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Lessons from the Development of a Guidebook on Pedestrian and Bicycle Connections to Transit

Nathan McNeil

Portland State University

Allison Boyce Duncan

Portland State University, nacnudnosilla@gmail.com

Drew DeVitis

Portland State University

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Pedestrian and Bicycle Connections to Transit

LESSONS FROM THE DEVELOPMENT OF
A GUIDEBOOK ON PEDESTRIAN AND
BICYCLE CONNECTIONS TO TRANSIT



Presentation Outline

Background on Guidebook

Access Sheds

Station Areas

Pedestrian Access

Bicycle Access

Planning and Implementation



Guidebook Goals

Making the case for walking and biking connections

Access for users of all ages and abilities

Tools, examples and best practices

Integrating bike share and transit

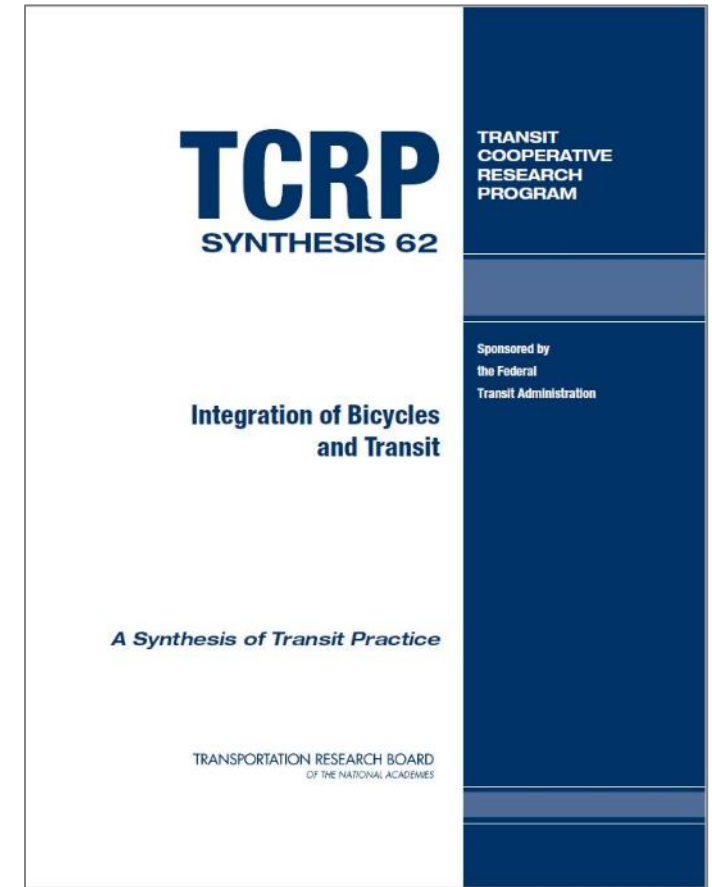
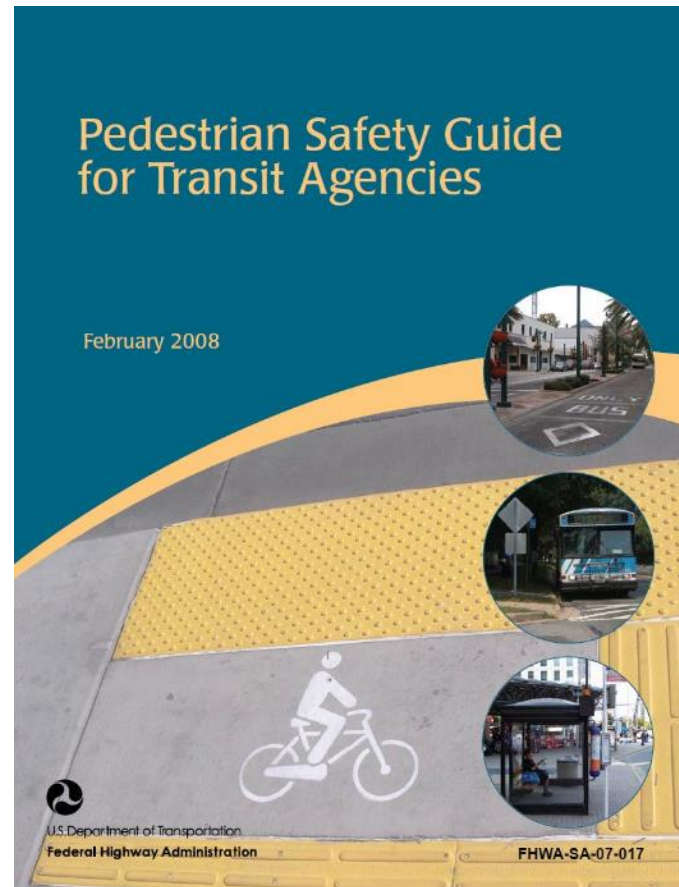
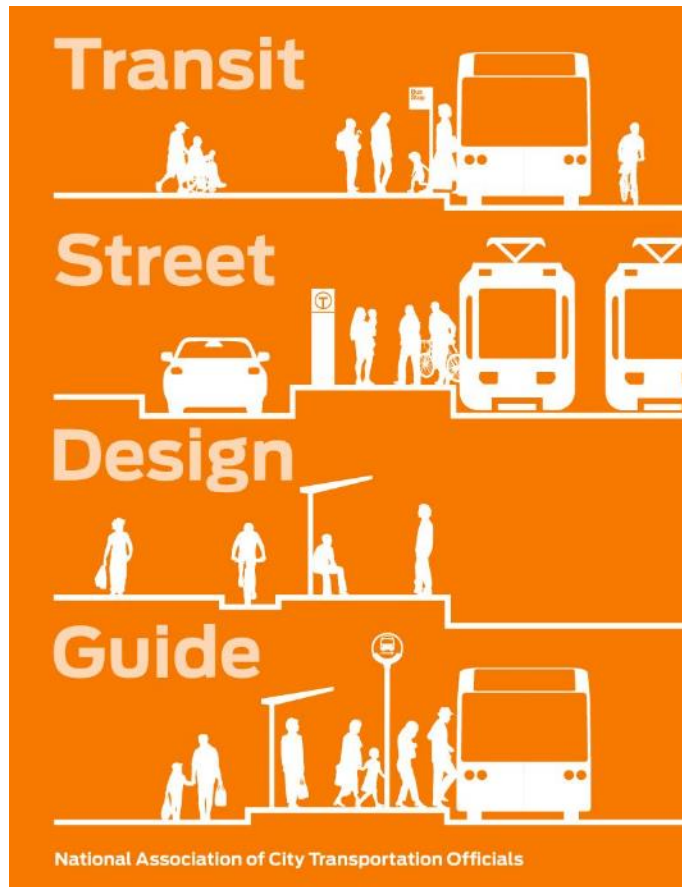
How to plan and implement



Benefits of Ped/Bike Connections to Transit

Provides Benefit to	Transit Agency	Riders	Everyone
Transit depends on safe pedestrian access	✓	✓	
More Equitable		✓	
Extend the Reach of Transit	✓	✓	
Gives Riders more Options		✓	
Supports Multitmodal trips		✓	
Alleviates Crowding	✓	✓	
Helps in cases of Transit Outages	✓	✓	✓
Improves Health	✓	✓	✓
Reduces Congestion	✓	✓	✓

Key Resources



Around the Stop or Station

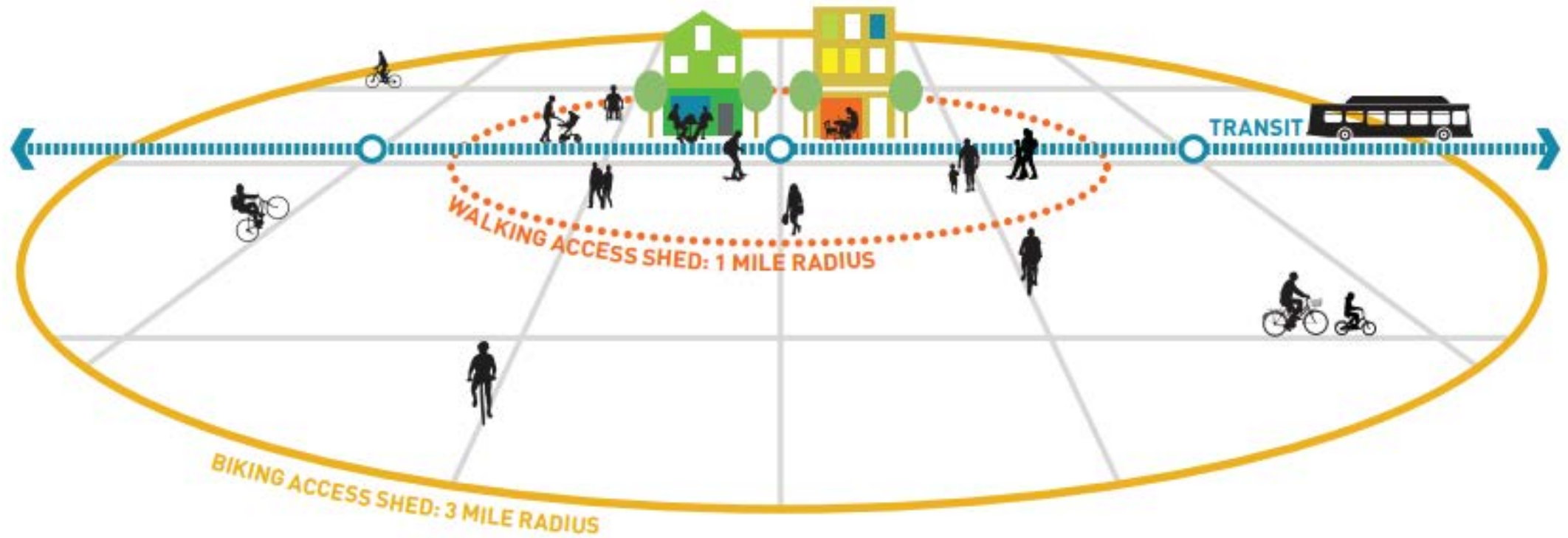
FTA Policy on First and Last Mile Connections

The Federal Transit Administration's 2011 *Final Policy Statement on Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law* states:

all pedestrian improvements located within one-half mile and all bicycle improvements located within three miles of a public transportation stop or station shall have a de facto physical and functional relationship to public transportation. Pedestrian and bicycle improvements beyond these distances may be eligible for FTA funding by demonstrating that the improvement is within the distance that people will travel by foot or by bicycle to use a particular stop or station.



Key Concept: Access Sheds



“as the crow flies” access sheds

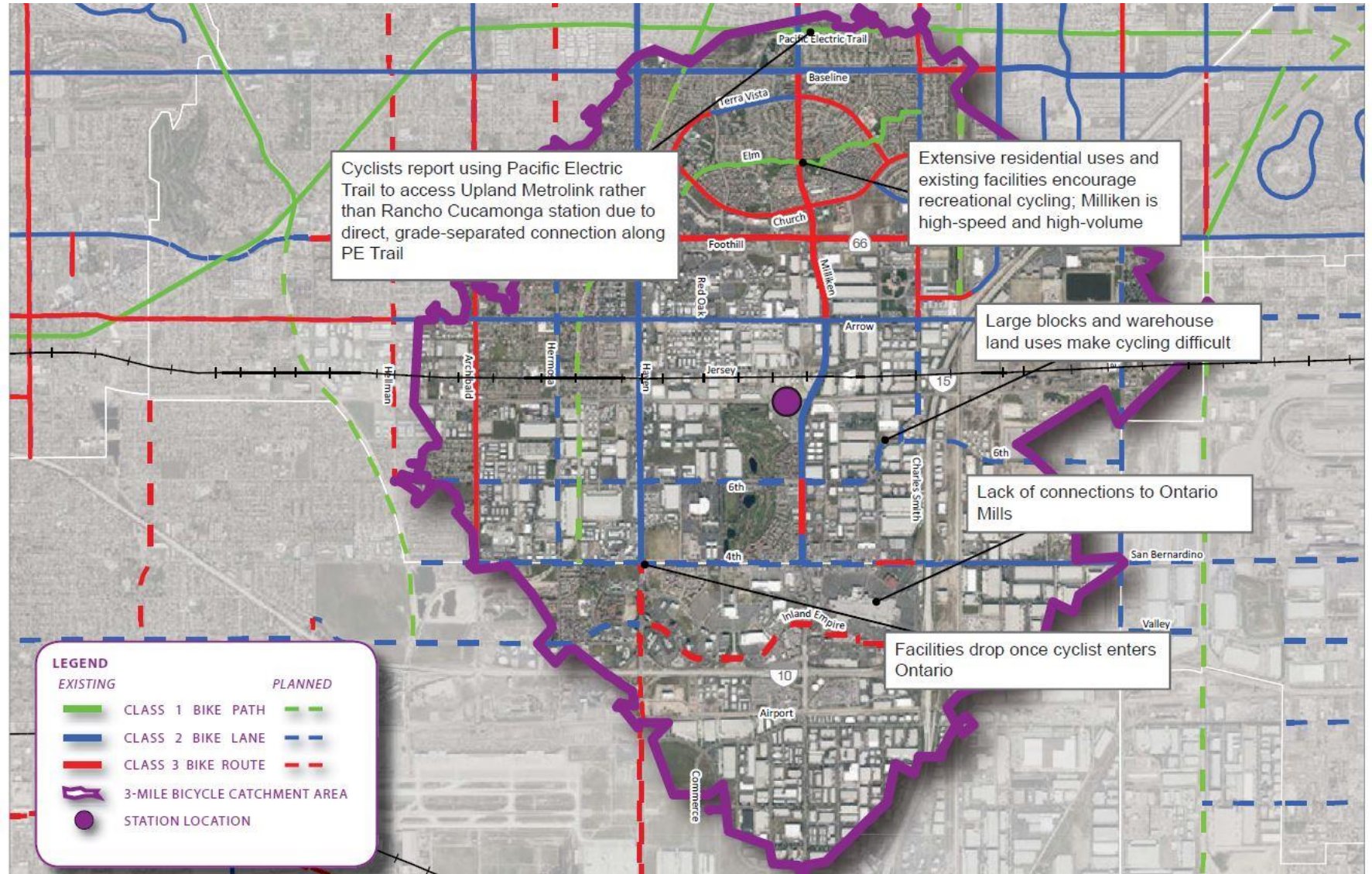
Source: Atlanta Regional Commissions Walk. Bike. Thrive! plan

Access Sheds: Network Distances



Source: NCTCOG Active Transportation Routes to Rail study

Bike Shed Example



Making Network Connections

Strategy / Approach

Benefits

Sidewalks - adding, repairing, widening

Lighting, shade, trees/landscaping, seating

Shared lanes and roadways, bike routes

Bike Lanes, Buffered bike lanes

Bike Boulevards

Separated Bike Lanes

Trails and paths


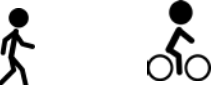

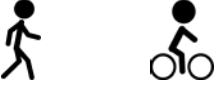

Traffic calming – speed humps, traffic circles,

road narrowing, diverters

Wayfinding



Making Network Connections

Strategy / Approach	Benefits
<p>Crossings – grade separated, RRFB, marked crossings, raised crossings, in-street crossing signage, high visibility crossing signage, staggered crossings</p>	
<p>Signalization - Signalized crossing, HAWK signal, bike signal, scramble signal, leading pedestrian interval</p>	
<p>Intersection treatments – areas for turning and/or queueing, advance stop lines, reduce curb radii</p>	
<p>Reducing crossing distances – median refuge, curb extension</p>	
<p>Accessibility features – audible cues, detectable warning surfaces, curb ramps</p>	

Station area concepts for pedestrians and bicyclists

Safety and Security



Emergency Call box, Expo Line Trail, Santa Monica

Camera and lighting, Metro bus stop, St. Paul

Comfort

Exit Lankershim Bl



North Hollywood Red Line BRT stop



Culver City Expo Line Stop



Universal Design



A Line Rapid Bus stop, St. Paul

Wayfinding to the Stop or Station



Art and Vibrancy



Twin Cities – A Line stop features

Elements shown are representative designs. Completed stations will vary slightly.



What will stations look like after construction is complete?

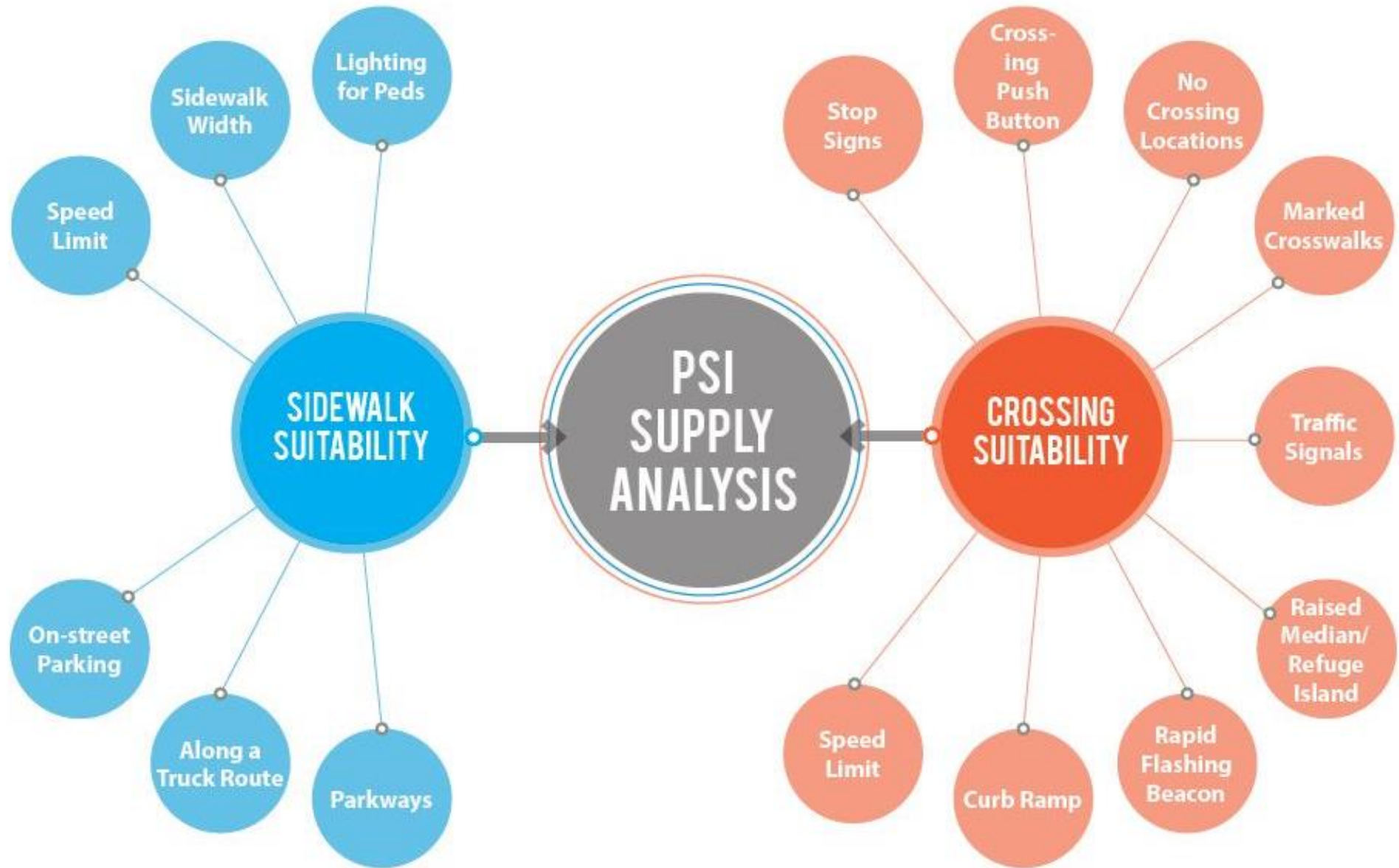
- A Utility boxes** near station areas house necessary communications and electrical equipment.
- B Pylon markers** help riders identify stations from a distance.
- C Real-time NoxTrip displays** provide bus information, and on-demand **annunciators** speak this information for people with low vision.
- D Shelters** provide weather protection and feature on-demand **heaters** and integrated **lighting**. Shelter sizes will vary based on customer demand (small shown here).
- E Ticket machines** and **fare card validators** collect all payment before customers board the bus.
- F Emergency telephones** provide a direct connection to Metro Transit security. Stations also feature **security cameras**.
- G** All stations feature **trash and recycling** containers.
- H** Platform edges are marked with a cast-iron **textured warning strip** to keep passengers safely away from the curb while the bus approaches. Many stations also feature **raised curbs** for easier boarding.
- I Platform areas** are distinguished by a dark gray concrete pattern.
- J** Some stations have sidewalk-level **light fixtures** to provide a safe, well-lit environment. Fixtures will match existing lights in the surrounding area.
- K Benches** at stations provide a place to sit.
- L** Every station has **bike parking loops**.

Source:
metrotransit.org/
a-line-faq



Pedestrian Access

Pedestrian Suitability



Sidewalks



Sidewalks



Crossings



Crossings

Full signal,
Minneapolis



Case Study Lessons: Safety, Comfort, and Access to Bus Stops



Atlanta – Buford Highway (before)



Source: Google Street View



Atlanta – Buford Highway



Atlanta – Buford Highway



Bicyclist Access

Wayfinding to Station or Stop



Near LA Metro Silver Line, Los Angeles

Near TriMet MAX Orange Line

Bikes on Transit



Bicycle Parking at Stations and Stops



Bicycle Parking at Stations and Stops



MARTA Station in Atlanta



Metro Transit Station in Minneapolis

Bicycle Parking at Stations and Stops



SE Tacoma Avenue Station, MAX Orange Line

Bicycle Parking at Stations and Stops: Alternatives





Bikehub at El Monte Station, Los Angeles

Case Study Lessons: Bike Share and Transit



Bike Share and Transit



Bike Share and Transit: Coordination

- Coordinating public information
- Coordinating fare systems (Goal)





NiceRide Bikeshare at a Metro Transit Green Line Station in Downtown St. Paul, Minnesota



LA Metro Bikeshare

Breeze Bikeshare in Santa Monica at an Expo Line Station

Planning for Pedestrian and Bicycle Connections to Transit

Key Plan Elements

Common Plan Elements

Existing conditions, including opportunities and constraints

Toolkit of treatments or strategies

Recommended improvements

Other recommended plan elements

Incorporating accessibility

Community engagement strategy

Implementation plan

Facility Prioritization

BUS STOP RANKING SYSTEM

Variable	Type	Max. Score
ADA Accessible	Legal Access†	3 points
ADA Pad for Wheelchair	Legal Access†	4 points
Crash History - Bicycle	Safety	3 points
Crash History - Pedestrian	Safety	3 points
Safety Crosswalk Access†	Safety	3 points
Lighting††	Safety	3 points
Level of Service	Safety	2 points
Sidewalk Access	Safety	2 points

BUS STOP RANKING SYSTEM cont.

Variable	Type	Max. Score
Bike Lane Access	Safety	2 points
Right-of-Way Buffer	Safety	2 points
Shelter	Facilities	1 point
Bench	Facilities	1 point
Bus Schedule	Facilities	1 point
Trash	Facilities	1 point
Bike Locker	Facilities	1 point

Facility Prioritization

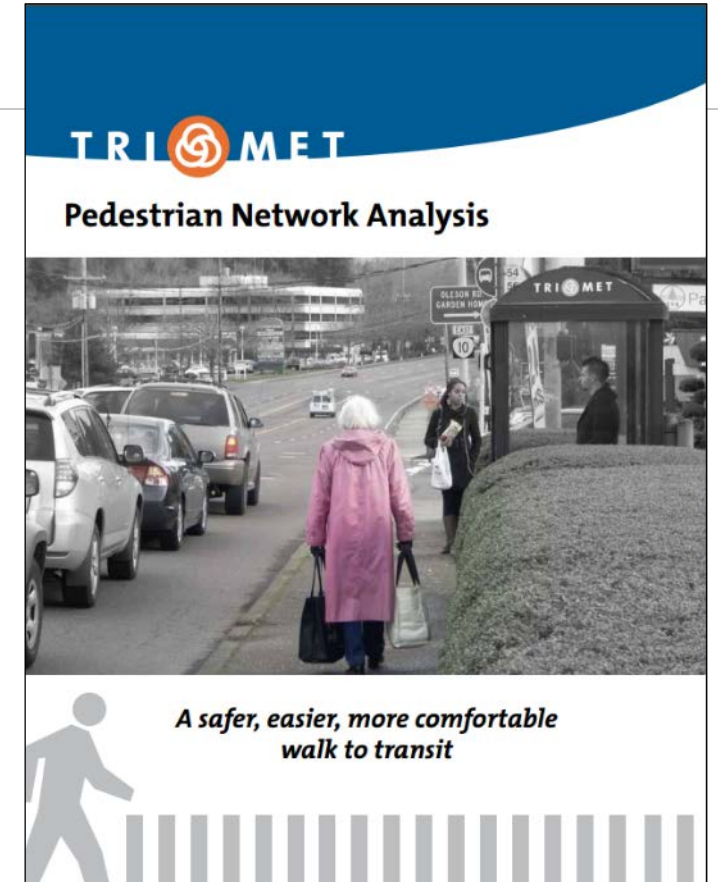
Bicycle Improvement Prioritization factors for new LRT Station

Criteria	Notes	Value	Weighting
Is the project located close to an LRT station?	Proximity to LRT station point in GIS	Projects ranked in comparison to each other on a scale of 0 to 10	30%
Does the project create a direct connection to an LRT station?	Connection to an LRT station	Yes = 15 No = 0	15%
Does the project address a known safety concern?	Bicycles crashes per mile	Projects ranked in comparison to each other on a scale of 0 to 10	15%
How many zero car households does the project serve?	Assigned zero car households to each project based on adjacent blocks	Projects ranked in comparison to each other on a scale of 0 to 10	15%
How many employees and residents does the project serve?	Assigned jobs to each project based on LEHD data points; assigned population to each project based on adjacent blocks	Projects ranked on a scale of 0 to 10 based on employment and residential density (jobs + population per mile)	15%
Does the project directly serve schools and libraries?	Known schools and libraries per mile	Projects ranked in comparison to each other on a scale of 0 to 10	5%
Does the project improve connections to the regional trail network and the Metropolitan Council's regional bicycle transportation network?	Proximity to trail or bicycle transportation network segment in GIS	Projects ranked in comparison to each other on a scale of 0 to 10	5%



Pedestrian access plans

- Sidewalks
- Crossings
- Stop/stations access points/locations
- Seating, shelter, and lighting



TriMet conducted a [Pedestrian Network Analysis](#) to develop “an objective, data-driven system for prioritizing places around the region where pedestrian infrastructure investments will provide safer and more comfortable access to transit”.

Bicycle access plans

- Bicycle network connections
- Parking at stop locations
- Onboard accommodations for bicycles



BART sought to “retool its stations and approach to access planning to attract thousands more bikes than cars to the system each day” which reduces the need to build costly auto parking, bolsters ridership, and encourages public and environmental health.

First Mile Last Mile Plans

Improving conditions for pedestrians and cyclists in the areas around the origin and destination stops



LA Metro's plan introduces "The Pathway," a "transit access network designed to reduce the distance and time it takes people to travel from their origins to stations and from stations to destinations, while simultaneously improving the user experience"

Implementation

Interagency Collaboration

Agency / Organization	Roles
<i>MPOs</i>	Convening; Agenda Setting; Capacity Building; Long Range Planning; Regional Planning;
<i>Transit Agency</i>	Convening; Agenda Setting; Service Integration; Facilities Planning; Station Access Planning
<i>Cities, Counties</i>	Bike/Ped Route Planning and Implementation
<i>BIDs, Foundations, Partners</i>	Marketing; Fundraising; Corridor Planning and Programming

Funding

U.S. Department of Transportation
Federal Highway Administration

Office of Planning, Environment, & Realty (HEP)

Bicycle and Pedestrian Program

Legislation
Funding
Guidance
Resources

State Coordinator and FHWA Division Coordinator
Each State has a Bicycle and Pedestrian Coordinator, and each FHWA Division office has a point of contact.
FHWA Headquarters Contact
For more information, please contact Dan Goodman, 202-366-9064.

FHWA → Environment → Bicycle and Pedestrian Program → Funding

Pedestrian and Bicycle Funding Opportunities

U.S. Department of Transportation Transit, Highway, and Safety Funds
Revised August 12, 2016

This table indicates potential eligibility for pedestrian and bicycle projects under U.S. Department of Transportation surface transportation funding programs. Additional restrictions may apply. See notes and basic program requirements below, and see program guidance for detailed requirements. Project sponsors should fully integrate nonmotorized accommodation into surface transportation projects. Section 1404 of the Fixing America's Surface Transportation (FAST) Act modified 23 U.S.C. 109 to require federally-funded projects on the National Highway System to consider access for other modes of transportation, and provides greater design flexibility to do so.

Pedestrian and Bicycle Funding Opportunities: PDF Version

Activity or Project Type	TIGER	TIFIA	ETA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTP
Access enhancements to public transportation (includes benches, bus pads)	\$	\$	\$	\$	\$		\$	\$	\$						\$
ADA/504 Self Evaluation / Transition Plan								\$	\$	\$		\$			\$
Bicycle plans			\$					\$	\$		\$	\$			\$
Bicycle helmets (project or training related)								\$	\$SRTS		\$		\$*		
Bicycle helmets (safety promotion)								\$	\$SRTS		\$				
Bicycle lanes on road	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				\$
Bicycle parking	~\$	~\$	\$	\$	\$		\$	\$	\$	\$	\$				\$
Bike racks on transit	\$	\$	\$	\$	\$			\$	\$						\$
Bicycle share (capital and equipment; not	\$	\$	\$	\$	\$		\$	\$	\$						\$

http://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.cfm

Advocacy Advance
a partnership of Alliance for Biking & Walking and THE LEAGUE OF AMERICAN BICYCLISTS

First Mile, Last Mile: How Federal Transit funds can improve access to transit for people who walk and bike




This report looks at how biking and walking can be integrated with transit and the federal transit funds that can support projects and programs to increase accessibility among people who bike, walk, and take transit.

August 2014

http://www.advocacyadvance.org/docs/FirstMileLastMile_August2014_web.pdf

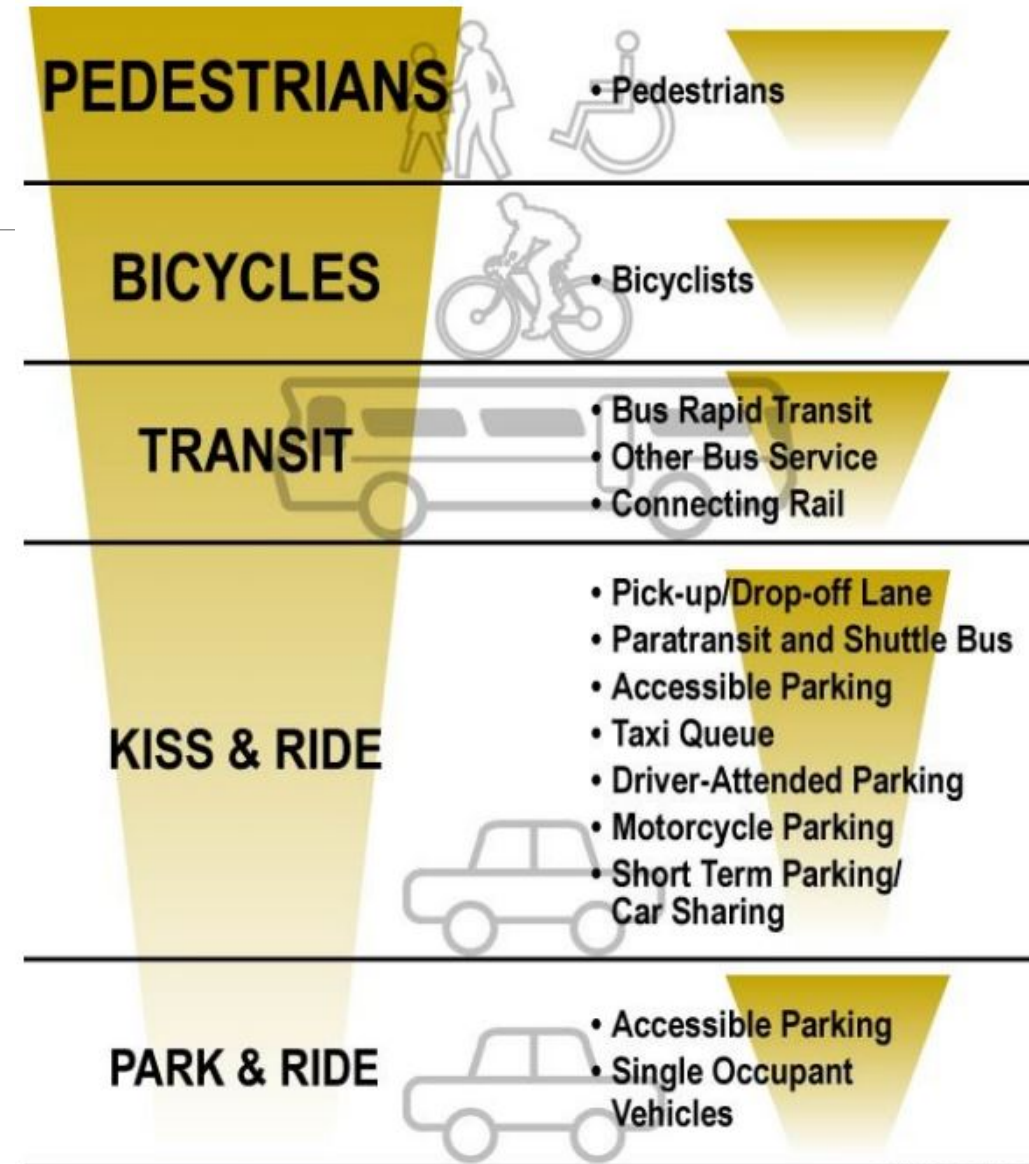


Agency Priorities and Culture

Prioritize walking and bicycling for transit access

Clarify agency policies and staffing

Leading by example



WMATASA009

Case Study Lessons: Culture Shift - Show, Don't Tell







November 2009



December 2012

Photo: Atlanta BeltLine, Inc.





Photo: Atlanta BeltLine, Inc.



PORTLAND STATE UNIVERSITY PROJECT TEAM:

JENNIFER DILL

LYNN WEIGAND

NATHAN MCNEIL

DREW DEVITIS

RUSSELL DOUBLEDAY

ALLISON DUNCAN

Questions?

