SOLUTIONS

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RESEARCH PROGRAMS
SPRING 2008

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PROJECT HIGHLIGHTS

GROWING NEIGHBORHOODS IN GROWING CORRIDORS: *LAND USE PLANNING FOR HIGHWAY NOISE*

http://www.mdt.mt.gov/research/docs/research_proj/noise_plan/final_report.pdf

MDT recently published *Growing Neighborhoods in Growing Corridors: Land Use Planning for Highway Noise* as a toolkit for local governments and others who want to consider highway noise as a factor in land use planning.

Montana's traffic noise problem is growing – largely because development is overtaking the open and formerly agricultural lands that are next to Montana's highways – but also because traffic volumes are increasing. Residential dwellings and other noise-sensitive land uses are in direct conflict with high-speed, high-volume roadways; yet land use decisions are matters of local jurisdiction. Although the state considers noise in all its highway expansion projects, noise problems that arise from development and land use changes near highways are a local responsibility.

The toolkit covers:

- Understanding and measurement of traffic noise
- Recommended maximum noise levels
- Land use planning alternatives and approaches to noise planning
- Built and natural noise barriers
- Model policy and program language
- On-line resources

The document provides recommended noise levels for different land use activities and strategies for including those noise levels in planning regulations. The City of Kalispell has implemented noise planning requirements for new developments. This is especially valuable for the rapid residential growth along the Kalispell Bypass.

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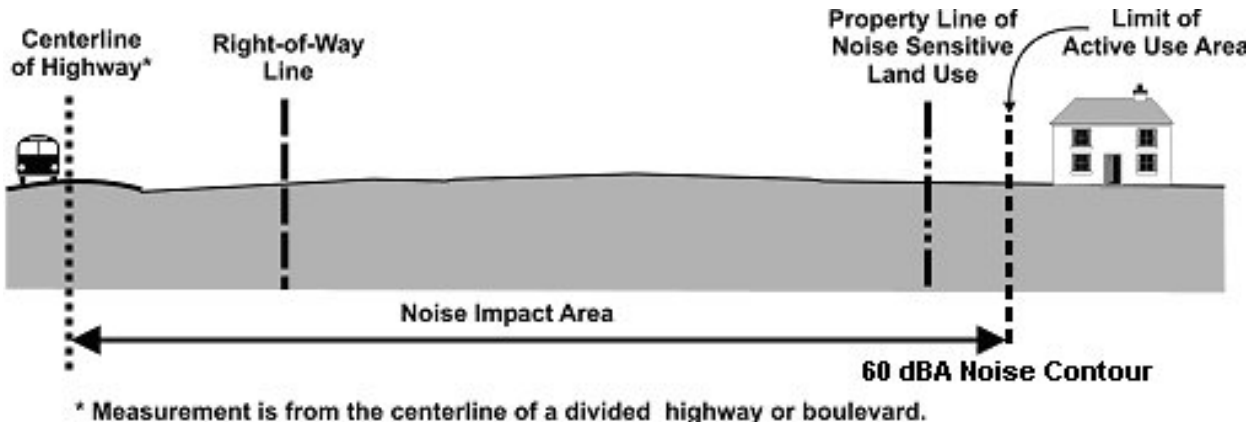
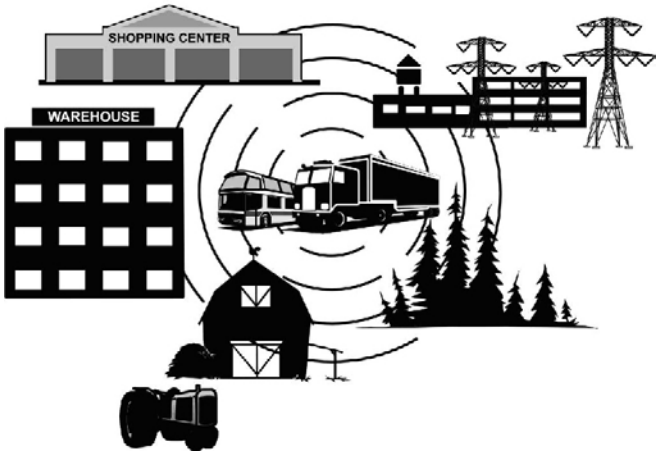


Example of the recommended 60 decibel contour noise sensitive land uses, such as residential.

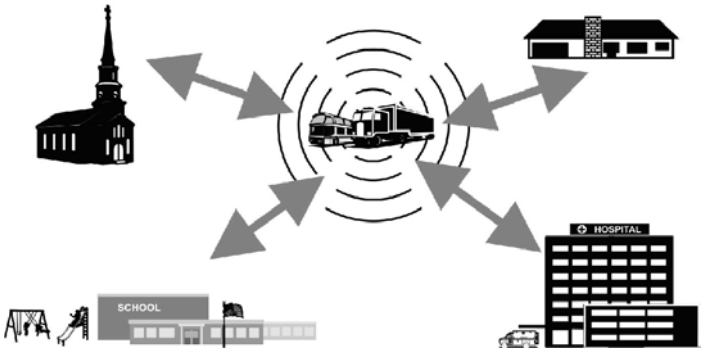
Kalispell requires developers to adhere to a maximum noise level of 60 decibels at their property lines adjacent to the Bypass. In order to attain those noise levels, developers may need to incorporate noise abatement into their developments.

Growing Neighborhoods in Growing Corridors can help Montana's local governments and developers tackle highway traffic noise before it becomes a more significant threat to a community's quality of life. Effective land use planning strategies are available and can be far less costly than after-the-fact mitigation.

For more information, contact Cora Helm at 406.444.7659 or cohelm@mt.gov.



Noise-compatible land uses



Noise-sensitive land uses

LIBRARY CORNER

GOVERNMENT INFORMATION LOCATOR SERVICE (GILS)

The United States Government Printing Office (GPO) is the largest publisher in the world. No wonder, then, that new tools have been created to find that exact piece of information needed.

Government Information Locator Service (GILS) is an effort to identify, locate, and describe Federal information resources, including electronic information. GILS records identify public information resources within the Federal Government, describe the information available in these resources, and assist in obtaining the information. GILS is a decentralized collection of agency-based information locators using network technology to direct users to relevant information resources within the Federal Government. Because this collection is decentralized, the GPO Access site is only one of many Government Information Locator Service sites. Thirty-two agencies have mounted their GILS records on the GPO Access server and are listed individually in the scroll box located on the GILS search page. The GILS records of the other departments and agencies are spread across many sites.

GILS also links to the Browse Topics website, a pathway to federal information links that is grouped by categories like Science and Technology, Environment, Education, and others. Finally, GILS lists federal publications for sale and references the USA.gov site of indexed US Departments and Agencies.

For more information, please contact Lisa Autio, 406.444.6125, or lautio@mt.gov.

KNOWLEDGE MANAGEMENT AND INSTITUTIONAL MEMORY

Knowledge Management (KM) has been defined as an approach to improving outcomes by implementing activities that create or share knowledge within a group. KM evaluates how people in an organization apply skills, experience, reason, intuition, and decision-making to raw information. Institutional memory is a body of prior knowledge that is shared by a group and is essential to its continuous and effective functioning.

NCHRP Synthesis 365, Preserving and Using Institutional Memory through Knowledge Management Practices discusses these concepts. It describes the emergence of KM in the 1990's as a business process and a way of preserving and facilitating current practices among a community of like individuals, and applying prior collective knowledge to current work.

The goals of knowledge management are not only to preserve historical information, but to facilitate the sharing of current knowledge and enable application of prior knowledge to current work. There are many advantages to retaining this institutional memory. Like other assets, the knowledge retained from human resources can save time, funds, and resources for the organization. KM practices seek to put in place the cultural, human, environmental, and technical ecology needed for preserving collective knowledge.

Building on past understandings, an agency can use current information more effectively. Historical perspectives and lessons learned can inform decision-making, and can help employees at all levels deliver programs more efficiently.

DID YOU KNOW?

AASHTO Technology Implementation Group

The American Association of State and Highway Transportation Officials Technology Implementation Group (TIG) was established in 2000 after the conclusion of the first Strategic Highway Research Program, and is one of AASHTO's Technical Services. The vision of TIG is to create a culture in which new technologies are quickly implemented to improve the nation's highways. Click on the links to read more about 2007 Focus Technologies:

Guiding Your Customers through the Storm describes software that can manage a winter weather response in a single tool and can be updated in real time.

Keep America Moving during Bridge Construction describes a multi-axle platform that carries heavy structures from off site.

Maximizing Construction Efficiency While Minimizing Congestion demonstrates how Construction Analysis Software Tools serve as an important weapon in today's battles against lower budgets, more congestion, and aging infrastructure.

Advancing Safer, Faster, More Accurate and Less Expensive Roadway Construction describes Automated Machine Guidance software that works with construction equipment to direct machinery at a high level of precision.

Innovative Lines of Defense describes cable median barriers as one of the most effective safety measures state transportation agencies can deploy.

Low Profile Barrier Systems are portable roadway barriers that provide operators with a greater field of vision and can be easily moved to define the work zone perimeter.

Embedded Data Collector is a solution to gathering bridge structural data. As states across the nation inspect their bridge inventories, highly variable data obtained from current inspection programs often prove inadequate for making comprehensive, long-term bridge management decisions.

Slope Stabilization using Recycled Plastic Reinforcement can help solve landslide and slope failures, which cost millions of dollars each year.

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FHWA Priority Market Ready Technology and Innovations

Each year, the Federal Highway Administration (FHWA) spends much time, money, and energy toward developing and deploying innovations that are designed to meet critical highway needs. These efforts reach much farther when the benefits of promising technologies are marketed effectively and understood by users. To maximize their effectiveness, FHWA reviewed how technologies were marketed and has identified 24 priority, market-ready technologies and innovations that the Agency has designated as "push" technologies.

In 2003, FHWA leadership accepted the challenge to "raise the bar" on Research and Technology and adopted 7 guiding principles and 26 Agency commitments in its *Corporate Master Plan (CMP) for Research and Deployment of Technology & Innovation* (FHWA-RD-03-077), a strategic framework developed with input from stakeholders. In this light, the Research and Technology Leadership Team endorses four new priority, market-ready technologies and innovations this year:

Adaptive Control Software-Lite is a cost-effective technology that improves efficiency and prolongs the effectiveness of traffic signal timing by updating critical timing parameters in response to current traffic conditions.

Bridge and Tunnel Security assesses resources to help owners make their critical bridges and tunnels more secure.

USLIMITS is a web-based expert advisor system designed to assist practitioners in determining appropriate speed limits in speed zones.

Construction Analysis for Pavement Rehabilitation Strategies (CA4PRS) is software that identifies optimal rehabilitation strategies that seek to balance the construction schedule with inconvenience to drivers and transportation agency costs.

CALENDAR OF EVENTS

June

AASHTO Environmental Research Ideas Due (6/8)
MDT RRC Meeting (6/24)
State CEO Ballot on NCHRP Program Due
TCRP Problem Statements (6/15)

July

AASHTO Research Advisory Committee National Meeting (7/14-17)
LTAP National Meeting (7/14-17)
MDT RRC Meeting (7/29)
NCHRP Problem Statements Solicited

August

MDT RRC Meeting (8/26)
TRB 2009 Annual Meeting Papers Due (8/1)

September

FHWA SPR Annual Work Plan Due
MDT RRC Meeting (9/30)

October

AASHTO Annual Meeting (10/16-20)
AASHTO SCOR Meeting
MDT RRC Meeting (10/28)
TRB Annual Meeting Preliminary Announcement Distributed

November

NCHRP Problem Submitters' Responses to Evaluations Due

NEW RESEARCH REPORTS

Growing Neighborhoods in Growing Corridors: Land Use Planning for Highway Noise

A listing of all past and current projects can be found at www.mdt.mt.gov/research/projects/sub_listing.shtml.

NEW RESEARCH PROJECTS

Evaluation of Test Methods for Permeability (Transport) and Development of Performance Guidelines for Durability

Western Maintenance Partnership

Western Pavement Preservation Partnership

A listing of all past and current projects can be found at www.mdt.mt.gov/research/projects/sub_listing.shtml.

REMINDER

Information on research services and products, such as research and experimental project processes and reports, and technology transfer services, including our library catalog can be found on the Research web site at www.mdt.mt.gov/research.

New Books in the Research Library – Catalog (Select Search the Catalog, then New Books in upper right corner)

New Books in the Research Library – RSS Feed

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