

TABLE OF CONTENTS

PAGE

| | | |
|------------|--|------------|
| 1.0 | <i>Purpose of the Transportation Plan</i> | 1-1 |
| 1.1 | TRANSPORTATION ISSUES | 1-1 |
| 1.2 | TRANSPORTATION GOALS AND OBJECTIVES | 1-2 |
| 1.3 | RELATIONSHIP TO OTHER PLANNING DOCUMENTS | 1-5 |
| | | |
| 2.0 | <i>Transportation System Principles and Standards</i> | 2-1 |
| 2.1 | TRANSPORTATION MODES AND TRIP TYPES | 2-1 |
| 2.2 | ROADWAY FUNCTIONAL CLASSIFICATION AND JURISDICTION | 2-3 |
| 2.2.1 | Principal Arterials | 2-3 |
| 2.2.2 | Minor Arterials | 2-4 |
| 2.2.3 | Major Collectors | 2-4 |
| 2.2.4 | Minor Collectors | 2-4 |
| 2.2.5 | Local Streets | 2-5 |
| 2.2.6 | Roadway Jurisdiction..... | 2-5 |
| 2.3 | NON-MOTORIZED TRANSPORTATION SYSTEMS | 2-6 |
| 2.3.1 | Minor Arterial Roadway Corridors..... | 2-6 |
| 2.3.2 | Major Collector Roadway Corridors | 2-7 |
| 2.3.3 | Minor Collector Roadway Corridor..... | 2-7 |
| 2.3.4 | Guidelines for Determining Roadway Crossing Treatments | 2-8 |
| 2.3.5 | Promoting an Integrated Motorized & Non-Motorized Transportation System..... | 2-8 |
| 2.4 | CORRIDOR DESIGN GUIDELINES..... | 2-10 |
| 2.4.1 | Design Vehicle and Design Speed..... | 2-10 |
| 2.4.2 | Street Types and Typical Sections..... | 2-13 |
| 2.4.3 | Corridor Design Features..... | 2-23 |
| 2.4.4 | Intersection Control Types..... | 2-27 |
| 2.4.5 | Roadway Capacity | 2-32 |
| 2.4.6 | Access Management | 2-35 |
| 2.5 | TRANSIT..... | 2-38 |
| 2.6 | AVIATION..... | 2-39 |
| 2.7 | RAIL | 2-39 |
| 2.8 | PAVEMENT MANAGEMENT..... | 2-40 |

| | | |
|------------|---|------------|
| 3.0 | <i>Existing Transportation System Evaluation</i> | 3-1 |
| 3.1 | TRANSPORTATION SYSTEM CONNECTIVITY AND SERVICE ROUTES | 3-3 |
| 3.1.1 | Roadway Functional Classification | 3-3 |
| 3.1.2 | Trail and Bicycle Routes..... | 3-4 |
| 3.1.3 | Pedestrian Facilities | 3-4 |
| 3.1.4 | Transit Services..... | 3-5 |
| 3.1.5 | Truck Routes..... | 3-5 |
| 3.1.6 | Emergency and Civil Service Routes | 3-6 |
| 3.1.7 | Rail..... | 3-6 |
| 3.1.8 | Aviation | 3-6 |
| 3.2 | EXISTING TRAFFIC VOLUMES AND CAPACITY..... | 3-7 |
| 3.3 | SAFETY ANALYSIS..... | 3-8 |
| 3.4 | PAVEMENT CONDITIONS | 3-9 |
| 3.5 | REGIONAL TRANSPORTATION INITIATIVES | 3-10 |
| 3.5.1 | TH 19 Access Management and Safety Plan..... | 3-10 |
| 3.5.2 | TH 19 Scoping Study..... | 3-10 |
| 3.5.3 | Northwest Northfield Highway Corridor Study | 3-10 |
| 3.5.4 | CSAH 1 Corridor Preservation Study..... | 3-11 |
| 3.5.5 | Northfield Industrial Corporation Study | 3-11 |
| 3.5.6 | Rice County Transportation Plan..... | 3-13 |
| 3.5.7 | Dakota County 2025 Transportation Plan..... | 3-14 |
| 3.5.8 | Rice County Transit Study..... | 3-14 |
| 3.5.9 | Dakota County Transit Plan..... | 3-15 |
| 3.5.10 | Mill Towns Trail..... | 3-16 |
| | | |
| 4.0 | <i>Future Transportation System Vision and Needs</i> | 4-1 |
| 4.1 | FUTURE CORRIDOR CONNECTIONS AND SERVICE ROUTES | 4-1 |
| 4.1.1 | Roadway Functional Classification | 4-1 |
| 4.1.2 | On-Road Bikeways | 4-6 |
| 4.1.3 | Off-Street Trails and Sidewalks..... | 4-7 |
| 4.1.4 | Transit Services..... | 4-8 |

| | | |
|------------|---|------------|
| 4.2 | FORECASTED TRAFFIC VOLUMES | 4-10 |
| 4.2.1 | Traffic Modeling Approach | 4-10 |
| 4.2.2 | Forecasted Traffic Volume Results | 4-18 |
| 4.2.3 | Roadway Safety & Capacity Needs | 4-19 |
| 4.3 | PAVEMENT MANAGEMENT NEEDS | 4-24 |
| 4.4 | ROADWAY JURISDICTION | 4-25 |
| 5.0 | <i>Implementation Priorities and Approach</i> | 5-1 |
| 5.1 | CONNECTIVITY, CAPACITY, AND SAFETY PRIORITIES | 5-4 |
| 5.1.1 | North Avenue Extension Feasibility Study (Zanmiller Drive to TH 3)..... | 5-4 |
| 5.1.2 | Jefferson Parkway Feasibility Study (TH 3 to TH 246) | 5-5 |
| 5.1.3 | Hall Avenue/Spring Creek Road Improvement Feasibility Study..... | 5-6 |
| 5.1.4 | Future Intersection Control Needs | 5-6 |
| 5.1.5 | Pavement Preservation Projects in City’s Capital Improvement Plan..... | 5-8 |
| 5.2 | MODAL INTEGRATION PRIORITIES..... | 5-9 |
| 5.2.1 | Downtown Modal Integration Subarea Study..... | 5-9 |
| 5.2.2 | TH 19/TH 3 Modal Integration Subarea Study..... | 5-11 |
| 5.2.3 | Bikeway Development..... | 5-11 |
| 5.3 | DEVELOPMENT DRIVEN PRIORITIES | 5-12 |
| 5.3.1 | Strategies for Reviewing Development & Redevelopment Proposals..... | 5-13 |
| 5.3.2 | Strategies for Encouraging Transit Orientated Development | 5-14 |
| 5.4 | REGIONAL TRANSPORTATION INITIATIVES | 5-15 |
| 5.4.1 | TH 19 Scoping Study & TH 19 Improvements | 5-15 |
| 5.4.2 | TH 246 Jurisdictional Transfer | 5-15 |
| 5.4.3 | Safe Routes to School Improvements Feasibility Study | 5-16 |
| 5.4.4 | Northwest Northfield Highway Corridor between TH 19 and CSAH 23 | 5-16 |
| 5.4.5 | Local and Commuter Transit Needs Study | 5-16 |
| 5.4.6 | CSAH 1/New Cannon River Bridge Environmental Review | 5-18 |
| 5.4.7 | Mill Towns Trail..... | 5-18 |
| 5.5 | EDUCATION AND ENFORCEMENT..... | 5-19 |
| 5.6 | POTENTIAL FUNDING SOURCES | 5-20 |

TABLES

| | | |
|---------|---|------|
| 2.1-1 | Transportation Modes and Trip Types | 2-2 |
| 2.4-1 | Design Vehicle and Design Speed Guidelines | 2-13 |
| 2.4-2 | Street Types by Roadway Functional Classification | 2-14 |
| 2.4.4-1 | Levels of Intersection Control Options | 2-27 |
| 2.4.4-2 | Traffic Circle Diameter Versus Corner Radius | 2-28 |
| 2.4.4-3 | Intersection Control Types by Roadway Functional Classification | 2-31 |
| 2.4.5-1 | Roadway Types and Capacity | 2-33 |
| 2.4.5-2 | Highway Level of Service | 2-34 |
| 2.4.5-3 | Urban Street Level of Service | 2-34 |
| 2.4.6-1 | Roadway Access Standards | 2-36 |
| 2.4.6-2 | Access Spacing Guidelines for Collector Roadways in Northfield | 2-37 |
| 3.3-1 | Crash Severity | 3-8 |
| 4.2.1-1 | Comparison of Non-Motorized Transportation Modes by City | 4-15 |
| 5.0-1 | 2008 Planning Level Cost Estimates | 5-1 |

FIGURES

| | |
|-------|---|
| 2.2-1 | Existing Roadway Functional Classification |
| 3.1-1 | Existing Transportation Issues Map |
| 3.2-1 | Existing Volume and Congestion |
| 3.3-1 | 1997-2006 Crashes Involving Pedestrians or Bicycles |
| 3.3-2 | 1997-2006 Crash Frequency |
| 4.1-1 | Future Functional Classification |
| 4.1-2 | Existing and Future Transit Services |
| 4.2-1 | Transportation Analysis Zones |
| 4.2-2 | 2030 Volume and Congestion – No Bridge |
| 4.2-3 | 2030 Volume and Congestion – Jefferson Parkway Bridge |
| 4.2-4 | 2030 Volume and Congestion – CSAH 1 Bridge |
| 4.3-1 | Intersection Control Evaluation Areas |

APPENDICES

| | |
|---|--|
| A | Crosswalk Installation Policies & Guidelines |
| B | Use & Application Guidelines for the Residential All-Way Stop Control Justification Worksheet |
| C | Stakeholder & Open House Meeting Summaries |
| D | Existing & Forecasted Traffic Volumes & Capacity Analysis (No Bridge Option, Jefferson Parkway Bridge Option & CSAH 1 Bridge Option) |
| E | Transportation Analysis Zone Forecasts |