

Addressing Traffic Safety in Pasadena

Identification of High Collision Locations

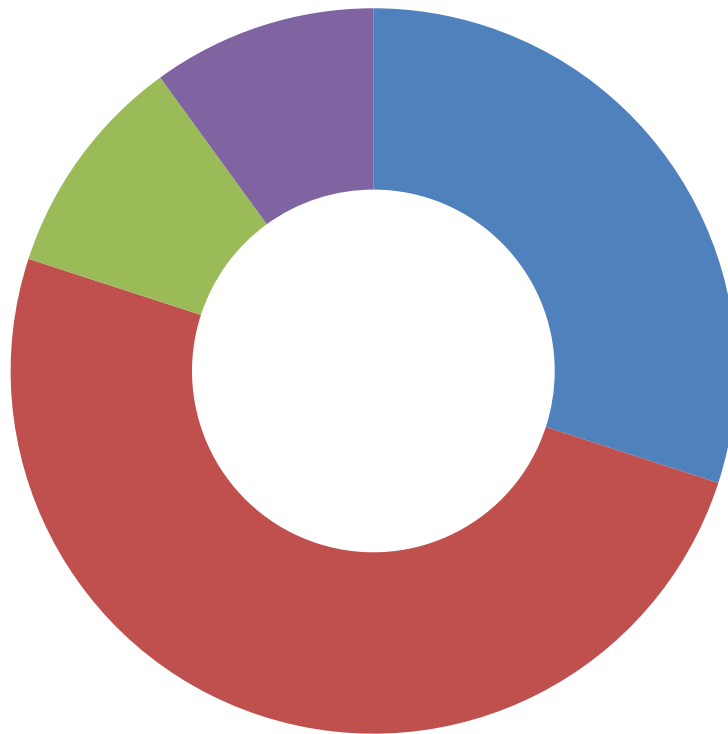
Prioritization of Treatments

Public Safety Committee May 17, 2017





- How Safety Concerns are Identified



■ **Public Suggestions/
Complaints**

■ **Collision Data**

■ **Plans/Programs**

■ **Best Practices/
Research**



Assessing Safety | Prioritizing Change

Department of Transportation

- **Top 10 High Collision Intersections**
 - > Collision Type / Primary Collision Factor / Severity
- **Safety Performance Measures**
 - > Network Screening Tools / Critical Crash Rate
- **Focused Demographic/Geographic Analysis**
 - > High Risk Groups and Areas are mapped/monitored
 - Pedestrians / Bicyclists / School Zones / Elderly
 - Routes to schools, transit, high pedestrian generators
- **Enforcement Actions**
- **Complete Streets Program / Traffic Investigations**
- **Vision Zero / Best Practices**
 - > Highway Safety Manual/ Crash Reduction Factors



Assessing Safety | Prioritizing Change

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- **Countermeasures are identified**
 - > Combination of operations, enforcement, physical change and targeted marketing (education/behavior modification)
- **CIP only includes physical changes \$75,000+**
 - > Prioritized by need
 - > Schedule influenced by available Grant Funding
- **Operations modifications addressed by TMC**
 - > Traffic signal timing and operation
 - > Signs and Pavement Markings



Assessing Safety | Prioritizing Change

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- Enforcement referred to Pasadena Police Dept. daily as staff receives complaints
 - > PPD deploys speed feedback trailer for speeding
 - > PPD provides selective enforcement of traffic laws
 - > For signalized locations with highest red-light running related crashes, Tattle Tale devices installed to aid the enforcement of red-light running
- Education/Encouragement Programs developed
- Reassess and Reevaluate
 - > On-going data collection/monitoring



Top 10 Intersections – Total Collisions

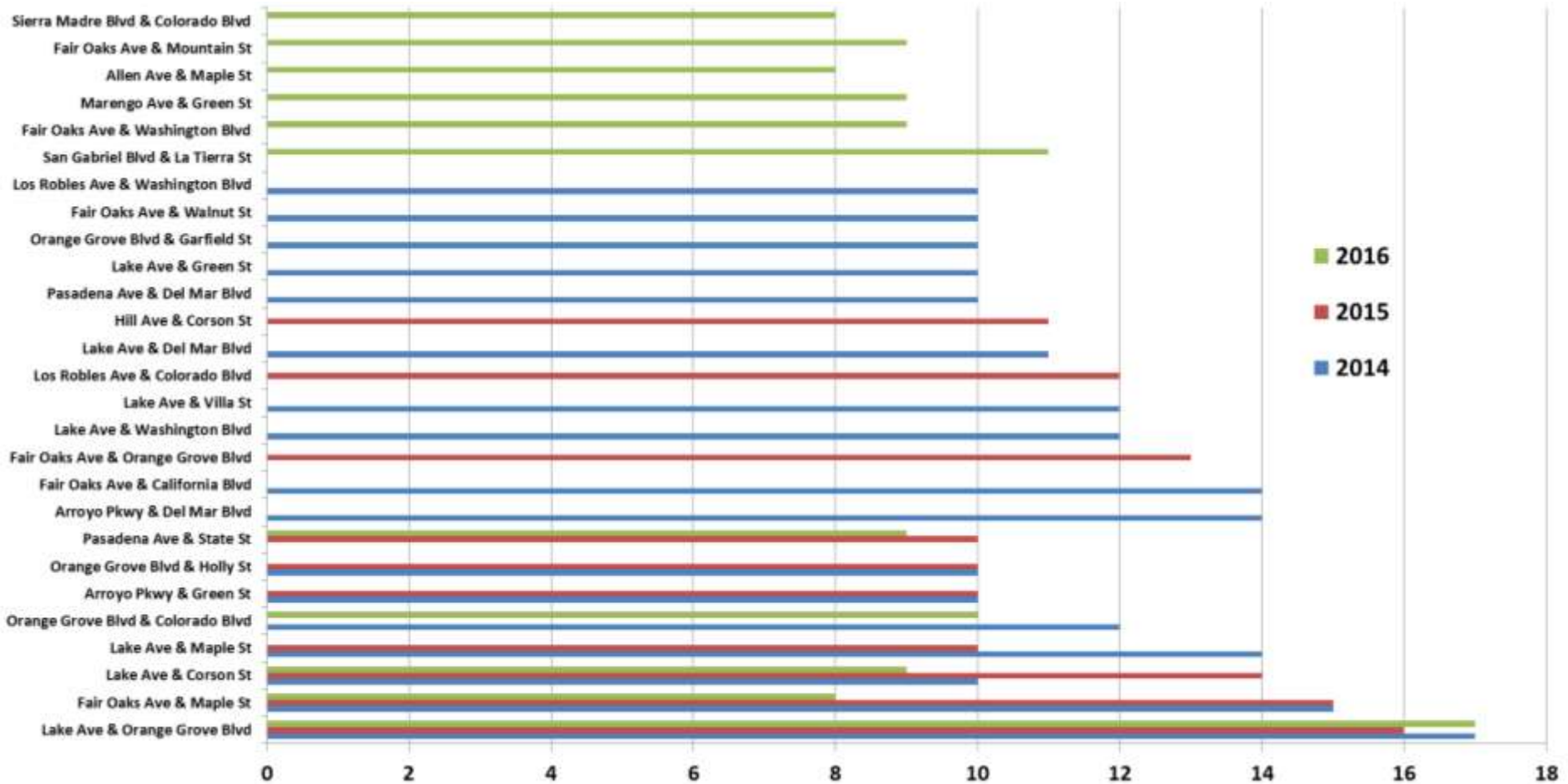
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- **How does an intersection get on the list**
 - > Generally experiences 8 or more collisions in a year
 - > About twice the average annual number of collisions
- **The list is a filter for pattern identification**
 - > Reviewed monthly by DOT and PPD
 - > Used to focus resources and determine if conditions are favorable for physical remediation, operational modifications or enforcement
- **The list is not static**
- **The list is not the only tool in use**



Top 10 Intersections – Total Collisions

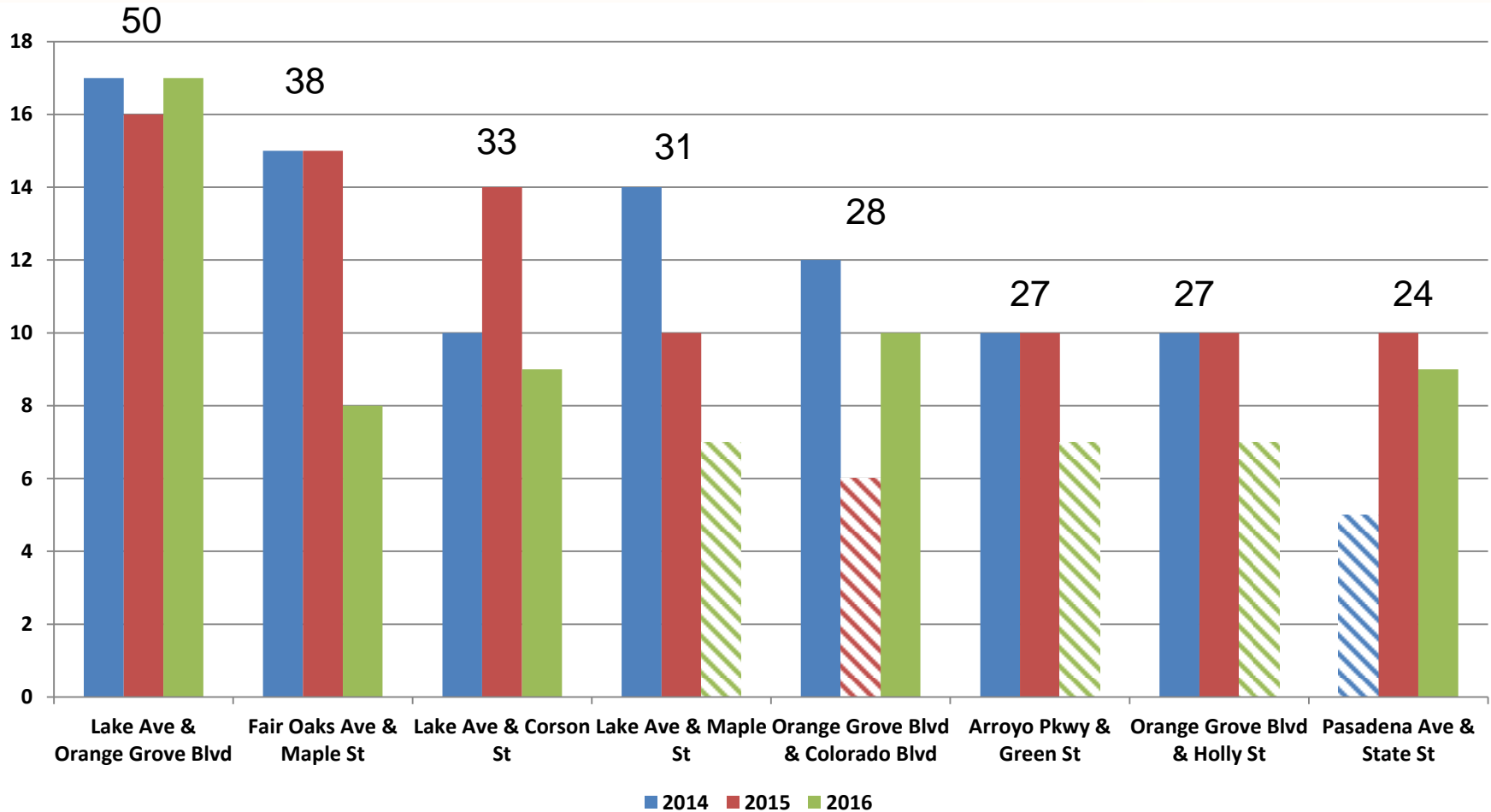
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Intersections in Top 10 – 2 Yrs or More

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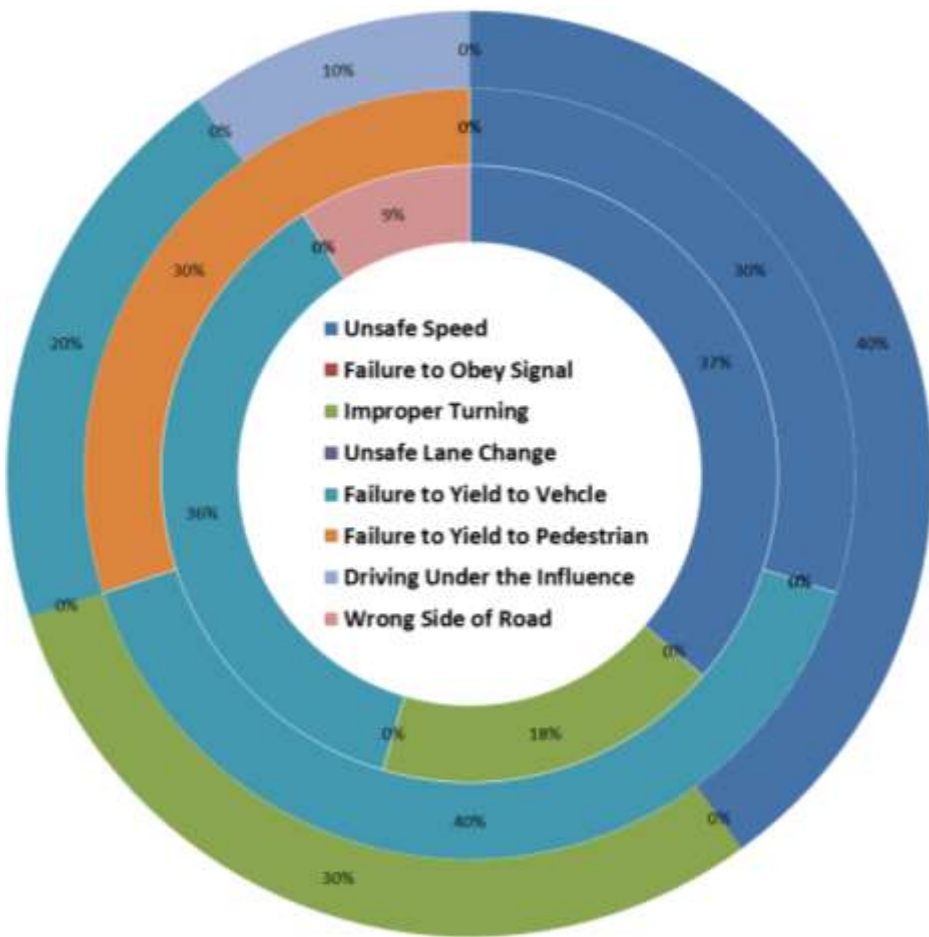




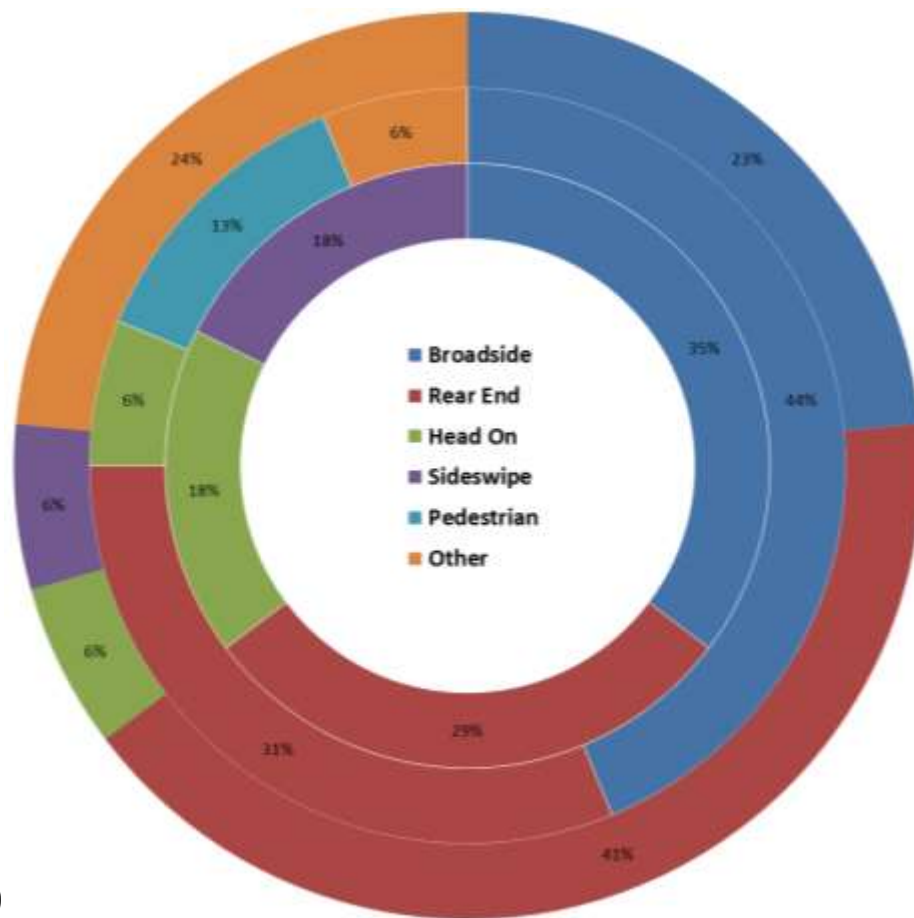
Lake Ave at Orange Grove Blvd

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Primary Collision Factor 2014-2016



Collisions by Type 2014-2016





Intersections in Top 10 2016

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- **Lake Ave & Orange Grove Blvd**
 - > Project developed to add protected left turn signal phases; requires substantially replacing traffic signal system;
 - > HSIP 80/20 federal funding received in 2017
 - > Currently awaiting Caltrans authorization to proceed with design
 - > PPD providing selected enforcement
- **San Gabriel Blvd & La Tierra St**
 - > Staff is researching potential channelization changes
 - > Tattle tale device is planned to assist with red light running
 - > DOT/PW will develop concept designs and preliminary cost estimates in 2017
 - > PPD providing selected enforcement



Intersections in Top 10 2016

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- **Orange Grove Blvd & Colorado Blvd**
 - > Caltrans intersection
 - > Project developed to add protected left-turn signal phases for all approaches
 - > HSIP 80/20 federal funding received in 2015
 - > Design completed in 2017/approved by Caltrans
 - > Project under construction with completion in late summer of 2017
- **Lake Ave & Corson St**
 - > Caltrans intersection
 - > Project to alter timing developed and under review by Caltrans
 - > Implementation in 2017
 - > Tattle tale device installed to facilitate red-light running enforcement
 - > PPD providing selected enforcement



Intersections in Top 10 2016

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- **Pasadena Ave & State St**
 - > Caltrans intersection
 - > Project developed to prohibit turning movements
 - > Encroachment permit submitted in March 2017
 - > Awaiting Caltrans approval; implementation will be completed within 3 weeks after issuance of permit
 - > PPD providing selected enforcement
- **Fair Oaks Ave & Washington Blvd**
 - > Operational enhancements to signal timing
 - > PPD providing selected enforcement
- **Marengo Ave & Green St**
 - > PPD providing selected enforcement



Intersections in Top 10 2016

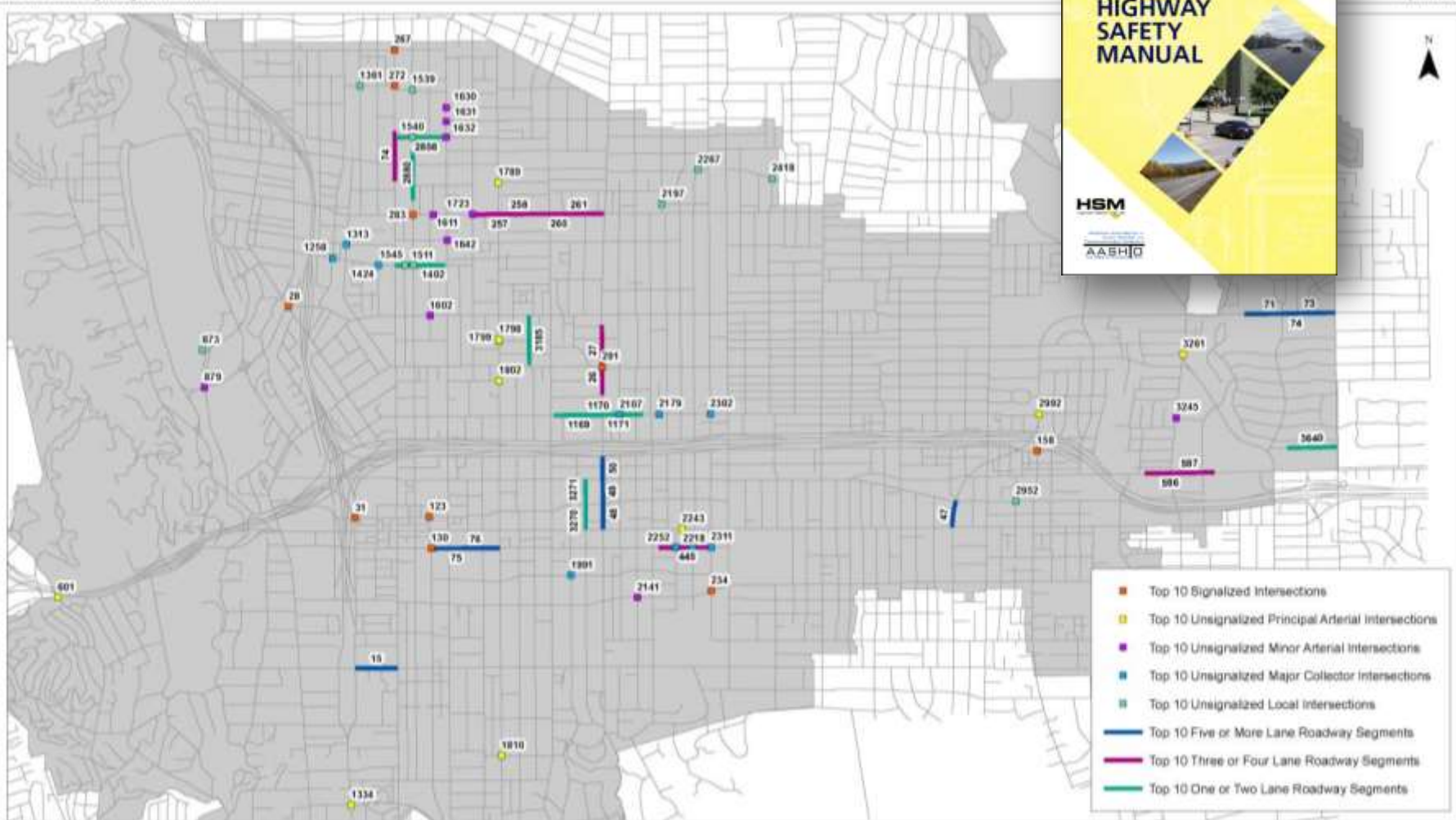
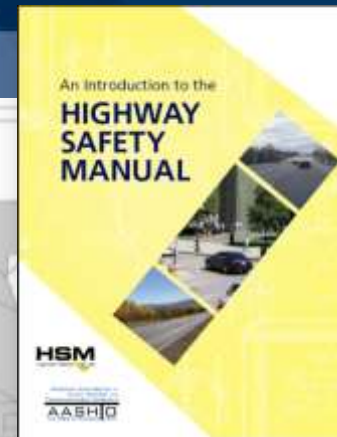
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- **Fair Oaks Ave & Mountain St**
 - > Operational enhancements to signal timing
 - > PPD providing selected enforcement
- **Fair Oaks Ave & Maple St**
 - > Caltrans Intersection
 - > PPD providing selected enforcement
- **Allen Ave & Maple St**
 - > Caltrans Intersection
 - > PPD providing selected enforcement
- **Sierra Madre Blvd & Colorado Blvd**
 - > PPD providing selected enforcement



Network Screening Tools

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Top 10 Locations by Reference Group
Critical Rate Network Screening
City of Pasadena, CA

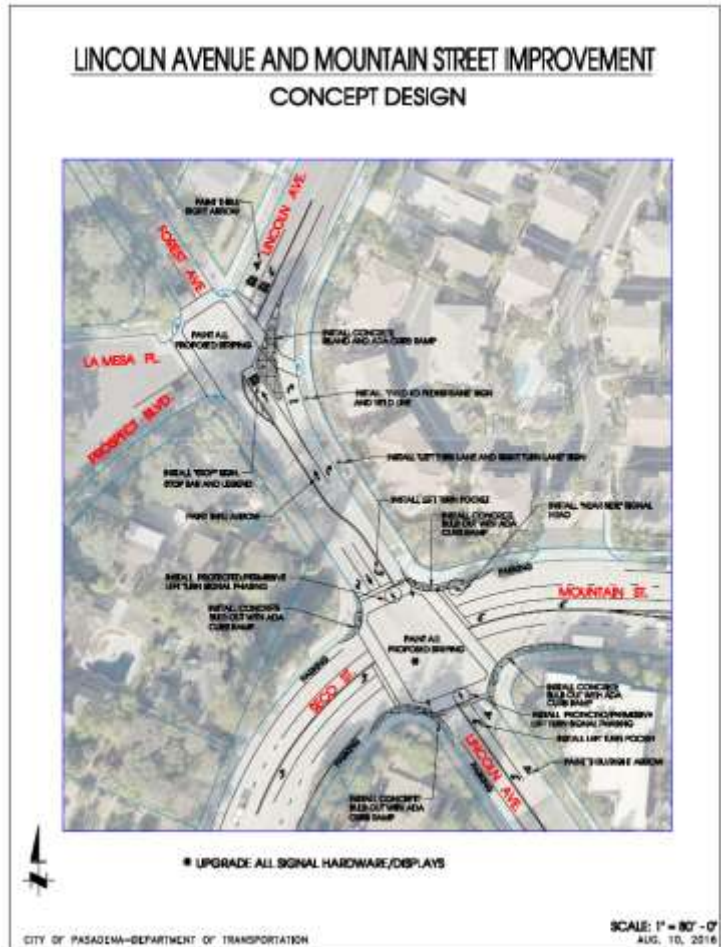
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Focused Countermeasures

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Operational Enhancements and Capital Improvements



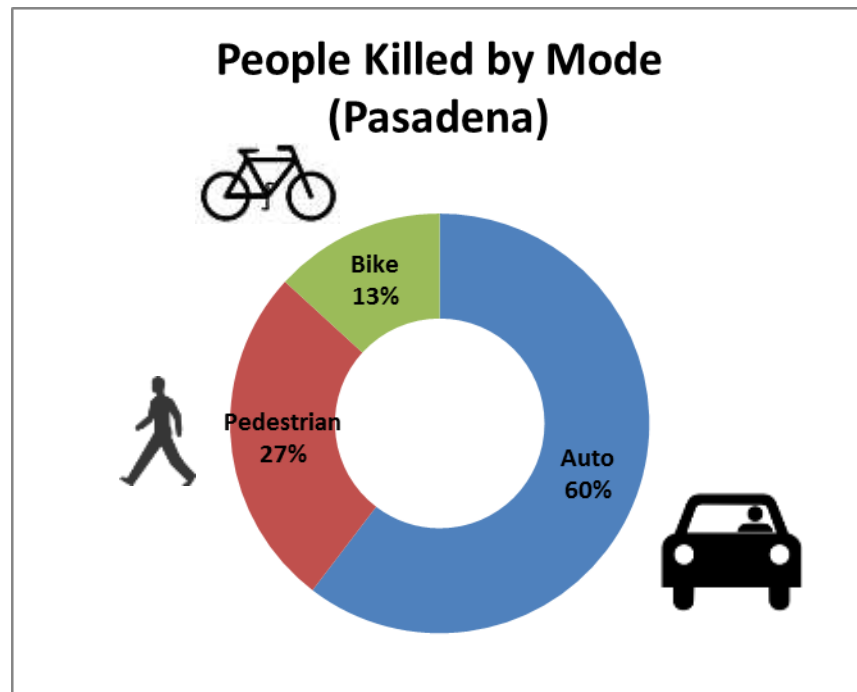
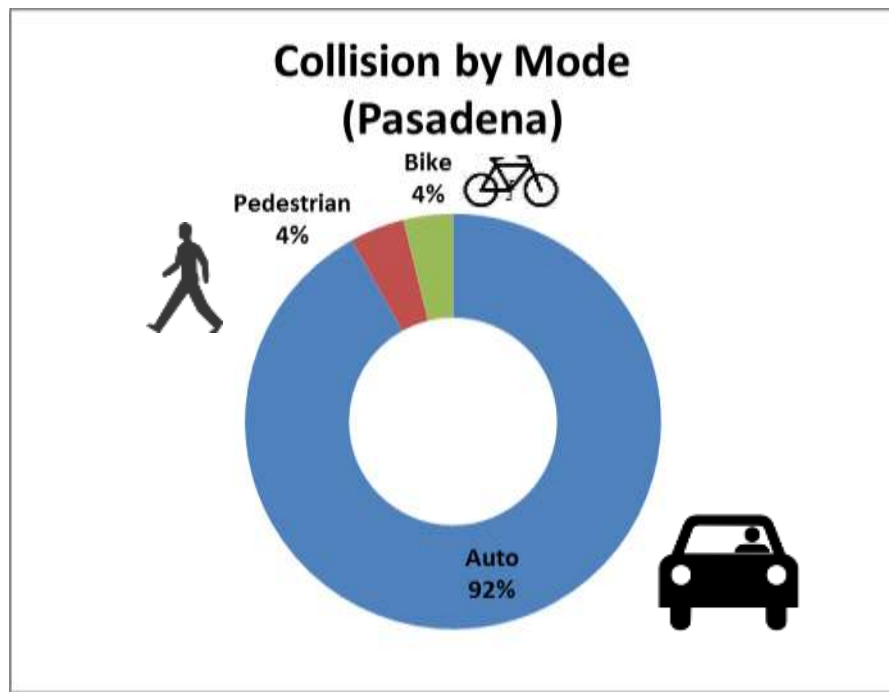
PASADENA



High Risk Groups / Areas

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- Pedestrian and Bicycle Vulnerability
(10-year Pasadena data 2006-2015)

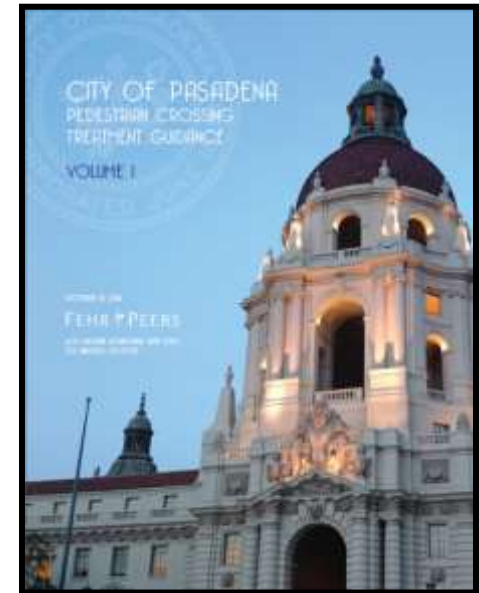




Pedestrian Safety Projects

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- Conduct site visits, identify countermeasures and prioritize safety enhancements





Pedestrian Safety Projects

Department of Transportation

- Conduct site visits, identify countermeasures and prioritize safety enhancements





Pedestrian Safety Projects

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- Pedestrian Safety Projects through Traffic Investigations and Operations

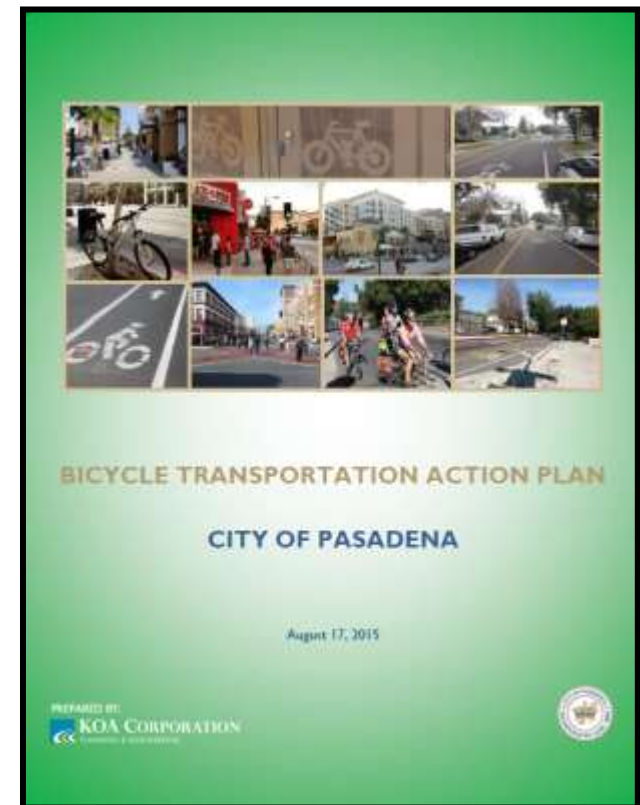




Bicycle Projects

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- Bicycle Transportation Action Plan





Bicycle Projects

Department of Transportation

- Bicycle Transportation Action Plan





Speed Management

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HIT BY A VEHICLE
TRAVELING AT:
**20
MPH**
10%
DEATH RISK



HIT BY A VEHICLE
TRAVELING AT:
**30
MPH**
40%
DEATH RISK



HIT BY A VEHICLE
TRAVELING AT:
**40
MPH**
80%
DEATH RISK

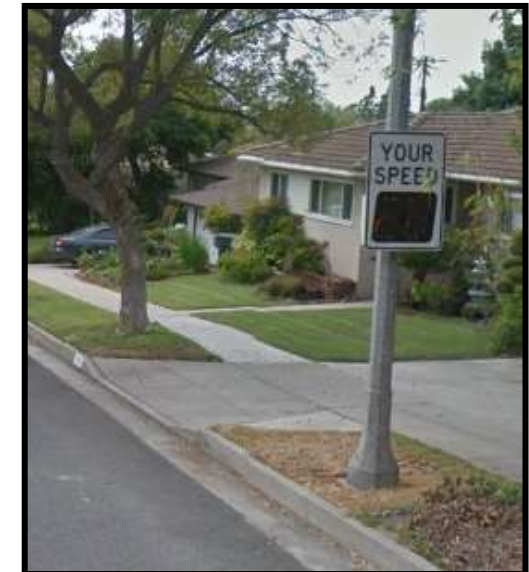


Image Source: City of Los Angeles, Vision Zero Fact Sheet. August 2015.



Assessing Safety | Prioritizing Change

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- Lower Cost vs Higher Cost Improvements
- Identification of funding sources
 - > Many are dependent on safety or mobility grant funding
- Funding dictates scheduling
 - > Type of funding dictates timing of design
 - Engineering dependent upon capital funding
 - > Federal/State/Regional funding sources have different requirements and timelines



Reassess | Reevaluate

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- Installing automated monitoring via CIP
 - > Network performance, traffic volume, travel times
- On-going effort to develop analytics to further enhance assessment and prioritization
- Continued outreach via Complete Streets
- Ongoing TIs and Development Review
- Ongoing Enforcement and Education
- Coordination with Public Health Department on treating traffic safety as public health item



Reevaluate | Report

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- **Periodic Update for Public Safety Committee**
 - > Twice yearly
 - > Report on status of safety assessment
 - > Identification of countermeasures for CIP consideration
- **Incorporate into an Analytics Dashboard**
 - > Developing from monitoring infrastructure
 - > Integration of local and big data streams
 - > Snapshot of assessment and implementation activities