Traffic Monitoring Practices Guide
for Canadian Provinces and Municipalities

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with

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PURPOSE OF THE GUIDE

• Provide the first national-level guidance on the planning, design, and implementation of traffic monitoring programs for Canadian provinces and municipalities.

OBJECTIVES

• Promote uniformity in traffic monitoring approaches and techniques.
• Improve the quality of traffic data in Canada.
NEED FOR THE GUIDE

• Currently no Canadian guidance available
  – Unique geography
  – Unique vehicles
  – Different administrative arrangement

• New data customers with higher expectations
  – Non-motorized traffic monitoring
  – New technologies available
  – Desire for more detailed, timelier data
SCOPE OF THE GUIDE

• **Topics**: All traffic monitoring program functions
• **Focus**: Traffic *monitoring* data, not traffic operations data or travel time data
• **Modes**: Motorized and non-motorized traffic
• **Geography**: Rural and urban jurisdictions in Canada
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Canadian perspective or practice

Urban perspective
CONTENTS

• Ch 1 – Introduction
• Ch 2 – Fundamentals of Traffic Monitoring
• Ch 3 – Program Planning & Design
• Ch 4 – Data Collection & Acquisition
• Ch 5 – Data Validation & Summarization
• Ch 6 – Data Reporting & Dissemination
• Ch 7 – Non-Motorized Traffic Monitoring
FUNDAMENTALS OF TRAFFIC MONITORING

• Functional program components.
• Unique issues for monitoring non-motorized traffic.
• Quality assurance.
FUNDAMENTALS OF TRAFFIC MONITORING

- Functional program components.
FUNDAMENTALS OF TRAFFIC MONITORING

- Quality assurance.

Guide Contents

- Guiding principles
- Data quality measures
- Staff training
- Equipment selection
- Ongoing operations
- Data validation
- Program evaluation

Quality assurance
Guide Contents

PROGRAM PLANNING & DESIGN
Guide focuses on four traffic data types.

- **Volume**
- **Classification**
- **Weight**
- **Spot Speed**
• Guide focuses on four traffic data types.
• Data customers and needs.
• Traffic Monitoring Plan.
• System-wide traffic monitoring considerations.
DATA COLLECTION & ACQUISITION
DATA COLLECTION & ACQUISITION

- Traffic monitoring equipment and technologies.
DATA COLLECTION & ACQUISITION

- Traffic monitoring equipment and technologies.
- Selecting traffic monitoring technologies.
- Quality assurance procedures.
- Integrating traffic operations and travel time monitoring data sources.
DATA VALIDATION & SUMMARIZATION
DATA VALIDATION & SUMMARIZATION

• Validation criteria and procedures.
DATA VALIDATION & SUMMARIZATION

• Methods for calculating AADT.

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<thead>
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<th>Description</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Monthly Average Hour-of-Week Traffic</td>
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<tr>
<td>Annual Average Daily Traffic</td>
<td>1 AADT</td>
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DATA VALIDATION & SUMMARIZATION

• Development of adjustment factors.
• Estimate average traffic statistics from short-duration count data.
• System-wide traffic statistics, VKT.
• Weight and spot speed statistics.
DATA REPORTING & DISSEMINATION
DATA REPORTING & DISSEMINATION

- Common traffic data products.
- Non-traditional traffic data dissemination.
NON-MOTORIZED TRAFFIC MONITORING
NON-MOTORIZED TRAFFIC MONITORING

- Pedestrians and cyclists addressed separately throughout Guide.
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Discussion of expected traffic patterns and system-wide monitoring considerations.

NMT specific traffic monitoring technology.

Average traffic statistic calculations.

Presents multiple short-duration count adjustment methods.
Summary

Provides state-of-the-practice guidance for traffic monitoring for Canadian provinces and municipalities.

- *Guide* applies a functional perspective.
- Developed from extensive research and knowledge about current state-of-the-practice.
- Key contributions:
  - Implements emerging practice (e.g., AADT calculation methods).
  - Addresses uniquely Canadian issues and opportunities.
  - Integrates rural and urban considerations.
  - Integrates guidance for motorized and non-motorized traffic.
Thank you.