Welcome!

Public Transportation and Right-of-Way: Making the Connection

will begin at 2:00 p.m. Eastern Time

Listening to the Webinar

Online:
- Please make sure your computer speakers are turned on or your headphones are plugged in
- Control the audio broadcast via the AUDIO & VIDEO panel
- If you have sound quality problems, please go through the Audio Wizard by selecting the microphone icon

Listening to the Webinar (cont.)

- To connect by telephone:
  1-443-453-0034
  Pass Code: 368564
  This is not a toll-free number
Captioning

Real-time captioning is provided; open the window by selecting the “cc” icon in the Audio & Video panel
• You can re-size the captioning window, change the font size, and save the transcript

Submitting Questions

• In the webinar platform:
  • Double-click on “Mid-Atlantic ADA Center” in the Participant List to open a tab in the Chat panel (keyboard: F-6 and arrow up or down to find Mid-Atlantic ADA Center); type your question in the text box and “enter”
    o Your question will be sent to the presenters; other participants will not be able to see it
  • E-mail: ADAtraining@transcen.org

Technical Assistance

If you experience technical difficulties
• Use the Chat panel to send a message to the Mid-Atlantic ADA Center
• E-mail ADAtraining@transcen.org
• Call 301-217-0124
Archive

- This webinar is being recorded and can be accessed within a few business days
- You will receive an email with information on accessing the archive

Continuing Education Credits

- Please consult the reminder email you received about this session for instructions on obtaining continuing education credits for this webinar.
- You will need to listen for the continuing education code which will be announced at the conclusion of this session.
- Requests for continuing education credits must be received by 12:00 PM EDT July 11, 2014

Public Transportation and Right-of-Way: Making the Connection

Presented by:

Mid-Atlantic ADA Center Logo

Today's presenter:

Linda Osiecki
Public Transportation and Right-of-Way: Making the Connection

Linda Osiecki ada4row@gmail.com

Outline

• Fixed Routes, Paratransit and Public Right-of-Way Pedestrian Facilities
• Questions
• Pedestrian Infrastructure Criteria
• Action Points
• Questions

In summary: Legislative timeline

1964—Civil Rights Act (did not include disability)
1968—Architectural Barriers Act (ABA)
1973—Rehabilitation Act
1975—Individuals with Disabilities in Education Act (IDEA)
1976—Higher Education Act Amendment (to include students with disabilities)
1986—Air Carrier Access Act
1988—Fair Housing Amendments Act
1990—Americans with Disabilities Act (ADA)
2008—ADA Amendments Act signed into law
Access Board Guidelines

- ADAAG (ADA Accessibility Guidelines)
  - 1991
  - 2001
  - 2004
- PROWAG (Public Right-of-Way Accessibility Guidelines)
  - 2005
  - 2011

Americans with Disabilities Act (ADA)

“the Nation's proper goals regarding individuals with disabilities are to assure equality of opportunity, full participation, independent living, and economic self-sufficiency for such individuals”

➢ Integrated public services

Public Transportation

Shared passenger transport service available for use by the general public

- Fixed-route buses
- Paratransit
- Rail / subway
Why do people want to use fixed-route buses if available?

- Lower (or free) fare
- Reliable Schedule
- Independence
- Flexibility to travel when wanted
- Opportunity to travel with friends
- Set personal schedule for travel without hours or days of pre-planning

Source: TCRP 163

Public Right-of-Way

- Public property along streets which may include pedestrian facilities for use by the public (public infrastructure)

PAR

pedestrian access route
Expectations - Roads

Expectations - Roads

Expectations – Pedestrian Infrastructure
Expectations – Pedestrian Infrastructure

TCRP Report 163
Sponsored by Federal Transit Administration

Strategy Guide to Enable and Promote the Use of Fixed-Route Transit by People with Disabilities

About Specific Disabilities

Neurological disabilities
Physical and Mobility disabilities
Speech disabilities
Learning disabilities
Psychiatric disabilities
Hearing disabilities
Visual disabilities
Intellectual disabilities
About Physical and Mobility Disabilities...

- Includes any impairment that impacts a person’s use of their body or limbs
- In 2002 there were 2.7 million wheelchair users
- In 2008 that number increased to 3.6 million
- 60% of wheelchair users are over age 65
- May involve using mobility devices, prosthetics, and other equipment to aid in performing manual tasks or moving around

Steinmetz, 2006; Wheelchair.net, 2006

About Visual Disabilities...

- 1.8 million people have a severe visual impairment or blindness
- Varying levels of visual disability
- Not all people with visual disabilities read Braille
- Many new developments in IT aid people with visual disabilities

Steinmetz, 2006

Types of Paratransit Eligibility

- Unconditional Eligibility – people not able to use fixed-route transit under any conditions
- Conditional Eligibility – people able to use fixed-route transit some of the time under certain conditions
- Temporary Eligibility – people with a temporary disability or health condition

Source: TCRP 163
Paratransit Conditional Eligibility

Includes:

- Path-of-travel issues
  - Pedestrian infrastructure (sidewalks, curb ramps, surfaces, cross slope, running slope, etc.)

- Street crossing issues
  - Street width
  - Intersection design
  - Traffic volume
  - Traffic controls

Source: TCRP 163

---

**Fixed Route Bus Fleet**

98% accessible

Source: TCRP 163

---

**Top Factors Negatively Affecting Use of Fixed Routes**

1. Barriers in the pedestrian environment (pedestrian infrastructure)

2. Distance to/from stops/stations

3. Lack of information about potential barriers getting to/from stops/stations

Source: TCRP 163
Suggested Strategies for Enabling and Promoting Use of Fixed Transit by People with Disabilities

A. Make Bus Stops and Pedestrian Environment as Usable as Possible
B. Develop Marketing and Public Information Materials; Offer Trip Planning and Travel Training Services
C. Consider Fare Incentives
D. Consider Alternative Transit Service Designs That Are More Inclusive and Serve All Riders
E. Use ADA Paratransit Eligibility Determination Process to Identify Travel Abilities

Source: TCRP 163

TCRP Report 163

Chapter 5 - Accessible Bus Stops and Pedestrian Infrastructure

“Every bus trip begins and ends with a pedestrian trip…”

Source: TCRP 163
Average Operating Costs Per Trip

- Bus trip - $3.60
- Paratransit $32.70

Therefore, potential cost savings of about $29 per trip

Source: TCRP 163 from 2011 National Transit Database
Average Operating Costs Per Trip

- Bus trip - $3.60
- Paratransit $32.70

Therefore, potential cost savings of about $29 per trip
  - $58 per round trip

Source: TCRP 163 from 2011 National Transit Database

---

Average Operating Costs Per Trip

- Bus trip - $3.60
- Paratransit $32.70

Therefore, potential cost savings of about $29 per trip
  - $58 per round trip
  - $3,016 per a year of one round trip each week

Source: TCRP 163 from 2011 National Transit Database

---

Average Operating Costs Per Trip

- Bus trip - $3.60
- Paratransit $32.70

Therefore, potential cost savings of about $29 per trip
  - $58 per round trip
  - $290 per five round trips in a week

Source: TCRP 163 from 2011 National Transit Database
Average Operating Costs Per Trip

- Bus trip - $3.60
- Paratransit $32.70

Therefore, potential cost savings of about $29 per trip
- $58 per round trip
- $290 per five round trips in a week
- $15,080 per a year of five round trips each week

Source: TCRP 163 from 2011 National Transit Database

Benefits of Improving Pedestrian Infrastructure

**Financial**

Maryland Transit Administration

If one person transitioned from paratransit to fixed-route transit

- Simple improvement - e.g., minor sidewalk repair
  - averaged $7,000 per stop
  - Costs recovered in 10 weeks

Source: TCRP 163

Benefits of Improving Pedestrian Infrastructure

**Financial**

Maryland Transit Administration

If one person transitioned from paratransit to fixed-route transit

- Enhanced improvements – e.g., lighted shelter, fixing adjacent sidewalks, etc.
  - averaged $58,000 per stop
  - Costs recovered in 18 months

Source: TCRP 163
Benefits of Improving Pedestrian Infrastructure
Pedestrian Safety
Montgomery County, Maryland

Comparing 2011 to 2000
• Pedestrian collisions decreased by 4%
• Pedestrian fatalities decreased by 39%

Source: TCRP 163

Other Benefits of Improving Pedestrian Infrastructure
• Increasing compliance with ADA (Americans with Disabilities Act)
• Making pedestrian infrastructure more useful for all users regardless of whether or not they have a disability (universal design)
• Transition Plan locations

Recommendations for Contracts to Improve Bus Stops and Pedestrian Infrastructure
Contracts large enough for cost-effective, competitive contracting
• Intercity Transit of Olympia, Washington: 15 to 20 stops

Source: TCRP 163
Recommendations for Contracts to Improve Bus Stops and Pedestrian Infrastructure

Contracts large enough for cost-effective, competitive contracting

If budgeted funds/grants available:
• $250,000 contract or 40+ locations
  – Keep a construction crew busy for about a year
  – Flexibility in scheduling including geographic proximity

If possible, coordinate to add the improvements to other contracts paving the road and improving curb ramps

Money for mobilization and maintenance of traffic (MOT) is already in the main contract plus lower bid prices due to a large contract

Potential savings of $3,000 or more per bus stop location

Questions???
**Pedestrian Infrastructure**

**Common Problems**

- Accessibility from both directions at the nearest street intersection
- Lack of compliant landing pad (boarding and alighting area)
- Sidewalks don’t connect with the bus stop

Source: TCRP 163

---

**Pedestrian Infrastructure**

**Common Problems (continued)**

- Sidewalks obstructed by public amenities and utilities
  - Utility poles
  - Vendor boxes
  - Public seating
  - Trash receptacles

Source: TCRP 163

---

**Pedestrian Infrastructure**

**Common Problems (continued)**

- Over-growth from adjacent shrubbery obstructs sidewalk access
- Physical conditions of sidewalks and landing pads
  - Broken
  - Uneven

Source: TCRP 163
Pedestrian Infrastructure

Maintenance

Over a period of time

• Cracks
• Settlement / Heaving
• Damage
• Deterioration

Pedestrian Infrastructure

• Bus stop
  • Sidewalk
  • Curb Ramp
  • Pedestrian Pushbutton and Pedestrian Signal
  • Pedestrian Street Crossing

Bus Stop Basics

Boarding and Alighting Area
**Bus Stop Basics**

**Boarding and Alighting Area**

- 5’ wide min.
- 8’ long min.
- Slope parallel to road matches road
- Slope perpendicular to road – 2% max.

**Bus Stop Basics**

- Accessible route to streets, sidewalks, pedestrian paths
- AKA – accessible route to an exit

5’ wide minimum
Bus Stop - 8’ long minimum
slope parallel to road matches road

slope perpendicular to road is 2% maximum

clear of obstructions
Photo of bus stop with curb

Exiting Ramp

Full height curb

Photo of sidewalk that ends
Pedestrian Infrastructure

- Bus stop
- Sidewalk
- Curb Ramp
- Pedestrian Pushbutton and Pedestrian Signal
- Pedestrian Street Crossing
Obstructions
tree roots, tree branches and bushes

Obstructions
Free of debris, mud, etc.

Cross Slope
2% maximum
Intersecting Driveways/Entrances

Think before acting.

Source: NCHRP 659
Pedestrian Infrastructure

- Bus stop
- Sidewalk
- **Curb Ramp**
  - Pedestrian Pushbutton and Pedestrian Signal
  - Pedestrian Street Crossing
Curb Ramp
• Cross Slope – 2% maximum
• Running Slope – 8.3% maximum
• Landing – 2% in both directions
• Detectable Warnings
• No ponding (positive drainage)
• Counter Slope

Curb Ramp Layout

Curb Ramps

UNITED STATES ACCESS BOARD
Parallel Curb Ramps

Perpendicular Curb Ramps

Photo of Crosswalk
Diagonal Curb Ramps

- 2011 PROWAG - R207.2 Alterations

- In alterations where existing physical constraints prevent compliance with R207.1, a single diagonal curb ramp shall be permitted to serve both pedestrian street crossings.
Photo of curb ramp at crosswalk

Detectable Warning
Truncated Domes

Photo of detectable warning on curb ramp
Detectable Warning Truncated Domes in Good Condition

No Ponding Positive Drainage
Gutter Counter Slope

• Less than 11% preferred
• 13% max
Pedestrian Infrastructure

- Bus stop
- Sidewalk
- Curb Ramp

**Pedestrian Pushbutton and Pedestrian Signal**
- Pedestrian Street Crossing

---

**Accessible Route Components**

**Pedestrian Signals**
- 10’ maximum from face of curb, shoulder or pavement  
- 10” maximum from edge of landing area  
- 5' maximum offset from marked crosswalk, long. w/road  
- **Face of Pedestrian Pushbutton parallel with direction of crosswalk**  
- Pedestrian Pushbutton height – approximately 42”, but no more than 48”
- If two Pedestrian Pushbutton poles on the same corner, at least 10’ apart, unless approved otherwise.
- If two ped pushbutton poles on the same pole, each marked with arrows on button housing.

Source: MUTCD (Manual of Uniform Traffic Control Devices)
Diagrams of APS on corners with various geometries

Photo of crosswalk

Photo of crosswalk
Pedestrian Infrastructure

• Bus stop
• Sidewalk
• Curb Ramp
• Pedestrian Pushbutton and Pedestrian Signal

Pedestrian Street Crossing

• Minimize distance of crossing
• Avoid skewed angles

Action Points

• Make decisions in consultation with those who have expertise in ADA and pedestrian infrastructure

— “A good leader can engage in a debate frankly and thoroughly, knowing that at the end he and the other side must be closer, and thus emerge stronger. You don't have that idea when you are arrogant, superficial, and uninformed.”

» Nelson Mandela
Action Points

• Inventory
• Analysis
• Respond to requests
• Start construction
  – Good inspection during construction
  – Detailed inspection after construction for ADA compliance

Action Points

Analysis

• When planning new fixed routes, choose bus stop locations to maximize accessibility
• Consult with transit riders
• Consult with transit staff, travel trainers and paratransit eligibility specialists
• Ongoing monitoring and maintenance
• Include tactile or technology elements to help visually impaired riders

Source: TCRP 163

Expectations – Pedestrian Infrastructure

Photo of corner with no paved sidewalk

Expectations –
Pedestrian Infrastructure

– Pedestrian Infrastructure
Expectations –
Pedestrian Infrastructure

Source: TCRP 163

Action Points

• Make public officials and other decision makers aware of your interest in ADA compliance and what they are doing to accomplish that

Action Points

• Report specific locations needing improvement
  – Detailed information such as:
    • Bus route
    • Intersecting streets
    • Corner
    • Adjacent existing property
Remember – Just the facts

Action Points

• Follow up after reporting a location

• Federal complaint
  – Department of Justice
  – Federal Transit Administration

Be Heard!
Good Resources

- TCRP Report 163
- Easter Seals Project Action
  - Checklist for Assessing the Accessibility of Transportation and Mobility
  - Toolkit for the Assessment of Bus Stop Accessibility and Safety
- ITE: Accessible Public Rights-of-Way – Planning and Designing for Alterations

Upcoming Resource


- Expected to be release mid or late July 2014

Questions???
Public Transportation and Right-of-Way: Making the Connection

Linda Osiecki ada4row@gmail.com

Contact Us

• ADA questions
  – ADA National Network
    • 1-800-949-4232 V/TTY
    • wwwadata.org
  • Questions about this presentation
    – Mid-Atlantic ADA Center
      • 1-800-949-4232 V/TTY (DC, DE, MD, PA, VA, WV)
      • 301-217-0124 local
      • www.adainfo.org

CEUs

• The continuing education code for this session:
• Please consult your webinar reminder e-mail message for further information on receiving continuing education credits

Thank you for joining us!