



Summary of Draft Regional Transitway Guidelines

Minneapolis Transportation and
Public Works Committee

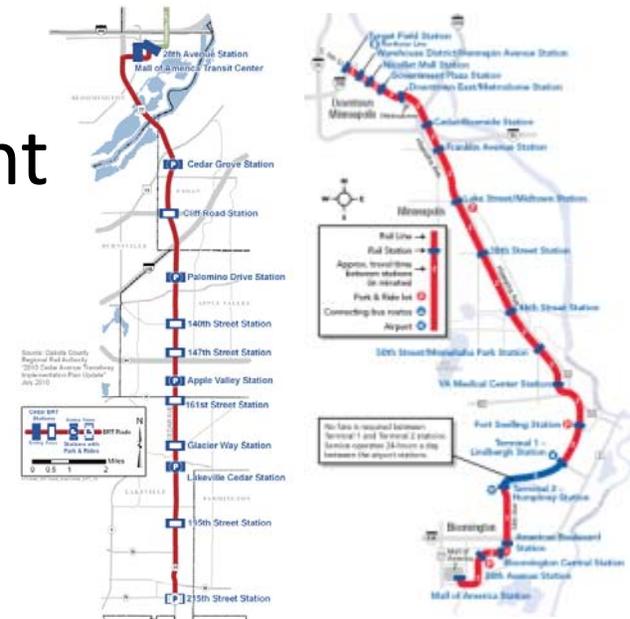
November 15, 2011

Cole Hiniker, Mary Karlsson



Need for Regional Transitway Guidelines

- Growing transitway system
- Multiple agencies involved in implementation
- Taking first steps to implement bus rapid transit (BRT)
- Better align transit, land use planning, and sustainable communities





Technical Guidelines Based in Best Practice

Light Rail



Hiawatha Line

Commuter Rail



Northstar Line

Arterial BRT



Kansas City MAX BRT Station

Tool for:
Planners
Engineers
Project managers
Consultants
Policy-makers

Ensure delivery of transitway system:
Equitable, efficient, effective, and customer-friendly
Integrated and consistent throughout the region

Highway BRT



Apple Valley Transit Station



Outreach Schedule

| Date | Group |
|---------------------|---|
| August 17 | Transportation Advisory Board (TAB) Policy Committee |
| September 7 | Transportation Accessibility Advisory Committee (TAAC) |
| September 12 | Counties Transit Improvement Board (CTIB) Senior Staff |
| <i>September 14</i> | <i>Metropolitan Council Adopted Draft Guidelines for Public Comment</i> |
| September 30 | Technical Workshop & Open House |
| October 5 | TAB's Technical Advisory Committee (TAC) |
| October & November | Policy-Maker & Stakeholder Outreach Meetings |
| November 18 | Comments Due on Draft Guidelines |



Guidelines Organization

1. Introduction
2. Service Operations
3. Station Spacing and Siting
4. Stations and Support Facilities
5. Runningways
6. Vehicles
7. Fare-Collection Systems
8. Technology and Customer Information
9. Identity and Branding
10. Project Development, Leadership, and Oversight



2. Service Operations Guidelines

Purpose

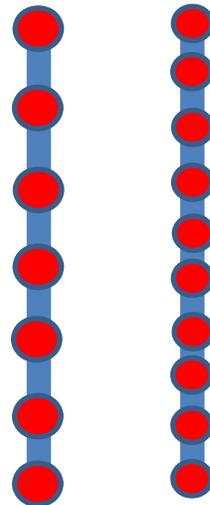
- **Establish operational guidelines** comparable to existing standards for local and express bus
- **Frame expectations for service**
- **Ensure service aligns with travel demand** in a cost-effective way
- **Promote customer understanding of transit** through consistent service design



2. Service Operations Guidelines

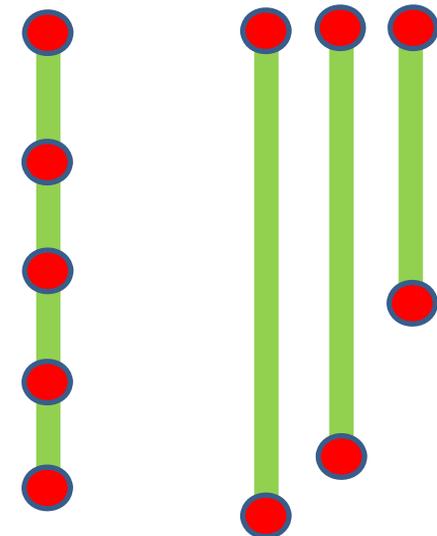
- **Definitions (2.1)**
 - Service and network design for each mode
- **Route Structure (2.2)**
 - Trunk and branches
 - Local tails discouraged
- **Service Coordination (2.3)**
 - Coordinate transfers between transitways
 - Coordinate transfers to/from other transit services

Arterial BRT



All-Day Arterial BRT Station-to-Station
Local Bus

Highway BRT



All-Day Highway BRT Station-to-Station
Peak Period Highway BRT Express



2. Service Operations Guidelines

- **Service Scheduling (2.5 – 2.7)**
 - Minimum frequencies by mode, day, and time of day
 - Example: 10-minute peak and 15-minute midday for Arterial BRT
 - Minimum service spans by mode and day
 - Example: 16 hours/day, 7 days/week for Arterial BRT
 - Travel time relative to other modes
 - Example: Highway BRT no more than 35% slower than car





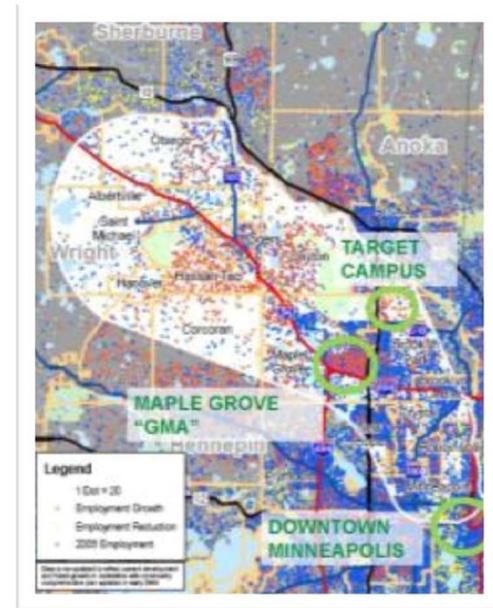
2. Service Operations Guidelines

- **Productivity Thresholds (2.8)**
 - Minimum average passengers per in-service hour
 - Example: 70 passengers/hour for LRT
- **Loading Standards (2.9)**
 - Maximum passenger loading relative to seated capacity
 - Example: 125% peak-period loading for Arterial BRT
- **Market Areas (2.10)**
 - Matching transit service type to market demand



3. Station Spacing and Siting Guidelines Purpose

- Establish criteria for identifying transitway station areas
- Establish criteria for identifying parcels on which to site transitway stations
- Balance community access with transit travel time competitiveness





3. Station Spacing and Siting Guidelines

- **Station Market Analysis (3.1)**
 - Consistent analysis factors & methods
 - Regional Travel Demand Forecast Model (RTDFM)
 - Importance of land use assumptions going into RTDFM - reference Council's Guide for Transit-Oriented Development
 - Minimum projected daily boardings by mode (3.4)
 - Example: 50 daily boardings for Arterial BRT station





3. Station Spacing and Siting Guidelines

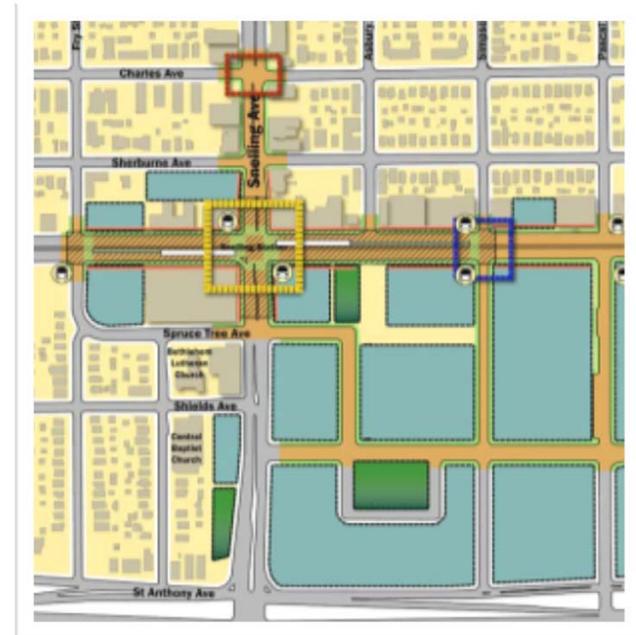
- **Site Location Factors**
(3.2, 3.3)

- **Transportation**

- Access to station
- Impact on existing car, bike, pedestrian networks
- Park-and-ride need

- **Land Use**

- Consider existing and planned land uses
- Incorporate Corridors of Opportunity principles
- Incorporate HUD Livability Principles





3. Station Spacing and Siting Guidelines

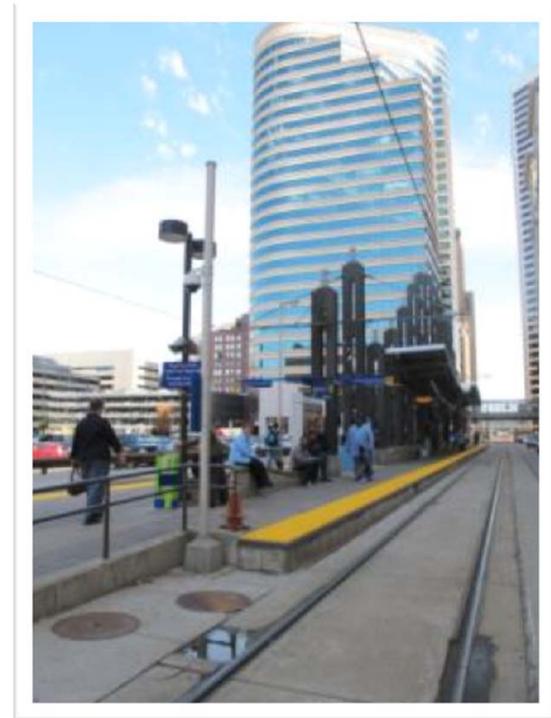
- **Station Spacing (3.5 -3.7)**
 - Average spacing for entire line by mode
 - Example: 1/4 to 1/2 mile spacing for Arterial BRT
 - Minimum spacing by mode
 - Example: 1/8 mile minimum spacing for Arterial BRT
 - Minimum distance between Central Business District & first station
- **Adding Stations (3.8, 3.9)**
 - Staged Development of Stations
 - Addition of New Stations





4. Station and Support Facility Guidelines Purpose

- Facilitate development of **attractive, functional, and cost-effective transitway stations** that are **regionally consistent** (4.1)
- Designers are encouraged to:
 - Achieve an **attractive, informative environment** consistent with local community context & transitway identity
 - **Achieve functional integration** with surrounding context
 - Implement an **interdisciplinary approach** to station design





4. Station and Support Facility Guidelines

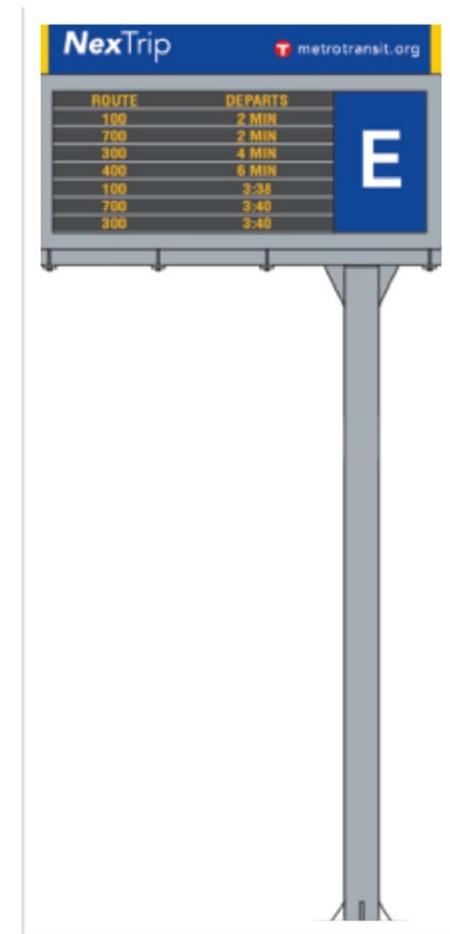
- **Guiding Principles (4.1)**
- **Station Facilities (4.2, 4.3, 4.8, 4.9)**
 - Access for customers of all ages and abilities
 - Accessible by foot, wheelchair, bicycle, car, transit transfer (special attention to ped/bike, safety-security)
 - Enclosures when justified by passenger volume or local site conditions





4. Station and Support Facility Guidelines

- **Station Sizing (4.4)**
 - Guided by peak passenger volume
 - Guidance on sheltered space, platform length, car and bike parking
- **Passenger Information at Stations (4.7)**
 - Consistent throughout region
 - Signage to accommodate new riders, riders with disabilities, non-English speakers & non-readers
 - Real-time information where possible and justified by passenger volume





4. Station and Support Facility Guidelines

- **Station Design**
(4.5, 4.6)

- Lighting, heating, security features
- Ticket vending where justified by mode and volume
- Art, landscaping and/or streetscaping to create quality public spaces
- Attractive, sustainable, and cost-effective materials
- Satisfy policies and regulations: ADA, NEPA, Civil Rights, FHWA/FRA/FTA, etc.





4. Station and Support Facility Guidelines

- **Support Facilities (4.10)**
 - Daily vehicle storage and cleaning, major vehicle maintenance, central system control, and runningway maintenance
- **Local Betterments (4.11)**
 - Enhancements beyond base elements described likely considered local betterments that require local funding commitment for capital, operations, and maintenance
 - Negotiate on a project-by-project basis





5. Runningway Guidelines

Purpose

- **Define and describe types** of runningways
- **Identify key issues** to be addressed during planning or design of runningways
- **Promote transitways' competitive, reliable travel times** while meeting corridor transportation needs





6. Vehicles Guidelines Purpose

- Establish key considerations in vehicle development
- Primarily guidance on **BRT station-to-station** vehicles
 - But applies generally to all transitway vehicle types
- **Vehicles for BRT express not addressed**
 - Remain provider decisions

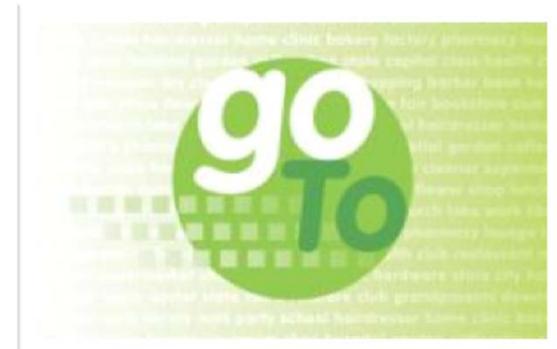




7. Fare Collection Systems Guidelines

Purpose

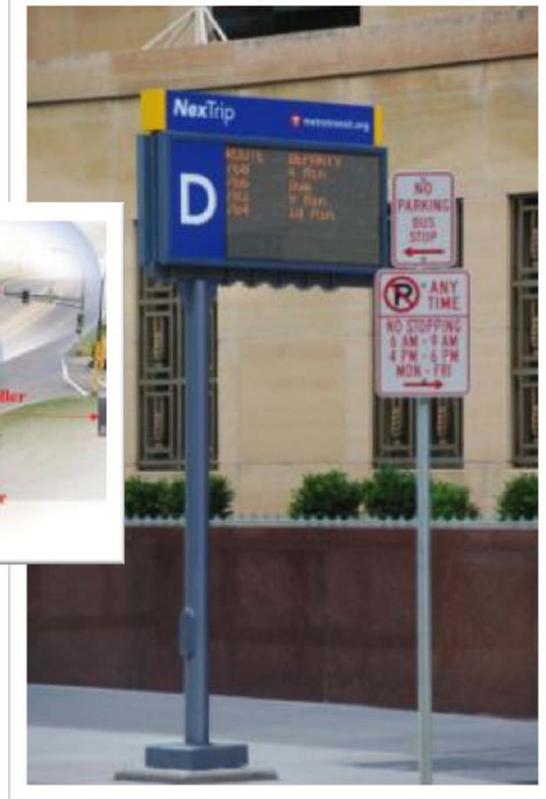
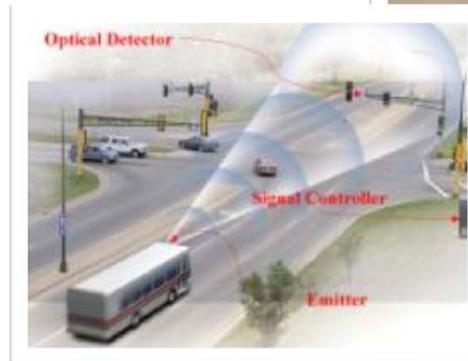
- **Build understanding** of the region's fare collection system
- **Identify key factors** for decision-making in fare collection system proposals
- **Promote efficiency and effectiveness** while meeting fiduciary and regulatory requirements





8. Technology and Customer Information Guidelines Purpose

- **Technology is broad and always evolving;** new technologies continually explored and introduced
- **Provide a process for exploring** technological solutions
- **Provide guidance on implementation** of existing technology
- **Set minimum expectations** for transitway technologies





9. Identity and Branding Guidelines

Purpose

- Identify branding and identity approach **based in best practices**
- Provide guidance on **distinguishing transitway services** from other services in the region
- Provide guidance on **implementing Station-to-Station Identity and Branding Framework**





10. Project Development, Leadership, and Oversight Guidelines Purpose

- Promote **effective coordination** and **simple, efficient, and consistent organization** throughout project development
- Promote **clear decision-making process** at staff and policy levels
- Promote **shared understanding of roles and responsibilities** for lead agency and partners



10. Project Development, Leadership, and Oversight Guidelines Purpose

(Continued)

- Promote **effective stakeholder and public involvement**
- Promote **best use of available resources**, including interests, skills, and resources, at all levels of government
- Promote **consistency in travel demand/ridership forecasting and reporting**
- Promote **quality outcomes**



10. Project Development, Leadership, and Oversight Guidelines

- **Transitway Development Process (10.1)**

- Must be in Transportation Policy Plan to use state or federal funds
- Follow professional due diligence and requirements of likely funding partners
- Evaluate alternatives using capital investment criteria (10.8)



- **Lead Agency Identification (10.3)**

- Need clearly identified lead agency
- Sometimes identified by statute for development phases after LPA selection



10. Project Development, Leadership, and Oversight Guidelines

- **Lead Agency Responsibilities (10.2 - 10.4)**

- Responsible for oversight of entire project including financial management and agency and stakeholder coordination
- May delegate to other agencies using interagency agreements

- **Metropolitan Council Responsibilities (10.5 – 10.7)**

- Transitway operator selection
- Transit service planning
- Maintaining Regional Travel Demand Forecasting Model





10. Project Development, Leadership, and Oversight Guidelines

- **Phased Development of Transitways (10.9)**
 - Transitways can be built in phases over time
 - Each phase should include minimum elements
- **Deviations From Guidelines (10.10)**
 - Guidelines are best practices, not requirements
 - Deviations from Guidelines trigger discussion with funding partners
 - Lead agency initiates discussion and negotiations



Final Project Deliverables

- Regional Transitway Guidelines
 - To be adopted by Metropolitan Council as a stand-alone document separate from the TPP
- Technical Support User Guides
 - Stations and Support Facilities
 - Runningways
 - Transitway Ridership Forecasting
- Transitway Guidelines Technical Report
 - Background and documentation of existing conditions, best practices



To Review & Comment

- Draft Guidelines on project Web site:
<http://www.metrocouncil.org/planning/transportation/transitways/index.htm>
- **Write** the Regional Data Center at 390 Robert St. N., St. Paul, MN 55101
- **Email** the Regional Data Center at data.center@metc.state.mn.us
- **Record** a comment on the Public Comment Line at 651.602.1500 (TTY 651.291.0904)
- **Fax** the Regional Data Center at 651.602.1464
- *Comment cards available at events (sent to Metropolitan Council Data Center)*
- Comments forwarded for Metropolitan Council consideration



Questions? Please call us ...

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Extra Slides





Guidelines Development

- Over **100 participants** and **25 agencies**
- **Technical committees** developed guidelines for **Advisory Committee policy review**
- Considered existing laws, regulations, and guidance, experience within the region, national and international best practices





Guidelines Advisory Committee

| | |
|---|---|
| Met Council | Wendy Wulff, chair Kirstin Sersland-Beach (2010) Lona Schreiber (2011) |
| Met Council MTS Director | Arlene McCarthy |
| Counties Transit Improvement Board (CTIB) | Comm. Peter McLaughlin - Hennepin County Comm. Jim McDonough - Ramsey County Comm. Dan Erhart - Anoka Co (2010) Comm. Nancy Schouweiler – Dakota County (2011) |
| Suburban Transit Association | Commissioner Will Branning – MVTA Chair |
| Mn/DOT | Tim Henkel, Asst. Commissioner Planning and Programming |
| Transportation Advisory Board (TAB) | Russ Stark, St. Paul City Council |



1. Introduction

- **Purpose of the Guidelines (1.1)**
 - Technical guidance for development and operation of transitways
 - Equitable, efficient, effective, and customer-friendly
 - Integrated and consistent throughout the region
 - Developments leading to Guidelines
 - Region's progressively growing transitway system
 - Multiple agencies involved
 - Region taking initial steps to implement BRT
 - Better alignment of transit, land use planning, and sustainable communities



1. Introduction

- **Guidelines Development Process (1.2)**
 - Based on existing best practices, local and peer regions
 - Input from Advisory & Technical Committees
 - Also from Metropolitan Transportation Services and Metro Transit Senior Staff
 - Over 100 participants and over 25 agencies represented in technical process



1. Introduction

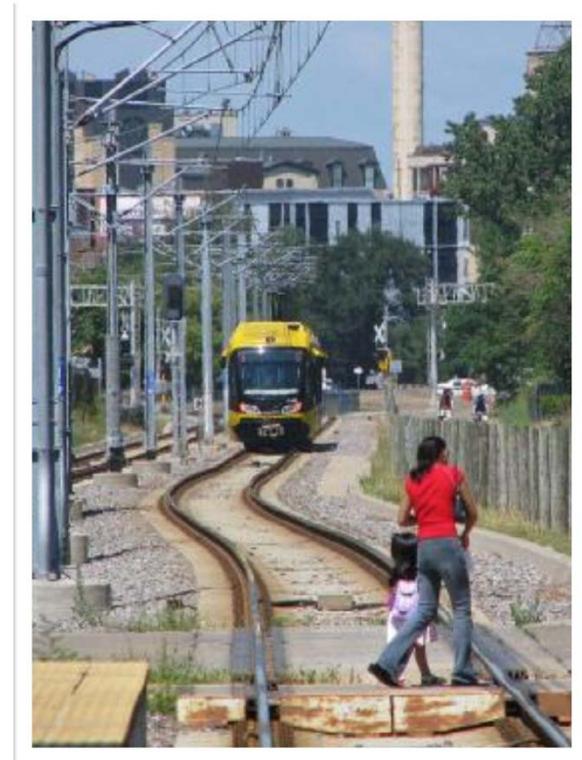
- **Guidance for four modes:**
 - Commuter Rail
 - Light-Rail Transit (LRT)
 - Highway Bus Rapid Transit (BRT)
 - Arterial BRT





5. Runningway Guidelines

- **Bicycle/Pedestrian Access (5.5)**
 - Safe, convenient crossings for all modes, especially pedestrians & people on bicycles
- **LRT Runningways (5.1)**
 - LRT only & at-grade, ballasted double track
 - Barriers or other guidance to prevent access except at legal crossings
- **Commuter Rail Runningways (5.2)**
 - At-grade, ballasted double track
 - Often make use of existing freight/inter-city passenger rail runningways





5. Runningway Guidelines

- **Highway BRT Runningways (5.3)**
 - 45+ mph, dedicated or partially-dedicated full-size lanes
 - Available to transit under all roadway conditions
 - Provide transit advantage in congested conditions
- **Arterial BRT Runningways (5.4)**
 - Less than 45 mph, mixed traffic or dedicated full-size lanes
 - Design and technology to provide transit advantage
 - Designed and maintained to provide high ride quality





6. Vehicle Guidelines

- **LRT and Commuter Rail Vehicles (6.1)**
 - Compatible with existing rail infrastructure and systems (Hiawatha, Northstar)
- **Arterial and Highway BRT Vehicles (6.2 – 6.10)**
 - Flexibility to match vehicle size to service type and passenger load
 - Provide interior experience similar to LRT
 - Compatible across transitways





6. Vehicle Guidelines

- **BRT Vehicle Styling and Branding (6.5)**
 - Portray sleek, modern, premium experience
 - Consistent transitway system identity and branding regardless of specific vehicle type





7. Fare-Collection System Guidelines

- **Proven and Reliable Methods & Technologies (7.1)**

- Use proven technologies
- Consistent with best practices in peer regions and comparable services

- **Support Customer Convenience (7.2)**

- Accessible for all ages and abilities – including new and low-income customers
- Consistent and predictable across transitways and modes





7. Fare-Collection System Guidelines

- **Support Transit Service and Monitoring (7.3, 7.4)**
 - Integrate with existing fare-collection system
 - Efficient boarding, validation, and travel times
 - Collect detailed, accurate ridership & revenue information
- **Fits Well in Region (7.5)**
 - Metropolitan Council will work with project partners when making transitway fare-collection system decisions



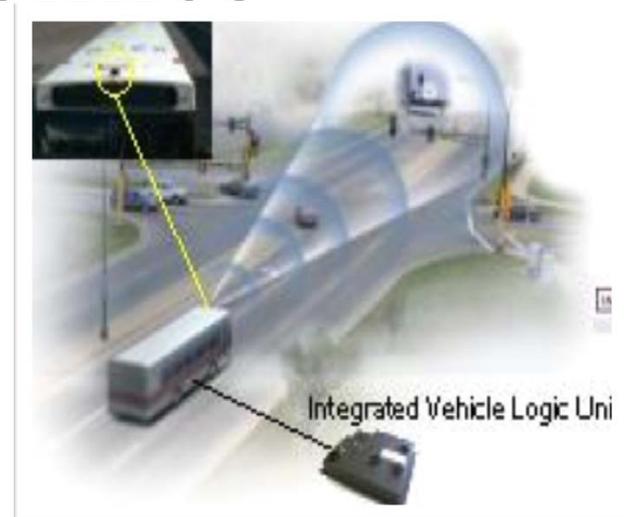
8. Technology and Customer Information Guidelines

- **Standard Vehicle Technologies (8.1 – 8.3)**
 - Automatic vehicle location (AVL)
 - Automatic passenger counters (APC)
 - Integration with regional transit control center
- **Real-time Customer Information (8.8)**
 - Compatible across transit providers
 - When possible and justified including schedule, park-and-ride availability, and travel time comparison



8. Technology and Customer Information Guidelines

- **Traffic Signal Priority (8.4 – 8.6)**
 - Analysis of benefits and impacts for each corridor
 - Coordination between cities, counties, state and transit providers
 - Regional compatibility preferred
 - Optimize for maximum person throughput
 - Minimize cross-traffic delays
- **Traffic Signal Pre-Emption (8.7)**
 - Only use when agreeable to all stakeholders
- **Other Technology (8.9 – 8.11)**
 - Needs/Benefits assessment, implementation considerations, list of information & security features if supporting infrastructure





9. Identity and Branding Guidelines

- **Integrated Branding and Identity (9.1)**
 - Consistent across transitways on vehicles, stations, signage and customer information
- **Vehicle and Station Branding (9.3, 9.4)**
 - Transitway and system brands take priority
 - Visual identity distinct from local and express bus services





9. Identity and Branding Guidelines

- **Line Names (9.2)**
 - LRT and Highway BRT transitways use colors
 - Selected by Council with stakeholder input
 - Coordinated across region
 - Commuter Rail lines use unique names
- **Station Names (9.5)**
 - Reflect major street or landmark names
 - Succinct and easy to recognize





9. Identity and Branding Guidelines

- **Customer Information (9.6)**
- **Advertising (9.7)**
 - Opportunities to sell advertising space at stations and on vehicles
 - Customer information (9.6) and transitway identity take priority
 - Opportunity to sell station naming rights to major landmark or business in station area

