



# Speed Limits Discussion

City of Ann Arbor Transportation Commission

Cyrus Naheedy, PE  
Transportation Engineer

June 17, 2020

# Past Work



## 01 Pedestrian Safety and Access Task Force (2015)

- Recommended 25 MPH maximum on local roads
- Recommended 30 MPH maximum on arterial/collector roads
- Work towards Citywide speed limits of 25 mph
- Lobby state government for greater local control of speed limits

## 02 TC– Speed Reduction Committee (2018)

- Did *not* recommend 25 MPH maximum on local roads
- Amend Traffic Calming program
- Public Outreach (A2BeSafe)
- Safe systems approach for roadway design

Several recommendations from both are feeding into the Transportation Plan Update

# The Need

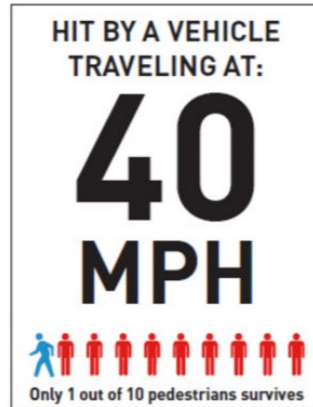
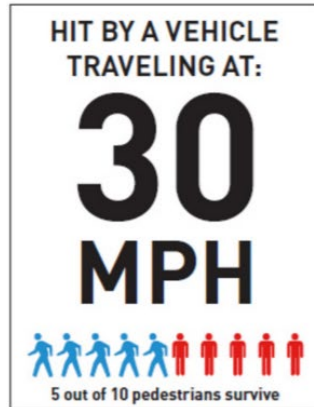
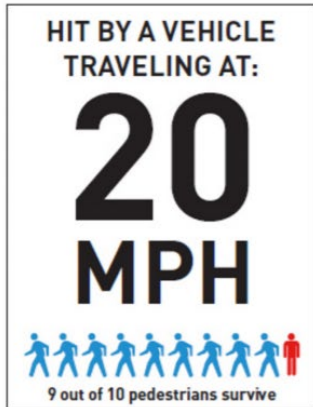


Image: Seattle Department of Transportation

**ANN ARBOR**  
**MOVING  
TOGETHER**

---

**TOWARDS VISION ZERO**



# The Desire

2018 National  
Citizen Survey  
706 Ann Arbor  
residents surveyed

Which of the following statements is closest to the advice you would like to give the City as they... **consider introducing new road designs that have been shown in other cities to reduce pedestrian, cyclist, and motorist crashes?**

---

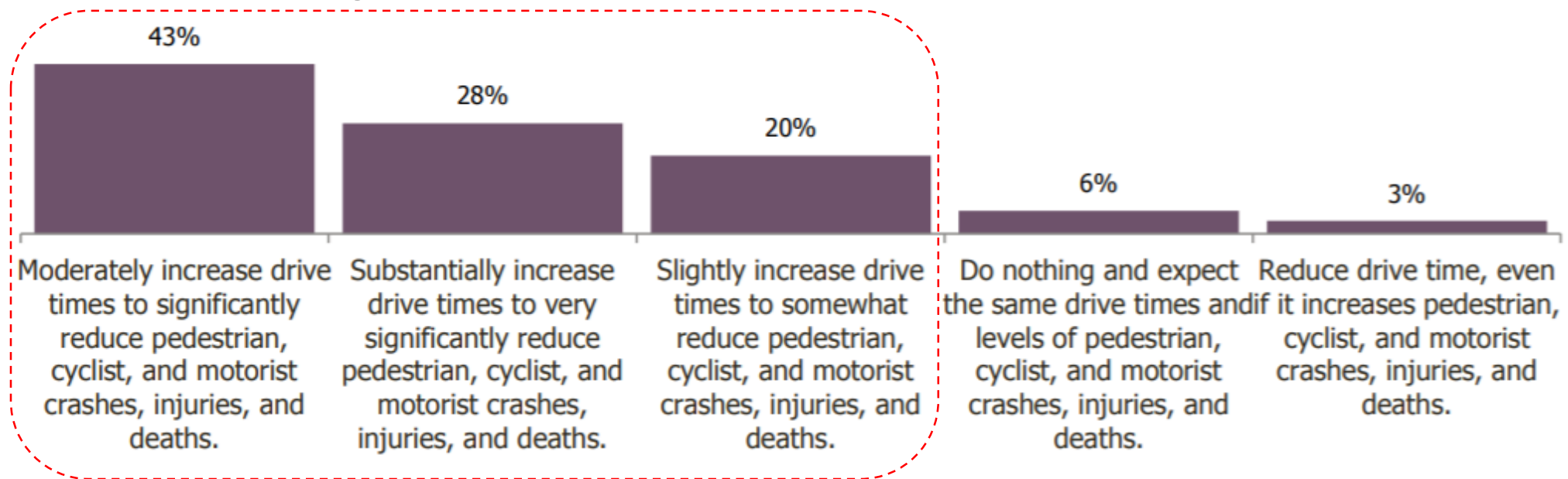
Community Support:

Source: <https://www.a2gov.org/news/pages/article.aspx?i=523>

# The Desire

2018 National Citizen Survey  
706 Ann Arbor residents surveyed

Which of the following statements is closest to the advice you would like to give the City as they... **consider introducing new road designs that have been shown in other cities to reduce pedestrian, cyclist, and motorist crashes?**



Community Support:

**91% support increased drive times** as a tradeoff to reduce traffic crashes, injuries, and deaths

Source: <https://www.a2gov.org/news/pages/article.aspx?i=523>



# The Challenge



## ENGINEERING APPROACH

The engineering approach starts by using the 85th percentile speed - the speed at or below which 85 percent of all vehicles are observed to travel under free-flowing conditions and then is adjusted based on other traffic and road conditions.



## EXPERT SYSTEM APPROACH

The expert system approach applies an algorithm using knowledge and inference procedures that simulate the judgment and behavior of speed limit experts.



## SAFE SYSTEM APPROACH

The safe system approach takes a holistic look at the area and sets limits based on crash types that are likely to occur and their impact on all road users.

# Current Practice

### 01

FHWA identifies 3 specific methods

### 02

Engineering/ Expert System Approach: USLIMITS2

- 85th percentile typically used, in 5 mph increments
- 50<sup>th</sup> Percentile in certain conditions
  - Density of signals, driveways
  - Pedestrian/bike activity
  - Parking activity
- Other considerations
  - Significant crash history
  - Minimum length

### 03

Transitioning to Safe Systems



# Safe Systems

---

- Moving towards a “safe system” approach
- Speed limit change would accompany road design change
- NACTO: City Limits





# State Law Constraints



Minimum Speed Limits



State Trunklines



Automated Enforcement

# Recent Examples



Washtenaw

45 MPH speed limit



Newport

25 MPH speed limit



Geddes

25 MPH speed limit



# Advisory Speeds

---

- Sight distance concerns
- Curves: maximum g-force exerted
- Different road classifications

Recommended  
Speed

*Not  
Enforceable*

# What If?

- A Vision Zero Transportation Network
  - What changes are required to achieve?
  - What is the role of speed limits?
  - Changing driver behavior
- Transportation Plan Update
  - Vision Zero
- Traffic Calming 2.0?
  - Major Streets



**THANK YOU**

---