a prohibition on advertising alcohol or tobacco products. In general, content is self-regulated through ASA.

A total of 580 shelters were installed, 360 of which involved replacement of older structures and for which planning and road permits already existed. Figure 18 shows the layout of a new bus shelter and a changeable message sign displaying bus arrival information.



Figure 18. Upgraded bus shelters in Glasgow.
(Courtesy of Transport Scotland)

Chapter 4: Summary of Observations

The scan team was interested in how other countries regulate outdoor advertising both inside and outside the roadway right-of-way. In particular, it wanted to learn about new techniques to enforce laws and balance competing interests (including public involvement); factors to consider when developing policy, regulations, and enforcement; and considerations such as safety, environmental concerns, and revenue generation.

In March 2010, the scan team visited Australia, Sweden, the Netherlands, and the United Kingdom to compare and contrast how other countries regulate outdoor advertising both inside and outside the roadway right-of-way. It also studied innovative practices in Japan (Appendix D).

A set of questions was sent to the host countries before the team visited them to frame the discussion around five major topics:

- Laws, policies, and enforcement
- Program management
- Stakeholder, community, and citizen involvement
- Environmental impacts, economic benefits, and revenue generation
- Safety

Summary of Observations—Similarities

In most of the countries visited, the team noted issues and interests similar to those in the United States.

Laws, Policies, and Enforcement

- Enforcement practices vary between regions and states.
- Regulators attempt to develop objective criteria for decisionmakers with mixed success.

Program Management

- Interest is growing in commercial advertising (street furniture) on transportation equipment and facilities.

- Time and staffing costs exceed funds generated from permit fees.
- Accurate, up-to-date inventories are lacking in some jurisdictions.

Stakeholder, Community, and Citizen Involvement

- Decisionmakers experience political pressure at many levels.
- Stakeholders question approval and denial decisions.
- With the exception of Japan, policymaking and decisions involve regulators and the regulated with little input from communities.

Environmental Impacts, Economic Benefits, and Revenue Generation

- Local jurisdictions form partnerships to generate outdoor advertising revenue.
- There is some interest in generating revenue inside the right-of-way using commercial electronic variable message signs and removing the limitation on commercial use of advertising inside the right-of-way.

Safety

- Common interest exists in regulating new technologies to minimize driver distraction.
- Goals focus on reducing crashes and fatalities.
- Signs that resemble official signs are prohibited.
- There is interest in research on the safety impacts of outdoor advertising. The body of research in this area in the United States and abroad continues to increase. In all of the countries visited, concern is increasing about the use of electronic signs and their potential impact on traffic and public safety, prompting an interest in conducting research in this

area. Appendix E lists some of the research discussed during the scanning study.

Summary of Observations—Differences

Key differences were observed in each area studied.

Laws, Policies, and Enforcement

- State and federal responsibility for outdoor advertising control was limited to high-level and national routes. The United States, in contrast, has about 43,000 mi (69,202 km) on the Interstate System and 261,000 mi (420,038 km) on the Federal-aid primary system, for a total 304,000 mi (489,240 km) with controlled outdoor advertising. In 1991, the National Highway System was created with about 164,000 mi (263,932 km). The 141,000 primary-system mi (226,917 km) that were not on the NHS on June 1, 1991, remain controlled for outdoor advertising and account for nearly one-half of the control route miles.
- For permitting purposes, both on-premise and off-premise signs are regulated and no distinction is made between conforming and nonconforming signs. Unlike the United States, most of the countries visited do not struggle with the two biggest issues that confound HBA regulators: conforming versus nonconforming signs and off-premise versus on-premise signs. Because of streamlined laws and regulations, these issues either do not exist or their impact is much lower than in the United States. Signs are either legal or illegal and all advertising signs in the regulated area (whether on- or off-premise) are subject to the same rules and regulations.
- In all of the countries visited, planning and environmental legislation typically provides the basic structure that defines jurisdictional boundaries (i.e., which agencies are responsible for which land), who is responsible for processing and managing which types of outdoor advertising permits, and what level of interagency consultation is required or recommended. Highway legislation typically defines specific roadway agency responsibilities (e.g., to ensure that traffic safety regulations and requirements are met). In some cases, the legislation enables the highway agency to remove signs that do not meet those requirements.
- Typically, local or regional authorities are responsible for outdoor advertising permits outside the

right-of-way of major transportation corridors, but they are also required to consult with a roadway agency to verify that the proposed sign is not a traffic safety hazard. Triggers for consultation vary. For example, the distance threshold ranges from a fixed distance from the highway to any distance if the sign is visible from the highway. In most cases, the local authority has the discretion to judge whether a sign is a potential traffic safety hazard before consulting with the highway agency (in other words, consulting with the highway agency is optional, which most highway agencies visited consider a weakness in the legislation). To keep the number of applications to review within manageable limits, some highway agencies review only certain types of permit applications (e.g., animated or electronic signs within a specified distance from a state-maintained road). Although highway agencies typically do not have veto power (i.e., the ultimate decision to approve or deny a proposal is at the local level), local authorities frequently accept the recommendation from the highway agency.

- New laws and amendments are not applied to existing signs that have legal permits, so there are few or no nonconforming signs until permits expire and are up for renewal.
- For regulatory control purposes, signs can be removed without compensation (a permit is treated as a privilege, not a property right). Some, but not all, countries reimbursed sign owners for actual removal costs.
- Sign businesses, site owners, and sign owners can incur penalties for noncompliance.

Program Management

- Agencies in the countries visited rely more on safety factors and the relationship between the sign and the road environment for permitting decisions. In several countries, the study team found examples of robust, well-thought-out guidelines and requirements for submitting and reviewing outdoor permit applications, which could provide the foundation for best-practice outdoor advertising control procedures in the United States. Some of the best examples cover a range of items—including design, impact on surrounding areas and vistas, and public and traffic safety—and require applicants to demonstrate how proposed installations address those items. Examples of guidelines and documentation requirements worth considering include those developed by RTA in New South Wales, TMR in Queensland, and Transport Scotland. Also worth

considering are the 10 golden rules that Rijkswaterstaat in the Netherlands developed to characterize road users and how they react to information they receive. These golden rules resulted from the application of a sustainable safety policy that involves designing to address the least favorable situation and the needs of the least capable road user rather than average situations and average road users.

- The study team perceived a strong interest by the agencies visited in developing comprehensive inventories of outdoor advertising signs. Some countries have developed or are developing inventories and databases to support the outdoor advertising control process, but most efforts are not comprehensive. The advertising industry in Australia has developed an inventory, possible through the Measurement of Outdoor Visibility and Exposure system, that contains data on about 60,000 individual advertising faces (including signs on road furniture and inside shopping centers), such as location coordinates, size, orientation, and whether the face is illuminated. The industry uses these characteristics to estimate the total number of visual contacts and develop media campaigns. The scan team's assessment is that similar inventories could be developed in the United States and used for a variety of applications, including monitoring the permit status, age, and other characteristics of permitted legal signs; conducting spatial analyses to determine potential conflicts and feasibility of new signs; examining issues with on-premise signs; and developing more accurate assessments of nonconforming signs.
- Agencies in the countries visited have considerable control over message formatting, such as setting font size and prohibiting phone numbers and e-mail addresses. Most countries regulate the physical aspects of outdoor advertising signs (e.g., sign size, height, structure, and graphic standards), but not the message itself. In Australia and the United Kingdom, message content is self-regulated through tools and protocols managed by advertising industry associations. Most countries have tighter billboard size and height standards than the United States. For example, billboards tend to be smaller and lower to make sure the sign does not dominate the skyline. Most countries have adopted guidelines or requirements to standardize the physical characteristics of advertising signs.
- Permit terms for advertising signs are longer, but finite (e.g., 15 years). Signs have a fixed expiration date, after which it is necessary to submit a new

application that must be reviewed under current standards, with no or few exceptions. In the United States, in comparison, issues related to nonconforming signs (which are not declining in number as originally envisioned in the HBA) consume a disproportionate amount of regulators' time. Although no statistical data were available, the scan team's perception was that countries with strict permit expiration date policies handled problems such as nonconforming signs much more effectively than countries with relatively lax expiration policies. Nonconforming signs are one of the major problems affecting outdoor advertising control in the United States. In the countries visited, a permit does not carry a property interest and, depending on the situation, can be revoked.

- The study team found evidence of efforts to develop constructive relationships between regulators and the outdoor advertising industry at both the national and state levels, particularly in Australia. In the United States, in comparison, the relationship between regulators and the outdoor advertising industry is frequently acrimonious. Examples of initiatives the study team found in Australia include regular meetings between regulators and advertising industry representatives, proactive discussions on specific policies, and standardization of policies across states. From a regulator's perspective, meeting with industry representatives helps regulators understand not just the industry needs, but also where the industry is headed. Feedback received by the study team indicates that negotiations with the advertising industry can be effective to the extent that regulators have the ability to clearly state up front which control issues are negotiable and which are nonnegotiable.
- In most countries visited, highway agencies and local authorities need to interact on permit applications that are outside the right-of-way, but are within a certain distance of or visible from the transportation corridor. Usually, communication protocols have evolved over time to formalize and facilitate communications between agencies.
- Outdoor advertising control at the agencies visited involves personnel in a variety of departments and specialty areas, including operations, safety, planning, maintenance, and human factors. By comparison, outdoor advertising control in the United States is typically managed by right-of-way or maintenance departments.

Stakeholder, Community, and Citizen Involvement

- Local planning of, regulatory involvement in, and control of sign permits are greater in the countries visited. All areas were under some control, designation, or zoning; no areas were unzoned because of more rigorous, comprehensive local planning for land use management. All of the countries have strong land use, planning, and environmental legislation and regulations, covering all jurisdictions, although philosophical differences exist (e.g., some countries have a more centralized approach to planning at the state level than is customary in the United States). In contrast to the United States, where outdoor advertising control focuses primarily on zoning, spacing, and lighting considerations, in most of the countries visited outdoor advertising control is an integral component of planning and environmental legislation, regulations, and associated processes. This integration makes it easier to implement policies and regulations that encourage outdoor advertising practices that are more consistent with modern urban and rural design principles than is common in the United States, where many nonurban areas do not have planning or land use regulation.
- England and Japan use comprehensive campaigns to remove illegal signs in neighborhoods as part of a broader economic regeneration and revitalization effort. Japan also mandates citizen involvement and local community landscape control plans for signing requirements through an outdoor advertising management council.
- Advertising management plans are required. In addition to the design assessment guidelines mentioned previously, countries are exploring a variety of ways to improve communications. In Queensland, Australia, AMPs are tools for implementing outdoor advertising policies in concert with local agencies and other stakeholders. The purpose of AMPs is to develop a structure and document processes to manage and control advertising, set parameters against which proposals are assessed, address vegetation and landscaping concerns, and ensure that the location of all proposed advertising devices is consistent with the location of existing and future devices.
- Opportunity for public participation during the review of individual permit applications varies widely, from no participation to opportunity to provide feedback in certain situations in which the anticipated social impact of a proposed installation

is significant. One Australian state is reevaluating its policy to formalize and include community input on billboards as it does on other transportation projects. In several countries, it is common to have lists of proposed installations posted on bulletin boards (or, increasingly, on the Internet). It is also common for the permitting agency to post a notice (e.g., in a newspaper) with instructions on how the public can provide feedback. In Australia, if a proposed sign is likely to have an impact on adjacent properties, all affected property owners and stakeholders must be notified. In some instances, the public also has the ability to appeal an approved sign. In all of the countries visited, the public has the right to complain about advertising signs in public spaces, particularly if the sign is perceived as a hazard (e.g., if it blocks pedestrians or bicycle riders) or if the content is questionable.

- As a result of several recent laws, the most active community and citizen involvement in enforcement and determining where to restrict or prohibit signs occurs in Japan (Appendix D).

Environmental Impacts, Economic Benefits, and Revenue Generation

- Practices vary widely on outdoor advertising signs in the right-of-way of transportation facilities. In urban areas, local authorities usually determine whether and where outdoor advertising may be allowed (e.g., billboards and signs on bus shelters, bicycle racks, or telephone booths). In rural areas, it is common to not allow outdoor advertising in the right-of-way. In all of the countries visited, directional signs and tourist-oriented signs are allowed in the right-of-way.
- Several countries (e.g., Denmark, Finland, the Netherlands, and the United Kingdom) do not allow billboards for advertising purposes in the right-of-way of major transportation corridors. Some countries allow outdoor advertising in the right-of-way of tolled roads. Outdoor advertising is also common in rest areas and as a tool to fund the construction of pedestrian bridges. Australia and Sweden are experimenting with billboards in the right-of-way of major transportation corridors, either by issuing a permit to an advertising provider or by operating their own advertising signs. For example, in New South Wales, Australia, RTA owns 75 sites that generate AU\$15 million (US\$13 million) per year. In Queensland, Australia, TMR has seven sites. In Stockholm, Sweden, SRA allowed a private operator to install eight digital signs along

the most congested corridor in the country to evaluate safety impacts.

- In most urban areas, outdoor advertising is an important source of revenue. The range of advertising applications is wide (e.g., billboards, banners, posters, signs on bus shelters or telephone booths, and tourist or public information panels). With the exception of RTA, which is seeking to expand its advertising sign portfolio, the scan team's perception was that highway agencies in the countries visited do not see outdoor advertising in the right-of-way of major transportation corridors as a major revenue-generating venture, particularly when they consider issues such as public safety, liability, urban design and amenity, and acceptability.
- Although revenue is an important consideration, some jurisdictions tie the approval of outdoor advertising in public spaces to whether a public benefit is associated with it. For example, in New South Wales, Australia, it is necessary to conduct a public benefit test to assess how the local community will benefit from deployment of an advertising sign. The public benefit, which could be in the form of a monetary or in-kind contribution (in addition to the standard application fee), must be linked to improvements in local community services and facilities. Examples include improved traffic safety, improved public transportation services, improved public amenity in or next to the transportation corridor, and support for school safety infrastructure and programs.
- In a similar application in Glasgow, Scotland, advertising was used to improve the city's tourist attraction panels through an agreement that enabled Glasgow to install 249 tourist panels while allowing the advertiser to install 76 advertising panels throughout the city. As part of another initiative, Glasgow upgraded its bus shelters using a scheme to maximize value and revenue while reducing maintenance expenditures. The winning bid on 360 bus shelters was £2.9 million (US\$4.2 million). However, all bids were in excess of what the city had originally expected.
- In most of the countries visited, permit fees do not generate enough income to fund regulatory programs, and agencies are reviewing practices to address this situation. Most highway agencies visited are referral authorities for outdoor advertising proposals that are located outside the right-of-way but within a certain distance of the transportation corridor. Typically, highway agencies do not receive a fee from the applicant or the local planning

authority for application review services, which has a negative impact on the agencies' ability to enforce laws and regulations effectively. Examples of negative impacts include deciding to review only certain types of outdoor advertising applications and not having enough resources to remove or prosecute illegal signs. Several countries are experimenting with programs to generate revenue from outdoor advertising (e.g., by allowing or operating billboards in the right-of-way). Typically, revenue from outdoor advertising is considered a general revenue source.

- The countries visited emphasize context-sensitive design, placing greater consideration on visual effects on viewsapes and how advertising blends with surrounding landscapes and the environment.
- Japan has enacted three laws on landscape and greenery to empower local governments to decide landscape criteria for their regions and the level of control needed to establish, preserve, and protect valued local landscapes (Appendix D). Combined with other street improvements and events, these laws are credited with a nine-fold increase in tourism.
- Japan has generated revenue used to improve public safety and security through the sale of naming rights to the highest bidder on bridges and pedestrian overpasses.

Safety

- Signs may be removed after they are permitted if safety later becomes a concern. Most countries distinguish between signs that are properly designed and placed (therefore minimizing any potential safety hazard from distraction, confusion, dazzling, or blocking) and signs that are improperly designed or placed. They explicitly state in their laws and/or regulations that an advertising sign that resembles a traffic control device, directs traffic, or distracts or confuses drivers is a safety hazard. Explicitly classifying an outdoor advertising sign as a safety hazard if improperly designed or placed is a high-standard design principle that is at the core of outdoor advertising laws and regulations in the countries visited and is different from the traditional emphasis in the United States on zoning, spacing, and lighting.
- In all of the countries visited, traffic and public safety considerations play a more critical role in the permitting process than in the United States. All of the countries have developed criteria to identify signs that would be unacceptable because they

resemble traffic control devices, could direct traffic, or could distract or confuse drivers. Further, the safety evaluation process is more comprehensive in all the countries visited, both in the documentation that applicants must provide and the review process that needs to take place once an application is submitted.

- All of the countries visited recognize that distraction is a potential traffic safety hazard. Some countries have established formulas (typically based on vehicle speed) to estimate the effect of distraction on distance traveled and the identification of safe stopping distances for outdoor advertising control purposes.

Chapter 5: Implementation Strategies

The scan team assembled a list of ideas to develop a scan implementation plan.

Ideas to Streamline Implementation of the HBA

- Simplify the HBA regulations and enforcement process.
- Develop model regulations for States to use.
- Evaluate the effect of reducing the number of controlled advertising miles on State highway agency costs and operations.
- Study potential cost savings that could come from eliminating the control and monitoring of nonconforming signs. This could involve looking at the legal aspects of term or probationary permits or potential criteria for safety or public benefit audits.
- Identify ways to encourage stakeholder agreement on fundamental ways to streamline control.
- Study control measures for certified cities to use.

Ideas to Improve Program Efficiency and Implement Best Practices

- Study fee schedules that would enable agencies to cover regulation and enforcement costs.
- Develop safety criteria that could be used when evaluating permit applications.
- Develop model regulations that synthesize safety criteria with longer fixed-term permits and other criteria observed in the countries visited.
- Study the legal aspects of or develop criteria for term or probationary permits.
- Develop criteria to trigger a safety audit of a sign or public benefit needs.

- Prepare a best-practices document and training materials for agencies to use to maximize revenue from outdoor advertising that could also address public needs.
- Study the feasibility of generating revenue from advertising in the right-of-way, including an evaluation of costs and benefits of advertising and the potential uses or use restrictions of any revenue generated.

Ideas to Improve Transparency of Process

- Develop a process and tools to improve notification and participation of local governments in outdoor advertising control decisions and enforcement.
- Develop methods to encourage public participation at the outdoor advertising control policymaking and permitting stages and improve consultation with jurisdictional authorities.
- Decrease dependence on zoning considerations when issuing permits by emphasizing other decision factors, such as jurisdiction of roads, safety factors, and scenic and public benefit factors.

Ideas for a More Comprehensive and Context-Sensitive Approach

- Encourage States to work with local public agencies to develop advertising management plans.
- Develop guidelines to incorporate livability concepts into permit applications in heavy pedestrian and bicycle traffic areas.
- Develop architectural and graphic design principles to integrate outdoor advertising signs into the context of the surrounding area.
- Encourage the use of green initiatives and technologies.

- Launch intensive local campaigns to remove illegal billboards as part of a broader economic revitalization effort.
- Study the true costs, benefits, and risks of revenue generation in rights-of-way.
- Research scenic roads and interstates on the HBA system and how scenic roads are regulated by local governments, and conduct a cost-benefit analysis on regulating only scenic roads and interstates.

Ideas to Enhance Safety

- Develop criteria to evaluate permit applications to identify signs that are unacceptable from a safety perspective because they resemble traffic control devices or could distract or confuse drivers.
- Update the assessment criteria used to review permit applications to reflect design, planning, environmental, and public and traffic safety criteria used by several countries visited.
- Update permitting requirements to include an analysis of the technical feasibility, benefits, safety impacts, and other effects of a proposed outdoor advertising installation.
- Conduct research on the safety impacts of outdoor advertising, and possibly require applicants to conduct a safety analysis to demonstrate the design and safety feasibility of proposed installations.
- Assess whether existing traffic data from intelligent transportation systems or traffic control centers could be used to track traffic patterns and establish the potential impacts of commercial electronic variable message signs on traffic flow.
- Study the effects of full-motion video on driver attention.

Endnotes

1. 23 USC 131. Control of Outdoor Advertising. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=browse_usc&docid=Cite:+23USC131.
2. 23 CFR 750. Highway Beautification. www.access.gpo.gov/nara/cfr/waisidx_03/23cfr750_03.html.
3. *Manual on Uniform Traffic Control Devices*. Federal Highway Administration, Washington, DC, 2009. <http://mutcd.fhwa.dot.gov>.
4. *The Outdoor Advertising Program Needs to be Reassessed*. Report CED-85-34, General Accounting Office (now U.S. Government Accountability Office), Washington, DC, January 1985. www.gao.gov/products/RCED-85-34.
5. 23 USC 136. Control of Junkyards. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=browse_usc&docid=Cite:+23USC136.
6. *Obstacles to Billboard Removal*. Report CED-78-38, General Accounting Office (now U.S. Government Accountability Office), Washington, DC, March 1978. www.gao.gov/products/CED-78-38.
7. *Highway Beautification Program Assessment*. National Advisory Committee, Federal Highway Administration, Washington, DC, 1981.
8. Simmons, M. (1986). *Outdoor Advertising Control Along Federal-Aid Highways*. Congressional Research Service, Library of Congress, Washington, DC.
9. *The Highway Beautification Act. A Broken Law*. Scenic America, Washington, DC, undated.
10. *Conflict Assessment: Federal Outdoor Advertising Control Program*. The Osprey Group, U.S. Institute for Environmental Conflict Resolution, Tucson, AZ, January 2007. www.fhwa.dot.gov/REALSTATE/oaconf.htm.
11. Roads Act 1993. Sydney, New South Wales, Australia. www.austlii.edu.au/au/legis/nsw/consol_act/ra199373/.
12. Road Transport (Safety and Traffic Management) Regulation 1999. Sydney, New South Wales, Australia. www.austlii.edu.au/au/legis/nsw/num_reg/rtatmrr19991999623607/.
13. Environmental Planning and Assessment Act 1979. Sydney, New South Wales, Australia. www.austlii.edu.au/au/legis/nsw/consol_act/epaaa1979389/.
14. State Environmental Planning Policy No. 64—Advertising and Signage. Ministry for Urban Affairs and Planning, Sydney, New South Wales, Australia. www.austlii.edu.au/au/legis/nsw/consol_reg/seppn64as577/.
15. *Transport Corridor Outdoor Advertising and Signage Guidelines: Assessing Development Applications Under SEPP 64*. Department of Planning, Sydney, New South Wales, Australia, July 2007. www.planning.nsw.gov.au/planningsystem/pdf/dop07033_outdooradvertising_transportcorridors_guidelines.pdf.
16. *Guidelines for the Location and Placement of Variable Message Signs*. TDT 2005/02, Roads and Traffic Authority, Sydney, New South Wales, Australia, March 2005. www.rta.nsw.gov.au/trafficinformation/downloads/td05_02bi.pdf.
17. Integrated Planning Act 1997. Office of the Queensland Parliamentary Counsel, Brisbane, Queensland, 2006. www.legislation.qld.gov.au/Acts_Passed/Acts_Passed_NUM_1997.htm.
18. Transport Infrastructure Act 1994. Office of the Queensland Parliamentary Counsel, Brisbane, Queensland, 2010. www.legislation.qld.gov.au/Acts_SLs/Acts_SL_T.htm.
19. Transport Operations (Road Use Management) Act 1995. Office of the Queensland Parliamentary Counsel, Brisbane, Queensland, 2010. www.legislation.qld.gov.au/Acts_SLs/Acts_SL_T.htm.

20. Transport Operations (Road Use Management—Accreditation and Other Provisions) Regulation 2005. Office of the Queensland Parliamentary Counsel, Brisbane, Queensland, 2005. www.legislation.qld.gov.au/Acts_SLs/Acts_SL_T.htm.
21. Transport Infrastructure (State-Controlled Roads) Regulation 2006. Office of the Queensland Parliamentary Counsel, Brisbane, Queensland, 2010. www.legislation.qld.gov.au/Acts_SLs/Acts_SL_T.htm.
22. Road Corridor Permit. Department of Transport and Main Roads, Brisbane, Queensland, 2010. www.tmr.qld.gov.au/Community-and-environment/Development-assessments/Development-approvals/Road-Corridor-Permit.aspx.
23. *Roadside Advertising Guide*. Edition 1.1, Department of Transport and Main Roads, Brisbane, Queensland, August 2009. www.tmr.qld.gov.au/Business-and-industry/Technical-standards-and-publications/Roadside-advertising-guide.aspx.
24. *Roadside Design Guide*. 3rd Edition, American Association of State Highway and Transportation Officials, Washington, DC, 2002.
25. Planning and Environment Act 1987. Melbourne, Victoria, Australia. www.austlii.edu.au/au/legis/vic/consol_act/paea1987254/.
26. Road Zone. Particular Provisions—Clause 36.04. Victoria Planning Provisions, Melbourne, Victoria, Australia. www.dse.vic.gov.au/planningschemes/VPPs/.
27. Advertising Signs. Particular Provisions—Clause 52.05. Victoria Planning Provisions, Melbourne, Victoria, Australia. www.dse.vic.gov.au/planningschemes/VPPs/.
28. Road Management Act 2004. Melbourne, Victoria, Australia. www.austlii.edu.au/au/legis/vic/consol_act/rma2004138/.
29. Referral and Notice Provisions. General Provisions—Clause 66. Victoria Planning Provisions, Melbourne, Victoria, Australia. www.dse.vic.gov.au/planningschemes/VPPs/.
30. Hoardings and Advertisements. Section 508, Road Management (General) Regulations 2005. Melbourne, Victoria, Australia. www.austlii.edu.au/au/legis/vic/consol_reg/rmr2005302/.
31. Measurement of Outdoor Visibility and Exposure. MOVE, East Sydney, New South Wales, Australia, 2009. www.moveoutdoor.com.au/.
32. OMA Policies. Outdoor Media Association, East Sydney, New South Wales, Australia. <http://oma.org.au/content/id/55/OMA-Policies>.
33. Advertising Standards Bureau, Canberra, Australian Capital Territory, Australia, 2006. www.adstandards.com.au/pages/index.asp.
34. Tavler og reklameskilte langs offentlige veje—Signs and Advertising on Public Roads. Danish Road Directorate, Copenhagen, Denmark. www.vejdirektoratet.dk/publikationer/VDspeTAV/index.htm.
35. Maantielaki—Highways Act (503/2005). Finnish Legislature, Helsinki, Finland. www.finlex.fi/en/laki/kaannokset/2005/en20050503.
36. Maankäyttö- ja rakennuslaki—Land Use and Building Act (132/1999, amendment 222/2003 included). Finnish Legislature, Helsinki, Finland. www.finlex.fi/en/laki/kaannokset/1999/en19990132.
37. Tieliikennelaki—Road Traffic Act (267/1981). Finnish Legislature, Helsinki, Finland. www.finlex.fi/fi/laki/ajantasa/1981/19810267.
38. Tieliikenneasetus—Road Traffic Regulation (182/1982). Finnish Legislature, Helsinki, Finland. www.finlex.fi/fi/laki/ajantasa/1982/19820182.
39. *Roadside Advertising Guidelines*. Document VVLED 2009:157, Swedish Road Administration, Stockholm, Sweden, December 2009.
40. Plan-och bygglag—Planning and Building Act (1987:10). Swedish Legislature, Stockholm, Sweden. www.riksdagen.se/webbnav/index.aspx?nid=3911&bet=1987%3a10.
41. Vägslag—Roads Act (1971:948). Swedish Legislature, Stockholm, Sweden. www.riksdagen.se/Webbnav/index.aspx?nid=3911&bet=1971:948.

42. Lag med särskilda bestämmelser om gatuhållning och skyltning—Act on Special Provisions for Street Cleaning and Signage (1998:814). Swedish Legislature, Stockholm, Sweden. www.riksdagen.se/webbnav/index.aspx?nid=3911&bet=1998%3a814.
43. Förordning om gatuhållning och skyltning—Regulation on Street Cleaning and Signage (1998:929). Swedish Legislature, Stockholm, Sweden. www.riksdagen.se/webbnav/index.aspx?nid=3911&bet=1998%3a929.
44. Richtlijn bewegwijzering—Signage Guidelines. Information and Technology Centre for Transport and Infrastructure, Ede, Netherlands, 2005. www.crow.nl/nl/Publicaties/publicatiedetail.aspx?code=222.
45. Routeontwerp—Road Design. Ministry of Transport, Public Works, and Water Management; Ministry of Housing, Spatial Planning, and Environment; Ministry of Agriculture, Nature, and Food Quality, Delft, Netherlands, undated. www.routeontwerp.nl.
46. Kerncijfers Verkeersveiligheid—Road Safety in the Netherlands. Rijswaterstaat, Delft, Netherlands, June 2009. www.rov-utrecht.nl/scrivo/asset.php?id=367201.
47. 10 Gouden regels—10 Golden Rules. Rijswaterstaat, Delft, Netherlands, April 2010.
48. Town and Country Planning Act 1990. Office of Public Sector Information, London, England. www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1990/cukpga_19900008_en_1.
49. Highways Act 1980. Office of Public Sector Information, London, England. www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1980/cukpga_19800066_en_1.
50. Town and Country Planning (Control of Advertisements) (England) Regulations 2007, April 2007. www.opsi.gov.uk/si/si2007/pdf/uksi_20070783_en.pdf.
51. *Outdoor Advertisements and Signs: A Guide for Advertisers*. Department for Communities and Local Government, England, June 2007. www.communities.gov.uk/publications/planningand-building/outdooradvertisements.
52. Planning and Policy Guidance: Outdoor Advertisement Control. PPG19, Department of the Environment, England, March 1992.
53. Spatial Planning Advice Note: SP 03/10. Highways Agency, London, England, June 2010.
54. Advertising Standards Authority. London, England, 2009. <http://asa.org.uk/>.
55. Communities and Local Government Circular 03/2007. Department for Communities and Local Government, London, England, March 2007. www.communities.gov.uk/publications/planningandbuilding/circulartown.
56. Valuation Office Agency. Durham, England. www.voa.gov.uk/.
57. Town and Country Planning (Scotland) Act 1997. Office of Public Sector Information, London, England. www.opsi.gov.uk/acts/acts1997/ukpga_19970008_en_1.
58. Advertising Hoardings. Acceptable Locations Beside Roads. Roads and Transportation Committee, Glasgow City Council, Glasgow, Scotland, October 1997.
59. *Road Furniture in the Countryside. Guidance for Road and Planning Authorities and Statutory Undertakers*. Transport Scotland, Edinburgh, Scotland, July 2006. www.transportscotland.gov.uk/reports/road/j7538-00.htm.
60. *Trunk Road and Motorway Tourist Signposting Policy and Guidance*. Transport Scotland, Edinburgh, Scotland, July 2006. www.transportscotland.gov.uk/files/documents/reports/j7818.pdf.

Appendix A: Scan Team Members

Contact Information

Mary Jane Daluge (FHWA Co-Chair)

Senior Realty Specialist
Federal Highway Administration
Office of Real Estate Services
HEPR-20, Room E74-418
1200 New Jersey Ave. SE
Washington, DC 20590-9898
Telephone: 202-366-2035
Fax: 202-366-3713
E-mail: maryjane.daluge@dot.gov

Matthew DeLong (AASHTO Co-Chair)

Administrator, Real Estate Support Area
Michigan Department of Transportation
PO Box 30050
Lansing, MI 48909
Telephone: 517-373-2200
Fax: 517-373-2209
E-mail: delongm@michigan.gov

Laurie Hanig

Assistant Attorney General
Maryland State Highway Administration
707 North Calvert St.
Baltimore, MD 21202
Telephone: 410-545-0065
Fax: 410-209-5007
E-mail: lhanig@sha.state.md.us

Hari Kalla

MUTCD Team Leader
Federal Highway Administration
Office of Transportation Operations
HOTO-1, Room E86-115
1200 New Jersey Ave. SE
Washington, DC 20590-9898
Telephone: 202-366-5915
Fax: 202-366-3225
E-mail: hari.kalla@dot.gov

Charlie Klauer, Ph.D.

Senior Research Associate
Virginia Tech Transportation Institute
3500 Transportation Research Plaza
Blacksburg, VA 24061
Telephone: 540-231-1564
Fax: 540-231-1555
E-mail: cklauer@vtti.vt.edu

Kenneth Klein

Executive Vice President, Government Relations
Outdoor Advertising Association of America, Inc.
1850 M St. NW, Suite 1040
Washington, DC 20036
Telephone: 202-776-1843 (direct) or 202-833-5566
Fax: 202-833-1522
E-mail: kklein@oaaa.org

Susan Klekar

Division Administrator
Federal Highway Administration Nevada Division
HDA-NV
705 North Plaza St., Suite 220
Carson City, NV 89701-0602
Telephone: 775-687-1204
Fax: 775-687-3803
E-mail: susan.klekar@dot.gov

Lyle McMillan

Director
Right of Way Division
Utah Department of Transportation
4501 South 2700 West, Box 148420
Salt Lake City, UT 84114-8420
Telephone: 801-965-4331
Fax: 801-965-3822
E-mail: lmcmillan@utah.gov

Cesar Quiroga, Ph.D., P.E. (Report Facilitator)
Research Engineer
Manager, Infrastructure Management Program
Texas Transportation Institute
Texas A&M University System
1100 NW Loop 410, Suite 400
San Antonio, TX 78213
Telephone: 210-979-9411, ext. 17203
Fax: 210-979-9694
E-mail: c-quiroga@tamu.edu

Jeffrey Soule
Director
Outreach and International Programs
American Planning Association
1776 Massachusetts Ave. NW, Suite 400
Washington, DC 20036
Telephone: 202-349-1012
Fax: 202-872-0643
E-mail: jsoule@planning.org

Mary Tracy
President
Scenic America
1250 I St. NW, Suite 750A
Washington, DC 20005
Telephone: 215-983-7765
Fax: 215-732-5725
E-mail: tracy@scenic.org

Barbara Wessinger
Assistant Chief Counsel
South Carolina Department of Transportation
PO Box 191
Columbia, SC 29202
Telephone: 803-737-1347
Fax: 803-737-2071
E-mail: wessingebm@scdot.org

Biographic Information

MARY JANE DALUGE (FHWA co-Chair) is a senior realty specialist in the Federal Highway Administration (FHWA) Office of Real Estate Services, where she is a member of the Program Implementation Team responsible for the agency's outdoor advertising control (OAC) program. Daluge has State department of transportation (DOT) and extensive FHWA Division and Resource Center experience in both the FHWA Right-of-Way and Civil Rights Programs. She has led effective reviews in numerous program areas, including the OAC Program in the Oklahoma Division, which had significant findings and resulted in major program improvements. She also has formal and practical experience in facilitation, mediation, and instruction. Daluge has

a bachelor's degree in business and management from the University of Maryland and the SR/WA professional designation from the International Right of Way Association.

MATTHEW DELONG (AASHTO co-Chair) is the Real Estate Division administrator for the Michigan Department of Transportation (MDOT) in Lansing, MI. He is responsible for statewide coordination, policy development, and procedural processes for real estate operations. He also is responsible for statewide outdoor advertising regulation and control programs, utility coordination, construction permitting, and all transport permitting processes. DeLong has been in his position for 7 years and with the State for 23 years. He is vice chair of the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Right-of-Way and Utilities, which includes outdoor advertising control as part of its responsibility. DeLong has bachelor's and master's degrees in civil engineering and is a licensed real estate broker in Michigan.

LAURIE HANIG is an assistant attorney general for the Maryland State Highway Administration (MSHA). Hanig's duties include litigating real estate and billboard acquisitions via exercise of the power of eminent domain, representing MSHA in inverse condemnation lawsuits and other real estate-related matters, and serving as legal advisor on all outdoor advertising issues under the U.S. Federal-Aid Highway Act of 1958 bonus program, the U.S. Highway Beautification Act of 1965, and the Maryland statutes implementing these Federal programs. Before her current post, she was in private practice with a law firm representing property owners in eminent domain proceedings and handling other types of business and real estate litigation at the trial and appellate levels. Hanig graduated from the University of Maryland with honors and earned her J.D. degree from the University of Baltimore's School of Law. She has been a member of the bar in Maryland and the District of Columbia for 30 years and is a trained mediator and member of the Association for Conflict Resolution. She taught a workshop on outdoor advertising for the Mid-Atlantic Joint Federal/State Right-of-Way and Utility Conference in 2001.

HARI KALLA is a team leader in the FHWA Office of Operations. He is responsible for developing and issuing FHWA's regulations, policies, standards, and guidance for all traffic control devices, including traffic signs, pavement markings, and traffic signals. Before his current position, Kalla served as a team leader and transportation specialist in FHWA's Office of Safety. Before joining FHWA, Kalla worked for the New York State Department of Transportation for 8 years. He has a master's degree in civil engineering from State University of New York, Buffalo and is a licensed professional engineer in New York.

DR. CHARLIE KLAUER is a senior research associate with the Center for Automotive Safety Research at the Virginia Tech Transportation Institute (VTI). Klauer's chief research interests involve driver distraction and the assessment of those distraction tasks that significantly increase driver involvement in crashes and near crashes. For the past 5 years, Klauer has served as the principal investigator and/or project manager for the 100-Car Naturalistic Driving Study and the Naturalistic Teenage Driving Study (NTDS). She has been the principal investigator for several follow-on analyses using the 100-Car Naturalistic Driving Database and is now analyzing the NTDS database to assess both driver distraction and a variety of driving safety-related questions for novice drivers. Klauer received her master's degree in human factors psychology from Wright State University in 1995 and her Ph.D. in industrial and systems engineering from Virginia Polytechnic Institute and State University in 2005. She is a member of the Human Factors and Ergonomics Society and the Transportation Research Board (TRB) Young Driver Subcommittee and serves on several other TRB technical committees.

KENNETH KLEIN is executive vice president of the Outdoor Advertising Association of America (OAAA) in Washington, DC. Klein leads the government relations efforts of the national trade association for the outdoor advertising industry. Before joining OAAA in 2001, Klein was chief of staff to U.S. Senator Bob Graham. He worked for Graham in various capacities from 1987 to 2001. Klein graduated from Ohio University with a journalism degree. In Florida, he worked for a daily newspaper and the Associated Press wire service before joining the Florida Department of Transportation in 1984 as a spokesperson for major projects, such as rebuilding the Sunshine Skyway Bridge and converting Alligator Alley to an interstate. Klein is a registered Federal lobbyist.

SUSAN KLEKAR is the division administrator for the FHWA Nevada Division in Carson City, NV. She directs FHWA oversight and stewardship activities in Nevada. This includes Nevada's right-of-way program and the Highway Beautification Act. Before her current post, Klekar was assistant division administrator in FHWA's Hawaii and Iowa Divisions and planning and research engineer in FHWA's Regional Office in San Francisco, CA. Klekar has served FHWA for more than 30 years in the program areas of construction, planning, research, right-of-way, and safety. She has a bachelor's degree in transportation engineering from California Polytechnic State University, San Luis Obispo. Klekar has been affiliated with the Institute of Transportation Engineers and the American Public Works Association and served on several technical committees and task forces for FHWA.

LYLE MCMILLAN is the director of right-of-way and property development for the Utah Department of Transportation (UDOT). Since 1999, McMillan has also served as Utah's outdoor advertising control administrator. In this capacity, he leads and manages the policies, procedures, and day-to-day administration of outdoor advertising permitting and enforcement on Utah's highway system. He recently served on the National Cooperative Highway Research Program (NCHRP) 20-7(247) Outdoor Advertising Sign Regulation study panel. McMillan is a current member and past board member of the National Alliance of Highway Beautification Agencies. He is also responsible for right-of-way acquisition (including outdoor advertising structures), displaced person relocation (including outdoor advertising structures), eminent domain strategy, corridor preservation, property management, regulatory takings, fiber optics in the Interstate System, access management, utilities relocations, and all permitting functions. McMillan has a bachelor's degree in finance from the University of Utah and a master's of business administration from Brigham Young University. He is a member of the executive committee of the AASHTO Right of Way and Utilities Subcommittee. He recently completed a 2-year commitment as chair of the International Right of Way Association's Communications and Marketing Committee.

DR. CESAR QUIROGA (report facilitator) is a research engineer at the Texas Transportation Institute (TTI), a research agency in the Texas A&M University System and the largest university-based transportation research organization in the United States. At TTI, he founded and leads the Infrastructure Management Program, which conducts research and technology transfer on data inventory and maintenance, data exchange and integration, project development process optimization, and infrastructure data management needs throughout the lifetime of transportation facilities. Quiroga has been particularly involved in utility and right-of-way topics, including feature inventory databases, permitting, utility relocation process optimization, and construction specifications. He has also been active in transportation operations research and has conducted studies addressing ITS design and implementation issues. Before joining TTI in 1998, he was a research associate at the Remote Sensing and Image Processing Laboratory at Louisiana State University. He also worked in the private sector as a consultant. He has a master's degree in civil engineering and a Ph.D. from Louisiana State University and an undergraduate degree in civil engineering from the Colombian School of Engineering. He is a registered professional engineer in Texas and Louisiana and is active in several organizations, including the American Society of Civil Engineers, Institute of Transportation Engineers, International Right of Way Association, and TRB.

JEFFREY SOULE is director of outreach and international programs at the American Planning Association (APA) in Washington, DC. Before joining APA, Soule held a number of planning and policy positions in government and the nonprofit sector. In 1996, Soule became policy director of APA, managing government affairs, public information, and outreach for the association's 44,000 members. In 1997, he launched an initiative with the Chinese government to provide long-term technical assistance through exchanges and special projects. In 2007, Soule became director of outreach and international programs, the first position at APA to combine communications, partnerships, and international activities. He is a member of the board of the U.S. National Committee of the International Council on Monuments and Sites (US/ICOMOS). He was a U.S. delegate to the General Assembly for ICOMOS and advises governments on cultural conservation. He is on the ICOMOS Cultural Towns Scientific Committee and has authored international papers on managing scenic and cultural resources. He has written and lectured extensively on urban design, rural development, historic preservation, environmental conservation, and disaster recovery. Soule is a fellow of the American Institute of Certified Planners and served as president of the Baltimore Chapter of the International Land Economics Society, Lambda Alpha. He received a bachelor's degree in natural science and fine arts from Colgate University and a master's degree in city and regional planning and public policy from Harvard University's Graduate School of Design and Kennedy School of Government.

MARY TRACY is the president of Scenic America in Washington, DC, a national nonprofit organization dedicated to preserving and enhancing the visual character of communities and countryside in the United States. Tracy also spearheaded citywide grassroots efforts to form the Society Created to Reduce Urban Blight (SCRUB) in 1990 to stop the proliferation of billboards in Philadelphia. In 2000, under her leadership, SCRUB became a 501(c)(3) nonprofit organization with a mission to improve Philadelphia's visual character and ensure that all citizens—regardless of income, education, or neighborhood—benefit from laws safeguarding the city's visual environment and quality of life. Tracy worked through SCRUB and its neighborhood partners and legal volunteers to prevent more than 50 new billboards and wall wraps from being erected and secure final removal of more than 900 illegal billboards located across from homes, schools, and playgrounds.

BARBARA WESSINGER is the assistant chief counsel for the South Carolina Department of Transportation (SCDOT). During her 18 years with SCDOT, she has provided counsel on and litigated cases involving condemnation, contract, highway and bridge construction

and maintenance, and outdoor advertising matters. She is a graduate of the Governor's EXCEL Leadership Institute and Strategic Training for Agency Representative Program. She is a member of the South Carolina Society of Certified Public Managers, TRB Technical Council on Outdoor Advertising, and AASHTO Subcommittee on Right-of-Way and Utilities Technical Council on Outdoor Advertising. Wessinger is also recognized as a friend of the TRB Contract Law Committee. She has been a member of the National Association of Highway Beautification Agencies (NAHBA) since its inception, serving as NAHBA chair from 2002 to 2006, second vice chair in 2007, and acting chair since 2008.

Appendix B: Host Country Contacts

The following served as the main contacts at the agencies visited. Table 10 provides a more comprehensive list of individuals the scan team met with during the scanning study.

Australia—New South Wales

Charmaine Moldrich

Outdoor Media Association
Suite 204, 80 William St.
East Sydney, New South Wales, 2011, Australia
Telephone: 011+61 02 9357 9900
Fax: 011 +61 02 8356 9500
E-mail: charmaine.moldrich@oma.org.au

Matthew Granger

Roads and Traffic Authority
101 Miller St.
North Sydney, New South Wales 2060, Australia
Telephone: 011+61 02 8588 5936
Fax: 011+61 02 8588 4191
E-mail: matthew_granger@rta.nsw.gov.au

Australia—Queensland

Shane Hawes

Department of Transport and Main Roads
85 George St.
Brisbane, Queensland 4000, Australia
Telephone: 011+61 7 3306 6467
Fax: 011+61 7 3306 7290
E-mail: shane.c.hawes@mainroads.qld.gov.au

Australia—Victoria

Peter Williams

VicRoads Commercial
60 Denmark St.
Kew, Victoria 3101, Australia
Telephone: 011+61 3 9854 2288
Fax: 011+61 3 9854 2170
E-mail: peter.williams@roads.vic.gov.au

Japan

Tomohiro Oishi

Deputy Director
Parks, Green Spaces, and Landscape Division
City and Regional Development Bureau
Ministry of Land, Infrastructure, Transport, and Tourism
213 Kasumigaseki, Chiyoda-ku
Tokyo, Japan
Telephone: +81-(0)3-5253-8420
Fax: +81-(0)3-5253-1593
E-mail: ooishi-t277@mlit.go.jp

Masahiro Nishikawa

National Institute for Land and Infrastructure Management
Asahi-1, Tsukuba-City, Ibaraaki-Pref.305-0804, Japan
Telephone: 81-29-864-7493
Fax: 81-29-864-0560
E-mail: nishikawa-m2rp@nilim.go.jp
U.S. Federal Highway Administration
6300 Georgetown Pike
McLean, VA 22101-2296
Telephone: 202-493-3132
Fax: 202-493-3419
E-mail: masahiro.nishikawa@fhwa.dot.gov,
nishikawa9369622@nifty.com

The Netherlands

Richard W. van der Elburg

Directorate of Public Works and Water Management
(Rijkswaterstaat)
Boompjes 200
3011 XD Rotterdam, Netherlands
Telephone: 011+31 887 982 372
Fax: 011+31 887 982 999
E-mail: richard.vander.elburg@rws.nl

Sweden

Fredrik Friberg

Swedish Road Administration (Vägverket)
Klarabergsviadukten 80
111 64 Stockholm, Sweden
Telephone: 011+46 70 398 51 27
E-mail: fredrik.friberg@vv.se

United Kingdom—Scotland

Graham Edmond
 Transport Scotland
 58 Port Dundas Rd.
 Glasgow, G4 0HE, Scotland
 Telephone: 011+44 141 272 7342
 Fax: 011+44 141 272 7400
 E-mail: graham.edmond@transportscotland.gsi.gov.uk

United Kingdom—England

Vicky Bowden
 Highways Agency Corporate Office
 123 Buckingham Palace Rd.
 London, SW1W 9HA, England
 Telephone: 011+44 161 930 5809
 Fax: 011+44 161 930 5256
 E-mail: vicky.bowden@highways.gsi.gov.uk

Table 10. Host country officials met during scanning study.

Country	Affiliation	Name	Title	
Australia	New South Wales	Outdoor Media Association	Charmaine Moldrich	Chief Executive Officer
Australia	New South Wales	Outdoor Media Association	Carolyn Samsa	Senior Policy Advisor
Australia	New South Wales	Roads and Traffic Authority	Tracey Arthur	General Manager, Corporate Communication
Australia	New South Wales	Roads and Traffic Authority	Murray Cleaver	Safer Roads Branch
Australia	New South Wales	Roads and Traffic Authority	Fiona Court	General Manager
Australia	New South Wales	Roads and Traffic Authority	Arem Gavin	
Australia	New South Wales	Roads and Traffic Authority	Kate Plowman	Legal Counsel
Australia	New South Wales	Roads and Traffic Authority	Michael Sheridan	Urban Designer, Development Program
Australia	New South Wales	Roads and Traffic Authority	Miles Tollan	Manager, Business Strategy
Australia	Queensland	Department of Transport and Main Roads	Shane Hawes	Senior Consultant, Stakeholder Relationships
Australia	Queensland	Department of Transport and Main Roads	Jane Hinton	Principal Advisor
Australia	Queensland	Department of Transport and Main Roads	David Jorgensen	Senior Technologist
Australia	Queensland	Department of Transport and Main Roads	Michael Mailloux	Director, Commercial Governance
Australia	Queensland	Department of Transport and Main Roads	Dave Stewart	Director-General

continued on next page

Country		Affiliation	Name	Title
Australia	Queensland	Department of Transport and Main Roads	Sharon Thompson	Manager, Corridor Access
Australia	Queensland	Department of Transport and Main Roads	Bradley Tubb	Manager, Corridor Land Management
Australia	Queensland	University of Queensland	Tim Horberry	Associate Professor
Australia	Victoria	Roads Corporation	Frank Berra	Senior Network Policy Officer
Australia	Victoria	Roads Corporation	Wendy Goad	Project Operations Officer
Australia	Victoria	Roads Corporation	James Holgate	Director, Safer Roads
Australia	Victoria	Roads Corporation	Gerry McLoughlin	Senior Urban Designer
Australia	Victoria	Roads Corporation	Peter White	Director, Network Planning and Policy
Australia	Victoria	Roads Corporation	Lorrae Wild	Principal Landscape Architect
Denmark		Danish Road Directorate	Bent Lund Nielsen	Road Standards Secretary
Finland		Finnish Transport Agency	Tuomas Österman	Specialist for Traffic Control
Japan		Ministry of Land, Infrastructure, Transport, and Tourism	Tomohiro Oishi	Deputy Director, City and Regional Development Bureau
Japan		National Institute for Land and Infrastructure Management	Masahiro Nishikawa	
The Netherlands		Directorate of Public Works and Water Management	Francis Cheung	Senior Advisor/Economist
The Netherlands		Directorate of Public Works and Water Management	Ilse Harms	Human Factors and Traffic Consultant
The Netherlands		Directorate of Public Works and Water Management	Herman Moning	Senior Advisor
The Netherlands		Directorate of Public Works and Water Management	Paul Schepers	Senior Advisor, Verkeersveiligheid
The Netherlands		Directorate of Public Works and Water Management	Annemiek Tromp	Program Manager
Sweden		Swedish Road Administration	Loella Fjällskog	Regional Road Side Coordinator

Country		Affiliation	Name	Title
Sweden		Swedish Road Administration	Alexander Hurtig	Human Factors Investigator
Sweden		Swedish Road Administration	Elenor Persson	National Road Side Coordinator
Sweden		Swedish Road Administration	Lena Rydén	International Strategist
United Kingdom		Department for Communities and Local Government	Drew Williams	Regional Manager
United Kingdom	England	Highways Agency	Abbas Abdulla	Regional Policy and Procedures Advisor
United Kingdom	England	Highways Agency	Ian Askew	Spatial Planning Team Leader
United Kingdom	England	Highways Agency	Vicky Bowden	Assistant Research Strategy Coordinator
United Kingdom	England	Highways Agency	Clare Griffin	Knowledge Strategy Assistant
United Kingdom	England	Highways Agency	Douglas Rounthwaite	Senior Engineer
United Kingdom	England	Highways Agency	Paresh Tailor	Group Manager
United Kingdom	England	London Borough of Hounslow	Marilyn Smith	Area Planning Manager
United Kingdom	Scotland	Glasgow City Council	Fotoula Adrimi	Senior Planning Officer
United Kingdom	Scotland	Glasgow City Council	Donald MacKinven	Traffic Manager
United Kingdom	Scotland	Transport Scotland	Ken Aitken	Development Manager
United Kingdom	Scotland	Transport Scotland	Graham Edmond	National Network Manager

Appendix C: Amplifying Questions

To assist in the discussion with host country officials, the scan team prepared a series of amplifying questions that clarify and expand on the primary objectives of the scanning study. The amplifying questions cover the following subject areas:

- A. Safety
- B. Community and citizen involvement
- C. Program management
- D. Environmental impacts, economic benefits, and revenue generation
- E. Laws, regulations, policies, and enforcement

The scan team is also very interested in field observations of the application of outdoor advertising laws, regulations, and policies in areas such as the following:

- Emerging outdoor advertising technologies that have been approved and are in use
- Advertising on private property
- Outdoor advertising in the right-of-way, such as at toll booths, overpasses, bridges and tunnels, open landscapes, intelligent transportation systems facilities, rest areas, welcome signs, tourist-oriented directional signs, and adopt-a-highway signs
- Signs without approval or for which regulatory oversight may be lacking
- Banners and memorial signs
- Vegetation control

A. Safety

- A.1. How do local and/or regional differences in regulation and policy affect driver behavior or expectations?
- A.2. What documentation do you have on the impact of different outdoor advertising technologies on traffic safety in terms of crash rates, driver distraction, processing time, roadside obstruction, visual clutter, or other factors?
- A.3. Have you found differences in safety impacts for different segments of the population, such as different age groups, income and socioeconomic levels, educational levels, and comfort with and access to technology?
- A.4. How does outdoor advertising compare in terms of safety impacts to other distractions in the driving environment?
- A.5. What methodologies do you have in place to measure and evaluate such differences? What strategies do you have in place to deal with research bias?
- A.6. When measuring safety impacts, do you differentiate between the effects of regulated versus nonregulated signs? Signs advertising the business on the sign property (on-premise signs) versus signs advertising commercial activities not conducted on the sign site (off-premise signs)?
- A.7. What is your experience with electronic signs regarding brightness and timing of advertisement changes, interactive messaging, scent-emitting signs, sequential messaging, and storytelling? What methods and/or technology do you use to detect violations?
- A.8. What documentation do you have on the impact of alternative advertising technologies (such as mobile signs, cell phones, and onboard navigation systems) on traffic safety? Are these restricted and controlled?
- A.9. What advertising provisions are included in traffic control manuals and standards? (The national standard in the United States is the *Manual on Uniform Traffic Control Devices*, available at <http://mutcd.fhwa.dot.gov/>.)
- A.10. What procedures do you use to determine that an outdoor advertising device is a safety hazard?

A.11. What level of participation does the outdoor advertising industry have in public safety campaigns, such as campaigns on speeding, drunk driving, construction zones, and seatbelt use?

B. Community and Citizen Involvement

B.1. Please describe your strategies, requirements, and procedures for involving community, industry, and other stakeholder organizations in policy development.

B.2. How do advocacy groups, private citizens, and the outdoor advertising industry influence policy? How is their input collected and used by your political leadership?

B.3. What type of political advertising is allowed and/or present in outdoor advertising?

B.4. Please describe your process for community and citizen input in the review of an outdoor advertising sign permit application.

B.5. Please describe your strategies to address stakeholders' conflicting positions, including mediation, conflict resolution, memoranda of understanding (MOUs), arbitration, and the courts.

B.6. What national organizations exist to participate in the development of standards and their applicability at the regional, state, and local levels?

C. Program Management

C.1. What is the administrative and organizational framework for outdoor advertising control, and what is the level of authority and responsibility at different levels of government (federal, state/regional, and local)?

C.2. Please describe the management of the enforcement program at your agency (such as staffing levels, outdoor advertising staff's other responsibilities, training, and the importance of outdoor advertising control in your organization). Do you outsource enforcement?

C.3. How is the regulatory process paid for and where do the resources come from? Is it self-sustaining?

C.4. What performance measures do you use to assess the effectiveness of outdoor advertising control and your outdoor advertising control program?

C.5. What documentation do you require for your files?

C.6. Could you provide documentation and sample data from databases and systems used for outdoor advertising sign inventories and other applications, such as sign permitting, tracking of outdoor advertising sign ownership transfers, revenue generation, analysis, and regulation? Please address topics such as data elements, metadata, databases, and systems used and database and system maintenance practices.

D. Environmental Impacts, Economic Benefits, and Revenue Generation

D.1. What types of fees, taxes, and other financial arrangements do you have in place for outdoor advertising both outside and inside the right-of-way?

D.2. How do you determine fees, taxes, and other financial arrangements? For example, do you consider factors such as safety impacts and legal liability, environmental and aesthetic factors, potential revenue, and traffic volumes? Can local jurisdictions assess fees on the same sign? What methodologies and data sources do you use for calculating monetary value? Do you treat sign structures as personal property or real property for tax or acquisition purposes?

D.3. Can you provide data evaluating whether there are economic benefits from installing and operating commercial signs in the right-of-way?

D.4. For signs in the right-of-way, who retains ownership of the structures? How are they maintained and by whom?

D.5. Do you allow private businesses naming rights on your roadways and, if so, what financial arrangements do you have in place?

D.6. What beautification or landscaping practices in front of outdoor advertising signs do you require, allow, or encourage?

- D.7. What criteria and procedures do you use for determining advertising control zoning areas, such as type and number of buildings, property boundaries, and building footprint areas? What is the relationship between these zones and regional and/or local land use zones?
- D.8. What specific requirements are in place for each type of zone, such as the number and spacing of advertising signs, distance from roadway, and sign characteristics?
- D.9. How is tourism affected by outdoor advertising policies and practices? For example, in the United States, Florida allows outdoor advertising signs, but Vermont and Hawaii do not.
- D.10. Can you provide data on operational and environmental impacts and costs of new technology signs, including energy consumption, dark sky initiative impacts, and aesthetics?
- D.11. When granting a sign permit, what environmental analysis, safety analysis, traffic studies, or other documentation do you require before approving the application?
- D.12. Do you use the “precautionary principle” for outdoor advertising? If so, how do you use it and what is your experience with it? (Note: Roughly speaking, the precautionary principle establishes that, in the absence of scientific consensus that harm would not happen, the burden falls on advocates taking an action or setting a policy to prove that there will be no harm to the public or the environment.)
- D.13. Do you use context-sensitive design techniques for outdoor advertising to balance economic, social, and environmental objectives? If so, please give examples of when you have used it and what changes in design resulted.
- D.14. How do you address outdoor advertising issues during the planning, programming, and design phases of transportation projects? Do you pay for signs affected by a transportation project, or do you pay to move the sign?

E. Laws, Regulations, Policies, and Enforcement

- E.1. Please describe the legal framework and provide an overview of applicable laws, regulations, policies, and enforcement procedures for outdoor advertising control, especially as they apply to your treatment of the following:

- a. On-premise and off-premise signs
- b. Size, spacing, and lighting and maintenance of signs in and outside the right-of-way
- c. Different advertisement technologies
- d. Signs that no longer contain an advertisement
- e. Illegal signs
- f. Signs that were legally erected but are no longer allowed (nonconforming)
- g. Signs destroyed by natural events, such as extreme storms, fire, or tornados
- h. Permissibility to upgrade old signs
- i. Other related topics

Note: For reference purposes, descriptions of advertising control terms normally used in the United States are available at www.fhwa.dot.gov/REALESTATE/oacguide.htm.

- E.2. It would expedite our preparation for the scanning study if you could send us links to Web sites containing outdoor advertising laws, regulations, and/or summaries before our meetings so we could tailor our questions to your country.
- E.3. How do you achieve consistency in regulation and policy between different jurisdictions in your country? With autonomous regions?
- E.4. Can you provide examples of past issues as well as emerging and hot legislative and regulatory issues, including issues related to changes in technology or advertising methods? How are you preparing for them in the short term, midterm, and long term?
- E.5. Please describe any existing and proposed arrangements (including MOUs, leases, compacts, and public-private partnerships) between outdoor advertisers and regulatory agencies.
- E.6. Please describe incentives and processes in place for removing outdoor advertising (with or without payment to sign owners) as well as policies that allow the imposition of a moratorium or caps on the number of outdoor advertising signs.
- E.7. What is the involvement of regulators when there are disputes between outdoor advertisers?
- E.8. How do you control advertising that reaches drivers by alternative means and technologies, such as mobile signs, banners, cell phones, and navigation systems?

Appendix D: Outdoor Advertising Control Practices in Japan

The scan team was unable to visit Japan as part of the scanning study because of scheduling conflicts, but decided that Japan's national and local laws governing landscape preservation and outdoor advertising signs should be reviewed for this report. Of particular interest were the 2004 amendments to the Outdoor Advertising Act, which were passed to enable greater citizen participation and a more effective legal framework to promote policies that protect landscapes and increase tourism.

This appendix summarizes information gathered from responses by the Japanese Ministry of Land, Infrastructure, Transport, and Tourism to the amplifying questions (Appendix C) and a 2008 paper published by the United Nations Center for Regional Development in Kobe, Japan (Dr. Shoichi Ando, "New Landscape Laws that will Reshape Japanese Cities").

Overview

In 1949, the Japanese government enacted the Outdoor Advertising Act to maintain scenic beauty and social stability and prevent harm to the public. Under the act, prefectural governors were given the responsibility to develop rules to regulate outdoor advertising. Prefectures, ordinance-designated cities, and major cities were responsible for enforcing outdoor advertising ordinances. Over the years, the act has been amended several times to include provisions allowing the expedited removal of advertising signs, registration of outdoor advertising businesses, and imposition of penalties to billboard companies for failing to register as a business.

In 2003, as part of a Japanese government program to increase tourism, the Ministry of Land, Infrastructure, Transport, and Tourism began implementing 15 strategies, including the following:

- Establish a landscape assessment requirement before and after development of a regional public project.
- Establish landscape guidelines for public projects.
- Promote a green corridor plan to encourage creation of large wooded areas in the suburbs of large cities.

- Conduct an intensive, short-term effort to dispose of illegal outdoor advertising materials, especially in tourist areas, and improve the materials used in outdoor advertising.
- Bury utilities underground within 5 years in selected districts through collaboration with stakeholders.
- Establish a legal framework to comprehensively and systematically protect and improve the landscape.

In 2004, three relevant laws were enacted: the Landscape Law, a revised Outdoor Advertising Act, and the Law on Urban Green Space Protection. In combination with other street improvements and events, these laws and the above strategies are credited with a nine-fold increase in tourism.

The Landscape Law identified four stakeholder responsibilities:

- **Residents**—Play an active role in improving landscapes in cooperation with the federal government and local agencies. Under the new law, a community can propose landscape planning areas to the municipality.
- **Businesses**—Create landscapes in harmony with nature, history, culture of the region, people's lifestyles, and economic activities; cooperate with national government and local agency measures.
- **Local public agencies**—Establish and implement measures to improve landscapes in accordance with human and natural conditions of the area.
- **National government**—Establish and implement comprehensive measures to improve landscapes and deepen a common citizen understanding through information and other activities.

The revised Outdoor Advertising Act provided a comprehensive framework with the power to change the landscape of cities and the relationship between communities and governments. A primary objective was to empower local governments to decide on landscape criteria for their

regions and the level of control needed to establish, preserve, and protect valued local landscapes.

Justification for the law was a study that found a large number of nonconforming advertising signs, which made it important to implement effective removal and regulation practices. At the same time, outdoor advertising control was viewed as strongly related to landscape management. To enforce the development of desirable landscapes based on the features of each area, it was also important to designate permitted areas based on the local characteristics of each region in the country. To address these needs, the amendment required landscape management ordinances by municipalities, expanded coverage of the act for permitted areas nationwide, and implemented registrations of outdoor advertising businesses.

The responsibility for enacting and enforcing outdoor advertising regulations falls to prefectures, ordinance-designated cities, major cities, landscape administrative organizations, and designated municipalities under the Maintenance and Improvement of Traditional Scenery in Certain Districts Act. Almost 500 local public agencies have established landscape ordinances. The Outdoor Advertising Act requires setting standards for outdoor advertising displays (e.g., size, shape, color, and design) and setting restrictions on displays. The law includes provisions for official signs, posters for elections, on-premise signs that conform to separate local standards, temporary advertising for ceremonial occasions or festivals, train cars and vehicles conforming to standards set by rules, and public-purpose displays posted by national or municipal governments.

The installation of advertising signs requires specific consent from the prefecture. As part of the new law, outdoor advertising is not allowed in certain areas, including the following:

- Low-rise exclusively residential districts, medium-to high-rise exclusively residential districts, landscape zones, scenic districts, and cultural property preservation areas
- Designated important cultural properties, including buildings under the provision of the Act on Protection of Cultural Properties
- Areas that include conservation forests (scenic forests) to preserve sites of scenic beauty and historical interest
- Areas of good landscapes and scenic beauty, designated by the prefectures and reachable by road and rail

- Parks, green spaces, ancient tombs, and cemeteries
- Other designated areas specified by the prefectures

Outdoor advertising ordinances enable city mayors to designate special areas as advertising utilization areas (AUAs) if advertising improves attraction to those areas or plays a role in developing or maintaining a vibrant cityscape. Advertising within AUAs is subject to prescribed standards for size, shape, color, design, and placement of displays. Often area residents outline voluntary rules and the governor certifies them. An area is eligible for the AUA designation if it faces a road that represents the city or connects to a square in front of a train station, or if it has many urban facilities. Even if none of these conditions are met, a mayor can confirm the need to designate an area as an AUA.

The 2004 amendment expanded the authority of local governments to remove nonconforming advertising by eliminating the requirement that signs could only be removed after a considerable period of time.

Outdoor advertising businesses must have a valid registration to operate. Registration is valid for 5 years. Registration and permits for advertising businesses can be canceled if a company uses illegal materials. Likewise, registrations are rejected if they include false statements or if any of the following applies:

- Any person whose registration has been revoked within the past 2 years
- Any person whose business is being suspended
- Any person who has violated outdoor advertising ordinances and has been fined or sentenced (from the completion of the payment or the term of sentence) within the past 2 years
- Any regional branch that does not have an executive officer to operate the business

The governor of the province (prefecture) is responsible for enforcing the laws and is expected to order necessary actions, such as removal of a sign by the owner of the property where the sign is displayed or the party responsible for the nonconforming advertising. The governor or his delegate will remove signs such as posters, freestanding signs, and A-frame signs not in compliance with the standards. Local ordinances must include fines and penalty fees for noncompliance.

Outdoor advertising companies that illegally erect signs are notified, fined, and given orders for removal. Unlike in the past when noncompliance with orders had no impact on the business, the business registration can now be canceled and the business suspended or canceled. The prefecture can also remove the sign.

Project to Promote Outdoor Advertising Management

After the Outdoor Advertising Act was passed, it was realized that the act missed several important elements, including a notification system, mechanisms to educate the community and stakeholders about the value of landscape protection, and financial resources for local governments to implement the new policies.

In 2009, the Japanese government started a pilot project on urban environment improvement support to emphasize the importance of landscapes and the need to develop and protect landscapes, as well as to give binding power to local governments to draft and enforce laws protecting landscapes.

Part of the project involves supporting outdoor advertising improvement activities. The project involves local governments, central urban area vitalizing councils, landscape councils, and private businesses. Support includes formulating outdoor advertising guidelines, developing urban environment maintenance and improvement plans, and

conducting pilot programs and demonstration projects to remove or improve the quality of outdoor advertising.

As figure 19 shows, Japan has formalized a process involving key stakeholders to (1) formulate design guidelines, (2) conduct preassessments on designs and shapes, and (3) provide advice to improve the quality of outdoor advertising. This process ensures consolidated installation of signs, use of better sign materials, and harmonized (context-sensitive) development.

Fees and Revenue

Road occupancy fees apply to advertising signs allowed in the right-of-way of a road managed by the national government. Cabinet Order for Enforcement of the Road Act—Article 19 states that the road administrator may allow a sign in the right-of-way only if it cannot be placed anywhere else and only if the sign does not significantly obstruct road traffic. Table 11 shows fees for advertising signs in different areas of Japan.

Osaka became the first prefecture in Japan to offer naming-right contracts. The prefecture sold the first right for US\$5,044 a year (\$1 = 90 yen). The original plan was to expand the program to 50 bridges to generate revenue to improve public safety and security. The prefecture also considered selling naming rights on public buildings such as gyms, but a market survey showed limited prospects. A new car dealership bid for the naming rights of a pedestrian

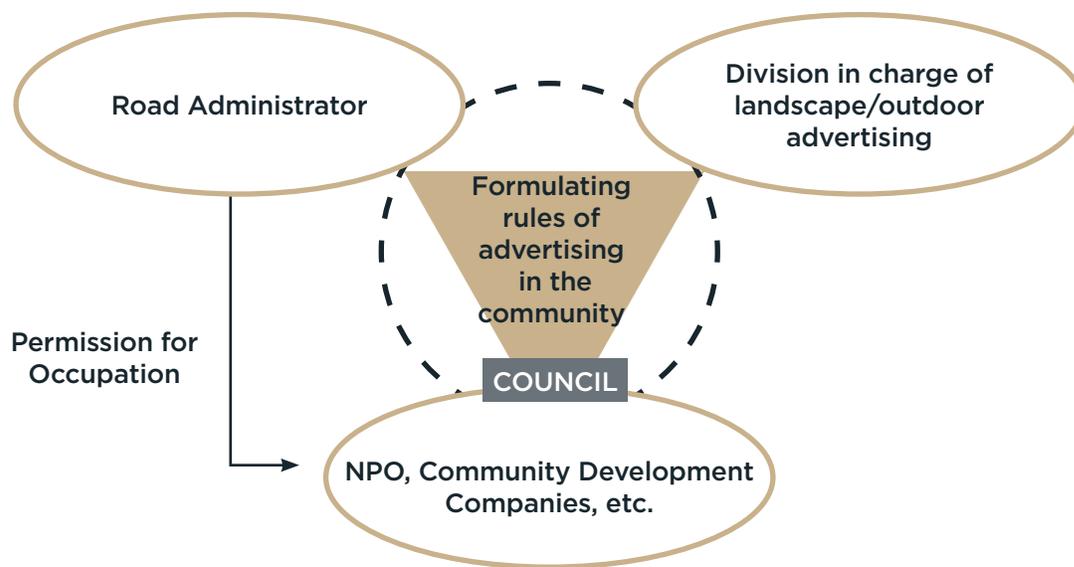


Figure 19. Public involvement process in Japan. (Courtesy of Ministry of Land, Infrastructure, Transport, and Tourism)

bridge in Hirakata City, Osaka. The bid amount was \$3,333 a year for 5 years. The car dealership was the only bidder, which eventually resulted in a contract.

Osaka tentatively has approved advertising in road areas if it is for local revitalization events. Advertising intended to revitalize the local area may be permitted after consideration by related governmental agencies, such as the road administrator. Private company logos may be printed on those advertisements, but some rules apply, such as size and harmonization with the surrounding environment. Advertising can be displayed 2 months before the event.

Osaka began a demonstration program to evaluate the deregulation of advertising in road areas in April 2010. Part of the demonstration includes advertising on light poles and arcades. Almost 300 banners have been displayed as a pilot project on Midosuji Street. Arterial roads and roads that offer major exposure to the public, such as Midosuji Street, are obvious candidates for advertising (although all roads in the city can be designated as advertising locations).

Table 11. Advertising sign fees in Japan.

ADVERTISING SIGN	FEE (US\$1 = 90 YEN)	AREA A	AREA B	AREA C
Temporary	Per 1 square meter of display per month	\$16	\$2	\$1
Other	Per 1 square meter of display for one year	\$156	\$22	\$11

NOTE:

Area A: Tokyo, Sapporo, Sendai, Saitama, Chiba, Funabashi, Hachioji, Yokohama, Kawasaki, Sagami-hara, Niigata, Shizuoka, Hamamatsu, Nagoya, Kyoto, Osaka, Sakai, Higashi-Osaka, Kobe, Himeji, Okayama, Hiroshima, Matsuyama, Kitakyushu, Fukuoka, Kumamoto, and Kagoshima

Area B: Cities except Area A

Area C: Municipalities

Appendix E: Studies on the Potential Impact of Outdoor Advertising on Traffic Safety

Most of the countries the scan team visited plan to assess or are conducting research to measure the potential impact of outdoor advertising on traffic safety. Some countries also highlighted studies recently completed or being conducted in the United States in this area. The purpose of this report is not to provide a comprehensive summary of research completed or in progress. As an illustration, this appendix lists some of the recent or current work mentioned during the scanning study.

- Beijer, D. D., Smiley, A., and Eizenman, M. (2004). "Observed Driver Glance Behavior at Roadside Advertising." *Transportation Research Record*, No. 1899, 96–103.
- Cairney, P., and Gunatillake, T. (2000). *Roadside Advertising Signs—A Review of the Literature and Recommendations for Policy*. ARRB Transport Research, Royal Automobile Club of Victoria.
- Chattington, M., Reed, N., Basacik, D., Flint, A., and Parkes, A. (2009). *Investigating Driver Distraction: The Effects of Video and Static Advertising. A Driving Simulator Study*. Report No. PO 3100173332, Transport of London, London, England.
- Crundall, D., Van Loon, E., and Underwood, G. (2006). "Attraction and Distraction of Attention With Roadside Advertisements." *Accident Analysis and Prevention*, 38 (4), 671–677.
- Dingus, T. A., Klauer, S. G., Neale, V. L., Petersen, A., Lee, S. E., Sudweeks, J., Perez, M. A., Hankey, J., Ramsey, D., Gupta, S., Bucher, C., Doerzaph, Z. R., Jermeland, J., and Knipling, R.R. (2006). *The 100-Car Naturalistic Driving Study: Phase II—Results of the 100-Car Field Experiment*. Report No. DOT HS 810 593. National Highway Traffic Safety Administration, Washington, DC.
- Edquist, J. (2009). *The Effects of Visual Clutter on Driving Performance*. Monash University Ph.D. Dissertation.
- Farbray, J., Wochinger, K., Shafer, T., Owens, N., and Nedzesky, A. (2001). *Research Review of Potential Safety Effects of Electronic Billboards on Driver Attention and Distraction (Final Report)*. Federal Highway Administration, Washington, DC.
- Johnson, C. (2009). *Outdoor Advertising Sign Regulation Study*. Report No. NCHRP 20-07 (Task 247), National Highway Cooperative Research Program, Transportation Research Board, Washington, DC.
- Klauer, S. G., Dingus, T. A., Neale, V. L., Sudweeks, J. D., and Ramsey, D. J. (2006). *The Impact of Driver Inattention on Near-Crash/Crash Risk: An Analysis Using the 100-Car Naturalistic Driving Study Data*. Report DOT HS 810 594, National Highway Traffic Safety Administration, Washington, DC.
- Lee, S. E., Olsen, E. C. B., and DeHart, M. C. (2004). *Driving Performance in the Presence and Absence of Billboards*. Foundation for Outdoor Advertising Research and Education.
- Molino, J. A., Wachtel, J., Farbray, J. E., Hermosillo, M. B., and Granda, T. M. (2009). *The Effects of Commercial Electronic Variable Message Signs (CEVMS) on Driver Attention and Distraction: An Update*. Report No. FHWA-HRT-09-018, Federal Highway Administration, Washington, DC.
- Perez, W. A., Bertola, M. A., Kennedy, J. F., and Molino, J. A. (2011). *Driver Visual Behavior in the Presence of Commercial Electronic Variable Message Signs (CEVMS)*. Federal Highway Administration, Washington, DC.
- Tantala, A. M., and Tantala, M. W. (2007). *A Study of the Relationship Between Digital Billboards and Traffic Safety in Cuyahoga County, Ohio*. Technical Report, Foundation for Outdoor Advertising Research and Education, Washington, DC.
- *The Impact of Roadside Advertising on Driver Distraction: Final Report*. WSP Development and Transportation, Highways Agency, London, England, June 2008.

- Wachtel, J. (2009). *Safety Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs*. Report No. NCHRP 20-07 (Task 256), National Highway Cooperative Research Program, Transportation Research Board, Washington, DC.
- Wachtel, J., and Netherton, R. (1980). *Safety and Environmental Design Considerations in the Use of Commercial Electronic Variable-Message Signage*. Report No. FHWA-RD-80-051, Federal Highway Administration, Washington, DC.
- Wallace, B. E. (2003). *External-to-Vehicle Driver Distraction*. Transport Research Planning Group, Scottish Executive Social Research.
- Young, K. L., Regan, M. A., and Hammer, M. (2003). *Driver Distraction: A Review of The Literature (No. 206)*. Melbourne: Monash University Accident Research Centre.
- Young, M. S., Mahfoud, J. M., Stanton, N. A., Salmon, P. M., Jenkins, D. P., and Walker, G. H. "Conflicts of Interest: The Implications of Roadside Advertising for Driver Attention." *Transportation Research Part F*, 12(2009), 381-388.

**OFFICE OF INTERNATIONAL PROGRAMS
FHWA/US DOT (HPIP)**

1200 New Jersey Avenue, SE
Washington, DC 20590
Tel: (202) 366-9636 ■ Fax: (202) 366-9626
international@fhwa.dot.gov
www.international.fhwa.dot.gov

