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
• **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
• 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
• 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
• 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

Department of Transportation

[Bar chart showing the total collisions at various intersections in 2014, 2015, and 2016.]
Intersections in Top 10 – 2 Yrs or More

Department of Transportation

Lake Ave & Orange Grove Blvd 50
Fair Oaks Ave & Maple St 38
Lake Ave & Corson St 33
Lake Ave & Maple St 31
Orange Grove Blvd & Colorado Blvd 28
Arroyo Pkwy & Green St 27
Orange Grove Blvd & Holly St 27
Pasadena Ave & State St 24

2014 2015 2016
Primary Collision Factor 2014-2016

Collisions by Type 2014-2016
• 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
• 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
• **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
• 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
Focused Countermeasures

Operational Enhancements and Capital Improvements
• Pedestrian and Bicycle Vulnerability

(10-year Pasadena data 2006-2015)
Pedestrian Safety Projects

- Conduct site visits, identify countermeasures and prioritize safety enhancements
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• Pedestrian Safety Projects through Traffic Investigations and Operations
Bicycle Projects

- Bicycle Transportation Action Plan
Bicycle Projects

- Bicycle Transportation Action Plan
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.
• 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
• 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
• 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