



TRADEOFFS IN DEVELOPING PEDESTRIAN FACILITIES

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Questions

How do we respond to growing pedestrian needs evidenced by increasing numbers of pedestrian crashes?

How do we plan for pedestrians on high speed rural roadways experiencing rapid suburbanization?

How do we address barriers to non-motorized travel created by multilane freeways?

How do we evolve to changing urban travel patterns – e-scooters, increased walking and bicycling, ridesharing?

Challenges



Resource constraints:

- Right-of-way
- Built environment
- Funding



Design constraints:

- Roadway geometry
- ADA criteria
- Speed differential
- Freight vehicles
- Drainage ditches



Human Factors:

- Land use
- Security
- Comfort
- Distraction
- Impairment



Photo: www.pedbikeimages.org / Dan Burdan

Considering tradeoffs

Tradeoffs result in imperfect solutions that attempt to optimize the needs of all roadway users.

What are the alternatives?

How will people be impacted?

What are the costs, benefits, and risks?

Evaluate further safety enhancements.

Exploring Trade-offs: Narrow right-of-way



Narrowing sidewalk around obstructions

- May be most direct route
- Route may not meet design criteria
- May require ROW acquisition or expensive relocations

Sharing designated space with other roadway users

- May complicate intersections
- May reduce user comfort
- Reduced cost/ROW

Alternative pedestrian routes

- May lack directness – increase travel time/effort
- May not be most obvious route

Exploring Tradeoffs: Midblock freeway crossings

Mid-block pedestrian bridges/tunnels

- More direct
- Physically daunting
- Security concerns
- Costly



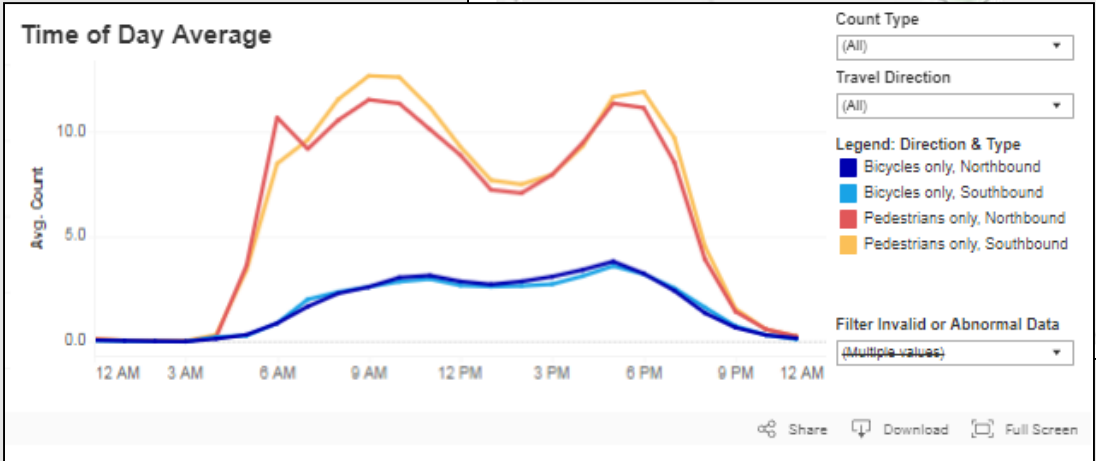
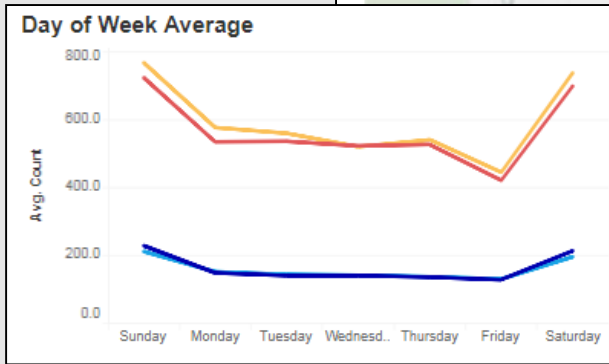
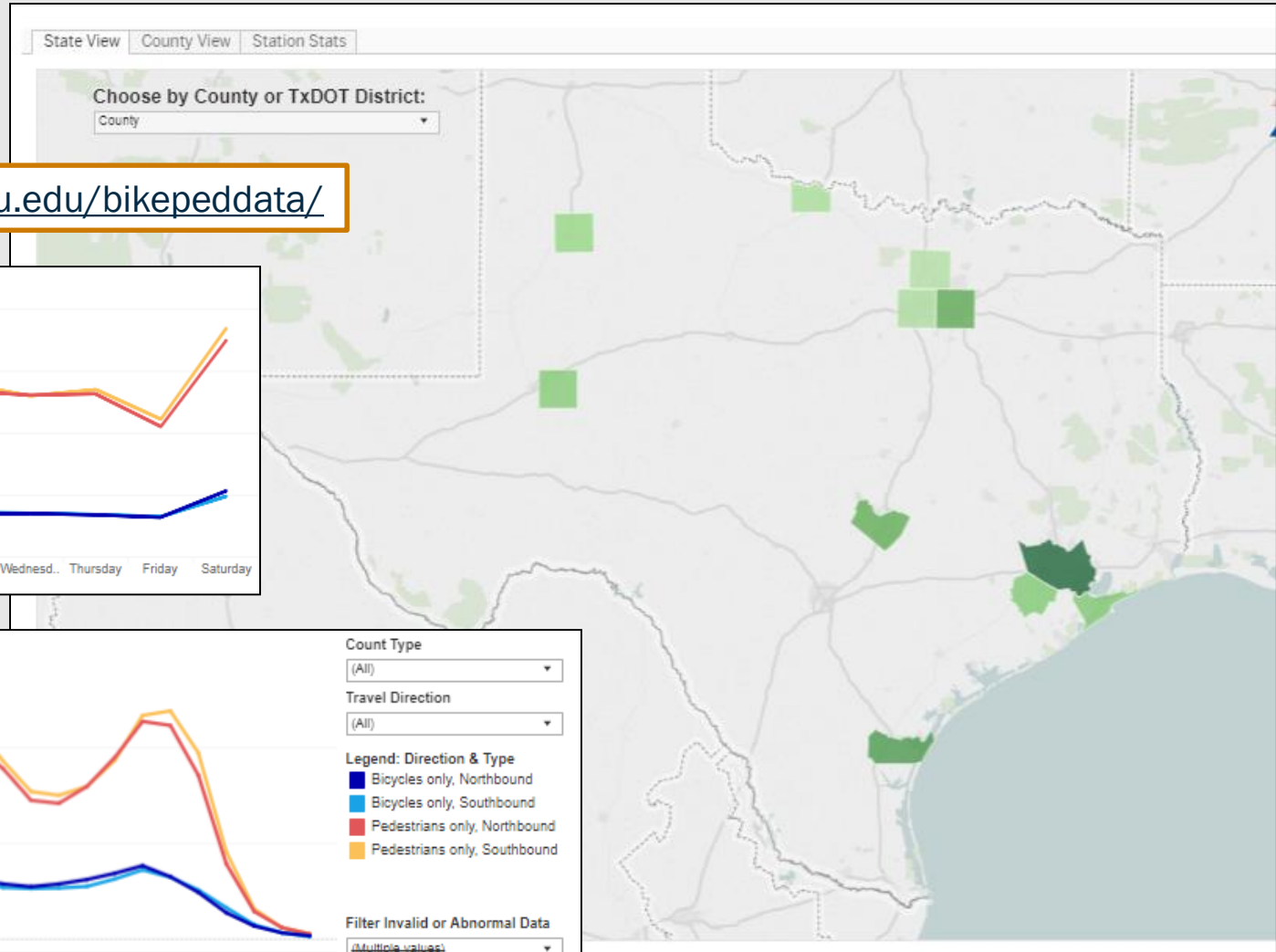
Centerline barriers

- Inexpensive
- Often permeable

- ## Alternative pedestrian routes
- May lack directness – increase travel time/effort
 - May not be most obvious route

Use data to evaluate tradeoffs: Texas Bike/Ped Count Exchange

<https://mobility.tamu.edu/bikepeddata/>



Thank you!

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SAFETY.**

Questions?