



Lisa Nisenson
New Mobility
@altaplanning

THE NEW TOD

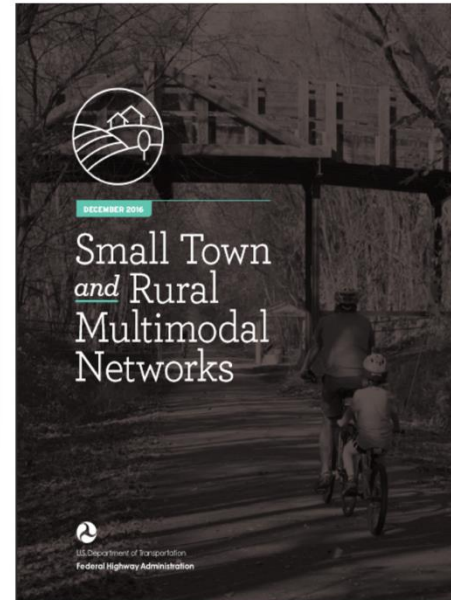
Design for Active + New Mobility



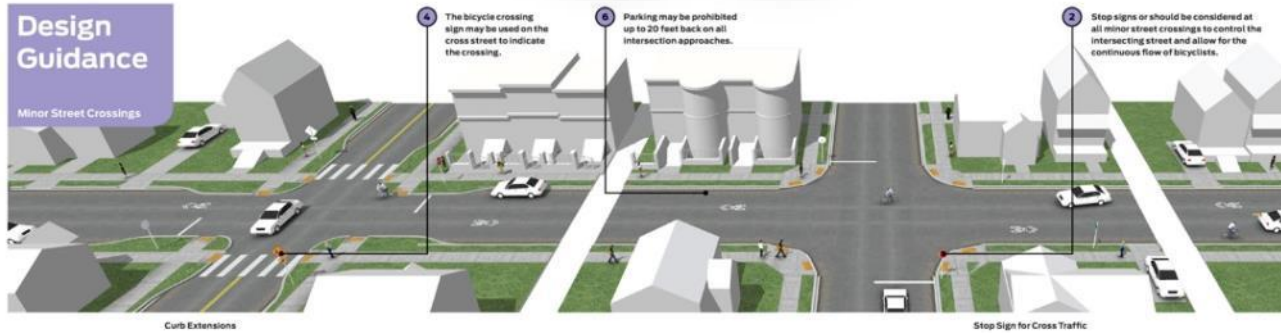
ABOUT ALTA: INNOVATION LEADERS



Innovation in Bicycle and Pedestrian Counts
A Review of Emerging Technology



Small Town and Rural Multimodal Networks

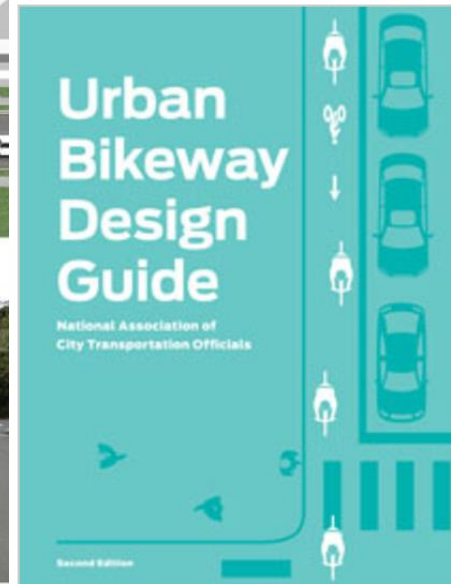


Design Guidance

Minor Street Crossings

- 1 Curb Extensions
- 2 Stop Sign for Cross Traffic
- 3 Parking may be prohibited up to 20 feet back on all intersection approaches.
- 4 The bicycle crossing sign may be used on the cross street to indicate the crossing.

<p>Required Features</p> <p>1 There is no minimum required element to a minor street crossing since they can vary significantly depending on the geometry and the speed/volume of cross traffic. Treatments shall be considered using engineering judgment and shall consider the safety and comfort of bicycle movements along the bicycle boulevard.</p>	<p>Recommended Features</p> <p>2 Stop signs or geometric design elements should be considered at all minor street crossings to control the intersecting street and allow for the continuous flow of bicyclists.TM</p> <p>3 Stop signs should control cross traffic only along the bicycle boulevard. If vehicle traffic increases along the bicycle boulevard, implement volume control measures. If vehicle speeds increase along the bicycle boulevard, implement speed control measures.</p>	<p>Optional Features</p> <p>4 The bicycle crossing sign (MUTCD sign W1-1) may be supplemented with an AHEAD plaque) may be used on the cross street to indicate the crossing.</p> <p>5 The CROSS TRAFFIC DOES NOT STOP plaque (MUTCD sign W4-47) may be used in combination with a STOP sign on the cross street to indicate the crossing.</p> <p>6 Parking may be prohibited up to 20 feet back on all intersection approaches to improve visibility.</p>	<p>7 A sign using the bicycle boulevard branding with an arrow may be used on the cross street to indicate the crossing.</p> <p>BERKELEY, CA</p> <p>BERKELEY, CA</p>
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Urban Bikeway Design Guide

National Association of City Transportation Officials

Second Edition

BIKE LANES
BIKE SHARE
MULTI-MODAL TRAILS
INTERSECTION DESIGN
PEDESTRIAN AMENITIES
RESEARCH + TDM
PERFORMANCE & MONITORING
WAYFINDING
PLACEMAKING & CAMPUS DESIGN

TECHNOLOGY IS CHANGING CITIES



Local Motors

SHARED-USE MOBILITY
AUTONOMOUS VEHICLES
VEHICLE DESIGN
SMART INFRASTRUCTURE



TransitScreen

INTERNET OF THINGS
SEAMLESS PAYMENT & TRANSFERS
ENERGY SOURCES
DRONES & DELIVERY



One-Wheel

BIKE LANES
BIKE SHARE
MULTI-MODAL TRAILS
INTERSECTION DESIGN
PEDESTRIAN AMENITIES
RESEARCH/TDM
PERFORMANCE & MONITORING
PLACEMAKING
WAYFINDING

Get a ride in minutes.



Lyft

VIRTUAL/AUGMENTED REALITY

GUIDING IDEAS – FIRST CUT



DESIGNING FOR ACTIVE + NEW MOBILITY

DESIGN FOR ACTIVE, HEALTHY, CONNECTED PEOPLE & PLACES

EMBRACE TECHNOLOGY TO ENHANCE ACCESS FOR ALL

DESIGN FOR TRANSIT SYSTEMS, NOT INDIVIDUAL CARS

DEVELOP PLACE-BASED, SUSTAINABLE TRANSPORTATION PORTFOLIOS

EXPECT, PLAN & GOVERN FOR FLEXIBILITY

BIKE LANES

BIKE SHARE

MULTI-MODAL
TRAILS

INTERSECTION
DESIGN

PEDESTRIAN
AMENITIES

RESEARCH

PERFORMANCE &
MONITORING

PLACEMAKING

WAYFINDING

WHY A BIKE/PED-FIRST DESIGN AGENDA?

Walkable communities deliver multiple benefits

Cars get stuck in traffic – driver or not

People seeking experiences

Digital resilience – glitch happens

Can't hack this! →



WHY A BIKE/PED-FIRST DESIGN AGENDA? FACE IT: PEDS + AVs DON'T MIX WELL



The “1 Pedestrian & 1 Car” Illusion

People love to bully robots

- David Woessner/Local Motors

“Trolley Problem”

WHY A BIKE/PED-FIRST AGENDA FOR NEW MOBILITY? IT'S HERE..



Image: Navya

OPPORTUNITIES – BEYOND THE BULLSEYE

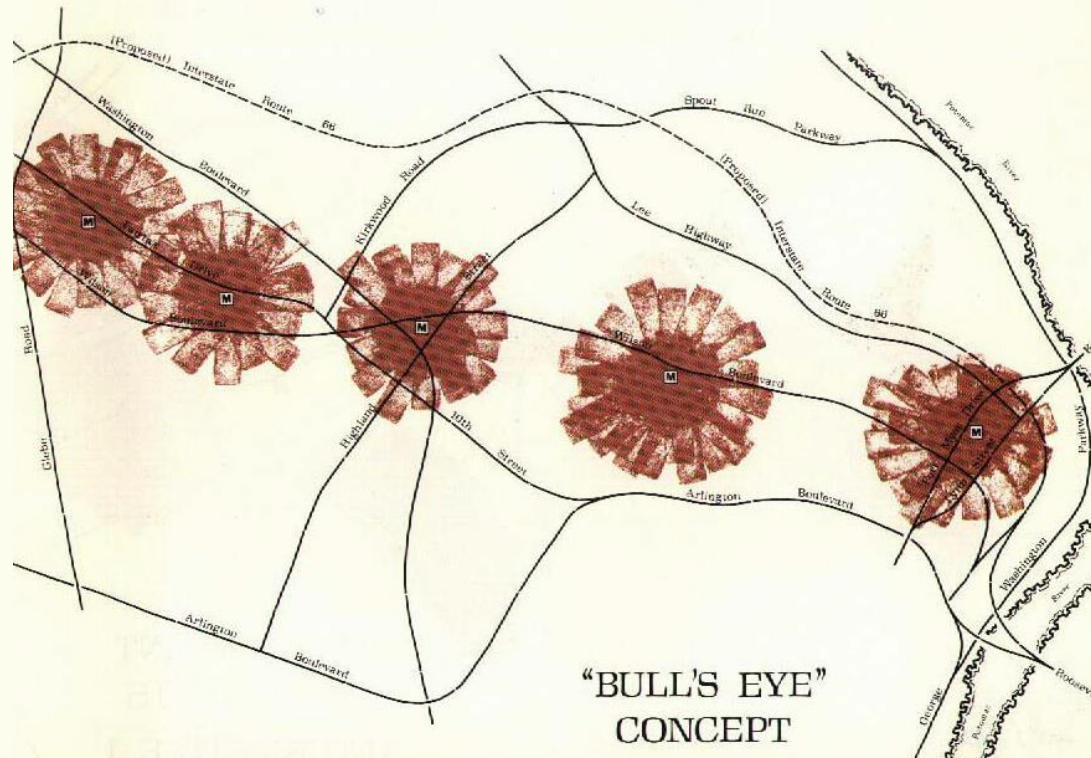
TOD model

Based on 1/2 mile walk

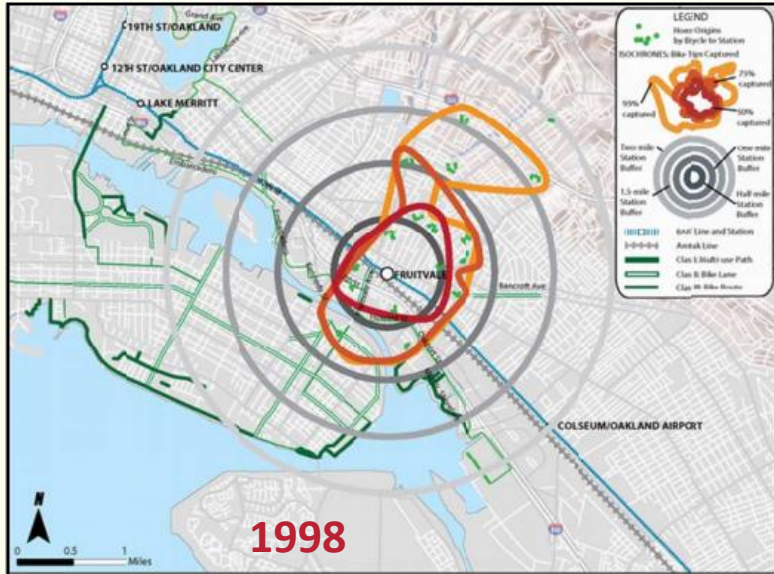
Access to stations

Service keyed to commutes

Drives real estate values



BEYOND THE BULLSEYE: THE OCTOPUS



What's Changing Now?

Better walk/bike connections

On-demand transit

Real time information/apps

Single payment cards

W-2 -> 1099 economy

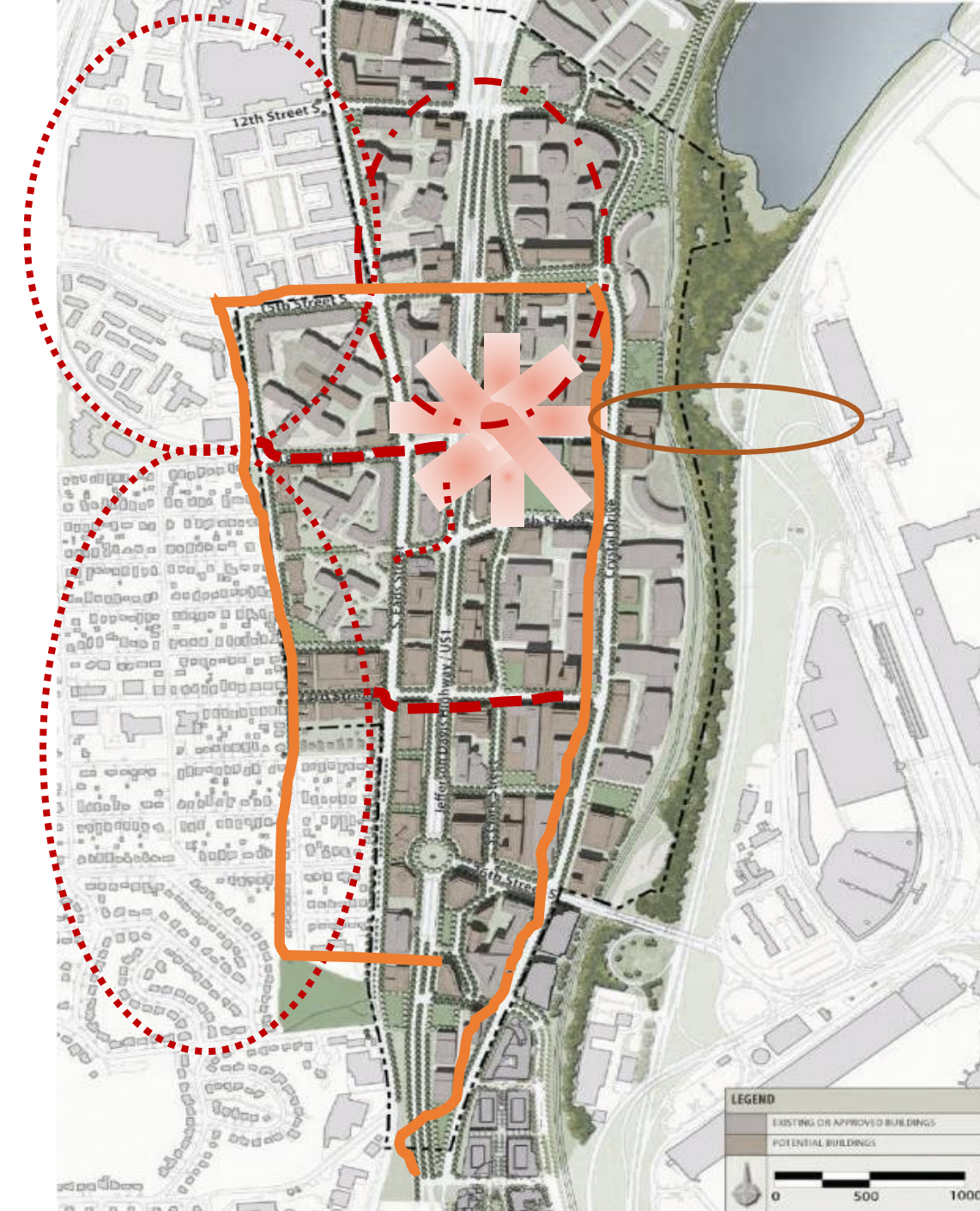
MOBILITY ORIENTED DEVELOPMENT

Transit

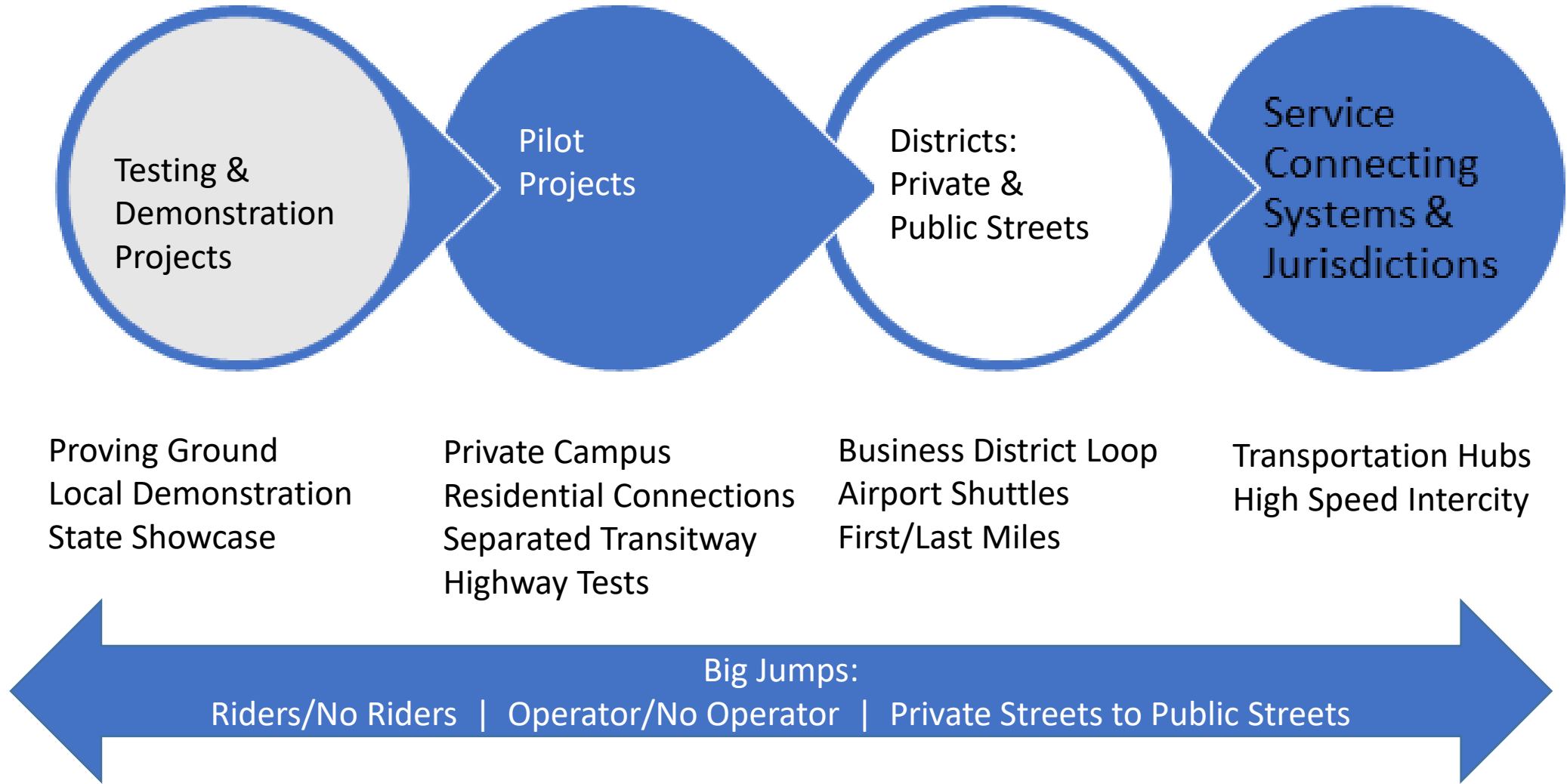
- Move lots of people

NEW: Spines & Circulators

- Transit + Pedestrian Spine
- Parallel Spines
 - Fixed route Circulators
 - On-demand Circulators
 - Hybrid Circulators
 - Periphery



HOW WILL AUTONOMOUS ROLL OUT?



MOBILITY ORIENTED DEVELOPMENT – URBAN TRANSIT HUB



Vehicle Image: Local Motors
Image: Ominet Properties

MOBILITY ORIENTED DEVELOPMENT SUBURBAN RETROFIT



Vehicle Image: Local Motors
Image: Creative Commons/Paul Sableman

MOBILITY ORIENTED DEVELOPMENT PHASING OUT PARKING



WHAT ABOUT TRANSIT?

TRANSIT IMPROVES

Shared use and AVs feed new customers to transit
Agencies operate their own AV fleets

TRANSIT FAILS

Weak systems lose ridership to on-demand & AVs

TRANSIT RESTRUCTURES

Agencies cede low performing routes
Focus on trunk lines/corridors
Engage AVs & shared-use as partners

TO-DO: ↑ BENEFITS / ↓ RISKS



#1 – Set Goals & Guiding Principles for New Mobility & Community Design with the public

- **Multi-Modal Streets – Don't Forget the Basics**
- **What to Watch in Contracts & Revenue Replacement**
- **Candidates for Pilot Projects**
- **Shared Use – Transit/Paratransit**
- **Rethink Parking Garage & New Road Proposals **NOW****

Let's Talk!



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Mobility Group**

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Active, Healthy Community Design

Shared Use Mobility

Autonomous Vehicle Action Plans

Mobility Hubs

Street/Trail/Sidewalk Design

Wayfinding

Smart City Technology