



# NORTH/SOUTH CORRIDOR SMART MOBILITY PLAN: FREMONT AVENUE

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CITY COUNCIL  
AUGUST 5, 2020

# FREMONT AVENUE



- Classification: Arterial
- Capacity of Arterial: 1,600 to 1,900 vph per lane
- Two lane arterial (one lane in each direction)
- Posted Speed Limit 30 mph



# Fremont Ave Data Overview

- Average Traffic Volumes
  - 2014: 26,071 vehicles
  - January 22, 2020: 18,494 vehicles
  - Decrease between 2014 and 2020: 29.1%
  - AM Peak: 1,236 & PM Peak: 1,448 (both directions)
- Average Speed
  - 2020: 29 mph (consistent with 2014 speed survey data)
  - Actual travel speed 23 to 24 mph
  - 81% of the vehicles traveling within posted speed limits
- Vehicle Classification
  - Single Unit Vehicles (passenger cars/SUV): 18,051 units (98%)
  - 2-Axel 6 tire (mostly utility trucks): 380 units (2%)
  - Large Trucks (3-axel units): 25 units



# Neighborhood Concerns

- Decrease congestion and illegal trucks.
- Deter excessive speeding.
- Safe pedestrian crossings and sidewalk connectivity.
- Make Fremont more family and pedestrian friendly.

# Neighborhood Requested Improvements

- Installation of digital speed signs.
- Construction of medians restricting illegal trucks accessing the street.
- Creation of a roundabout/crosswalk at Fremont and Buena Vista, including pedestrian control features like RRFB.



# Short Term Measures: Fremont Ave

- Replace faded striping along the corridor.
- Added “Keep Clear” striping/signage at Fremont and Lyndon.
- Add high visibility crosswalks on Buena Vista St.
- Add speed limit signage as needed.
- Striping for parking spaces.
- Coordination with Police Department to increase enforcement and deployment of portable speed feedback signage.
- Install additional signage to deter trucks on Fremont Ave.
- Completed CIP Project Forms for Fremont Avenue funding.
- Applied for Metro MAT grant seeking funding for Active Transportation.
- Continue to collaborate with the Families on Fremont.



# MTIC Short Term Requested Items: Fremont Ave

- Northbound left turn lane on Fremont Ave at Buena Vista St.
- Edge line striping along Fremont Ave.
- Painted medians.
- Reverse curve sign and advisory speed limit sign adjacent to flashing beacon on Fremont Ave near Buena Vista St.
- Relocate the speed limit sign near 411 Fremont Ave closer to Columbia St.
- Repaint the Speed Limit pavement markings (between Buena Vista Ave and Foothill St).
- Update pedestrian signal crossing timings on Fremont Ave.
- Additional signage to deter trucks from turning onto Fremont Ave.



# MTIC Short Term Requested Items: Fremont Ave

- Activate northbound right turn traffic signal at Fremont Ave and Huntington Dr (complete).
- Add protected left turn traffic signal from southbound Fremont onto eastbound Huntington Dr (Capital Project).
- Update signal timings at Fremont Ave and Huntington Dr (coordinate with above).
- No Left turn on Fremont Ave from side streets during school drop off and pick up.
- Additional red curb paint on Fremont Ave north of Buena Vista St.
- Collaborate with Cities of Pasadena and Alhambra on Fremont Ave.

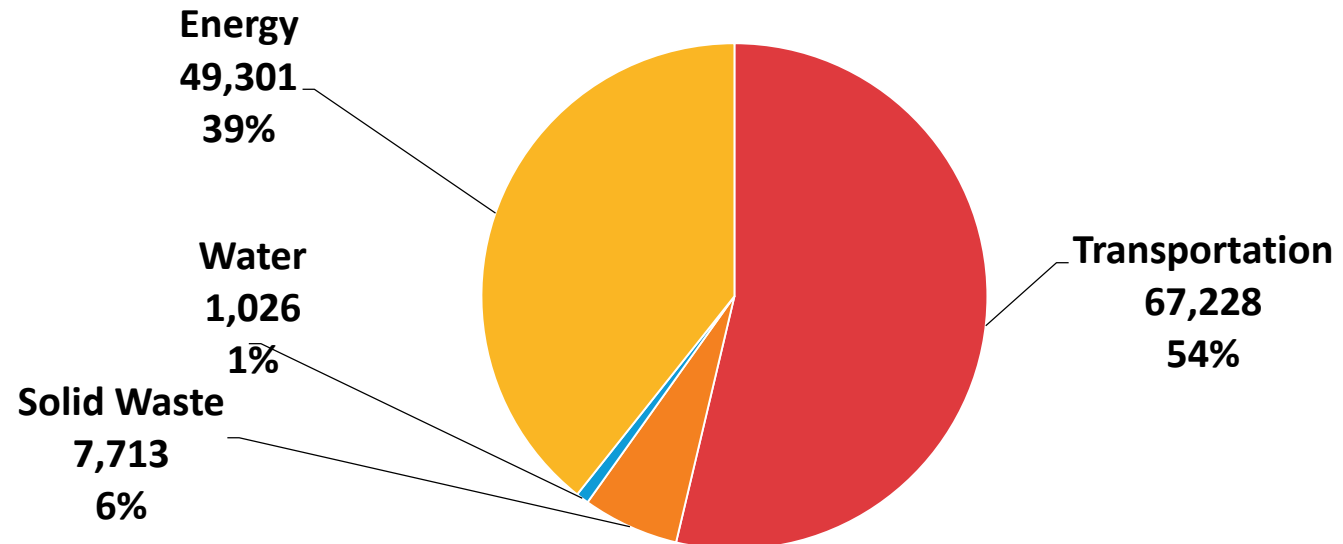
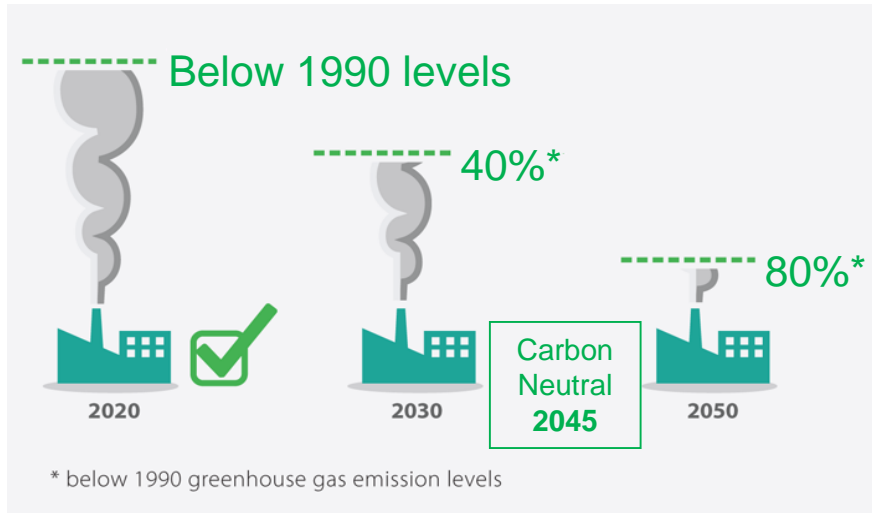


# City's Plan Looking Ahead on Fremont Ave

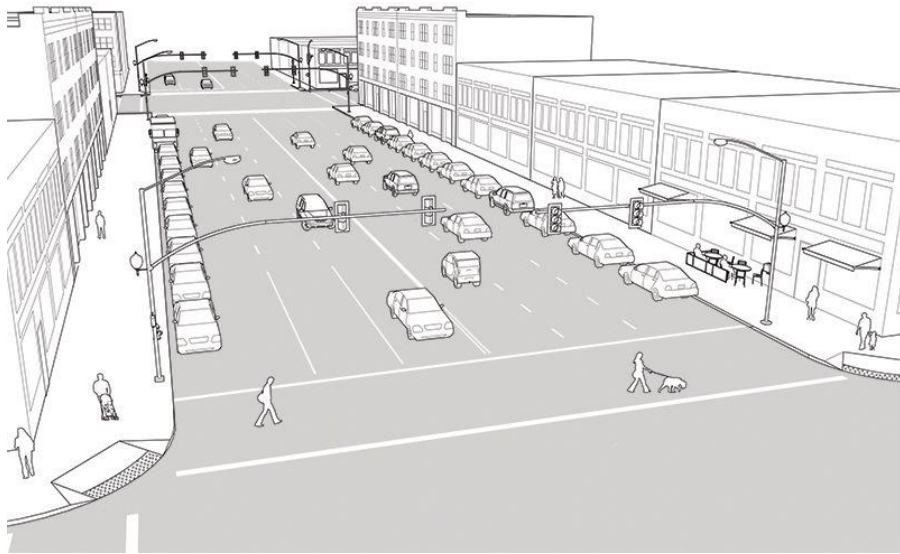
- Staff continues to work with Families on Fremont to gain support for the Fremont Avenue Complete Street Project.
- Convert Fremont Avenue to a “*Livable Complete Street*” with “*Smart Mobility and Active Transportation*” incorporating “*Green Streets*” design elements.
- Complete Street Definition: “A transportation facility that is planned, operated and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit riders, and motorists appropriate to the **function and context** of the facility.” – Caltrans Deputy Directive 64-R2



# Climate Action Plan Info/Data



# Complete Street – Before & After



Before



After

# Street without Complete Street Elements



# Complete Street – Examples





# City's Plan Looking Ahead on Fremont Ave

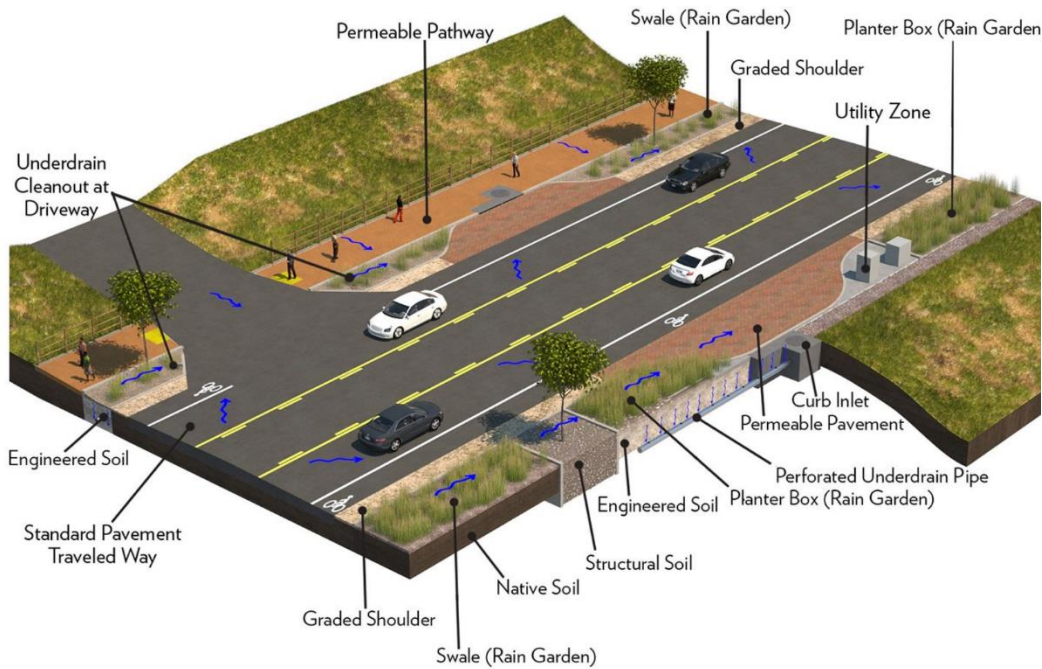
- Potential Complete Street elements for Fremont Ave:
  - Create safe and attractive Green Street.
  - Aesthetically pleasing flat raised (conspicuous) intersections and crosswalks to improve visibility and traffic calming.
  - Protected Intersections.
  - Medians treatments along the corridor.
  - Refuge islands and vehicle separation.
  - Gateway treatments including roundabouts and channelizers.
  - Pinchpoints.
  - Pedestrian control features such as Rectangular Rapid Flashing and other hybrid devices like Hawk Signals.
  - Install bike facilities including green pavement marking.
  - Upgrade traffic signal to include adaptive pedestrian and bike safe crossing features.



# City's Plan Looking Ahead on Fremont Ave

- Potential Complete Street elements for Fremont Ave:
  - Improve signal progression to create traffic platooning.
  - Real-time speed and travel time monitoring systems.
  - Changeable speed feedback signage.
  - Pavement resurfacing/rehabilitation.
  - Upgrade the pavement markings and signs throughout the corridor.
  - Improve pedestrian and ADA accessibility along the corridor.
  - Improve safe route to schools where possible.
  - Parkway treatment where appropriate.
- Complete street design elements will require a detailed study to determine effective elements that meet all design requirements and standards.

# Green Streets



# Raised Intersection & Crosswalk Improvements

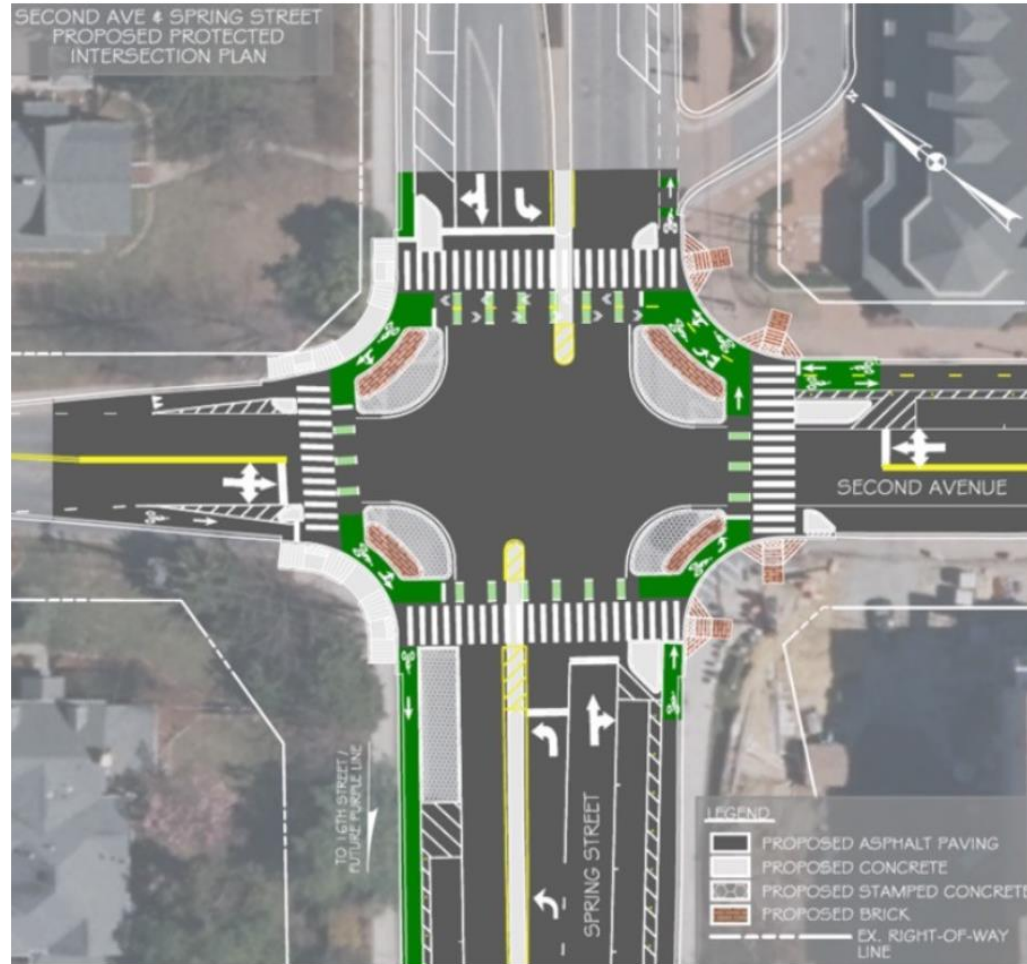




# High Visibility Crosswalks



# Protected Intersections



# Median Treatments & Refuge Islands



# Median Treatments & Refuge Islands



# Roundabouts



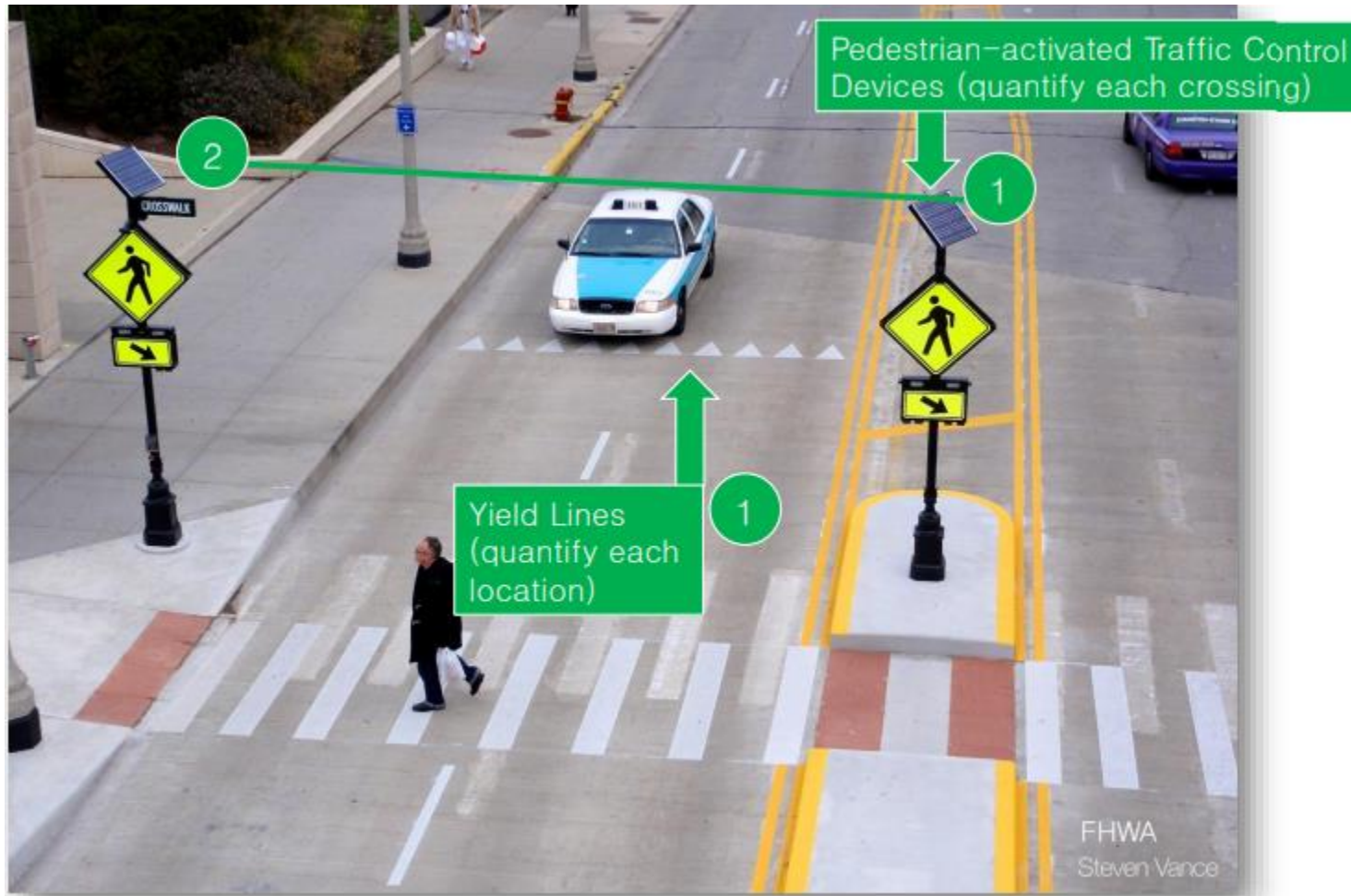
# Gateway Treatments: Channelizers



# Pinchpoints



# Pedestrian-Activated Traffic Control Devices & Refuge Island





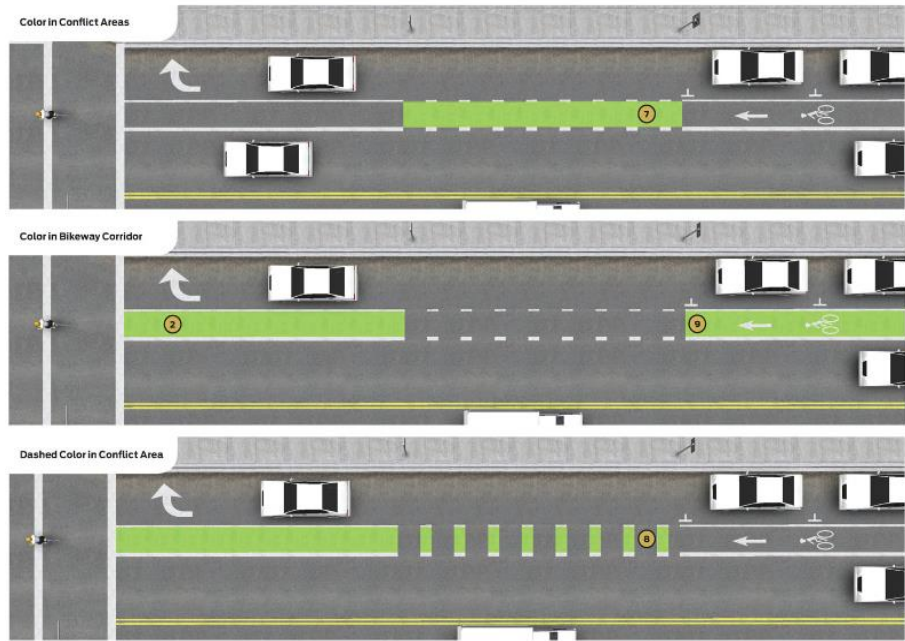
# Rectangular Rapid Flashing Beacon



# High-Intensity Activated Crosswalk (HAWK)



# Green Bike Pavement Markings



# Upgraded Traffic Signals



# Real-time Travel Information





# FREMONT AVENUE COMPLETE STREET CONCEPT PLAN

# Fremont Ave – Existing Configuration



# Fremont Ave – Complete Street Concept







# Funding Available for Fremont Ave

- City has received \$10M in Measure R MIP to mitigate SR-710 impacts to increase north-south through put traffic and capacity on Fremont.
- This is against the wishes of the community and these funds cannot be used for traffic calming.
- Therefore, the City applied for MAT grant with Metro for Fremont Avenue Complete Street.
- Complete Street may require parking removal to install active transportation facilities.
- Funding has been requested for Fremont Complete Street Project in the City's Capital Improvement Plan.
- Continue to seek active transportation grant funding.

# Shelf Ready Projects





QUESTIONS?



# BACKUP SLIDES



# Fremont Ave Data Overview

- Fremont Avenue
  - Classification: Arterial
  - Capacity of Arterial: 1,600 to 1,900 vph per lane
  - Two lane arterial (one lane in each direction)
  - The data presented for Fremont Ave between Columbia Street and Buena Vista Street



# Fremont Ave Data Overview

- Average ADT

- 2014: 26,071 vehicles
- December 17, 2019: 19,907 vehicles
- January 22, 2020: 18,494 vehicles
- Decrease between 2014 and 2020: 29.1%

- Peak Hour Volume

- AM Peak: 1,236 vehicles (total both directions)
- AM Peak Hour Factor: 0.9
- PM Peak: 1,448 vehicles (total both directions)
- PM Peak Hour Factor: 0.9



# Fremont Ave Data Overview

- Average Speed
  - Posted Speed: 30 mph
  - 2020: 29 mph (consistent with 2014 speed survey data)
  - Actual travel speed 23 to 24 mph
  - 81% of the vehicles traveling within posted speed limits
- Vehicle Classification
  - Single Unit Vehicles (passenger cars/SUV): 18,051 units (98%)
  - 2-Axel 6 tire (mostly utility trucks): 380 units (2%)
  - Large Trucks (3-axel units): 25 units
  - Buses (mostly school): 26 units



# Fremont Ave Data Overview

- Collision Data (2015 to 2019 from SWITRS)
  - 4 collisions in 5 years at an average of 0.8 collisions per year.
  - No fatal or serious injuries in the data reported years.
  - Rear End Collision - Fremont and Foothill: southbound on 5/14/2015.
  - Rear End Collision - Fremont and Foothill: southbound on 11/28/2016.
  - Collision with Parked Vehicle - Fremont and 588' south of Columbia: southbound on 12/9/2015.
  - Rear End Collision - Fremont and 519' south of Columbia: southbound on 11/11/2019.
  - Motorcycle collision on 1/8/2020 not yet reported in SWITRS.





# 2011 Fremont Ave Concept Plan

- 2011 Concept Plan prepared by Glatting, Jackson, Kercher, Anglin, Inc.
- Raised medians at intersections and raised intersections around the schools.
- Bulbouts at major intersections (such as Monterey Road).
- Pedestrian treatments at post office (near El Centro).
- Roundabout at railroad crossing and Grevalia Street.
- Fremont Ave and Alhambra extension of the merge lane.
- A concept plan, no data and engineering details are provided in the report.



# Neighborhood Requested Improvements

- Installation of digital speed signs (\$60,000).
- Construction of medians restricting illegal trucks accessing the street (\$100,000-150,000).
- Creation of a roundabout/crosswalk at Fremont and Buena Vista (crosswalk with control features like RRFB \$100,000).
- Decrease congestion and illegal trucks (additional signage at minimal cost and channelizer for \$150,000-\$200,000).
- Deter excessive speeding (additional speed limit signs and traffic calming devices along the corridor, cost varies).
- Safe pedestrian crossings and sidewalk connectivity.
- Make Fremont more family and pedestrian friendly.



# Measure M MSP Project Summary

- Original Measure M MSP Project List (Year 1 to 5):
  - Columbia St. and Pasadena Ave. Turn Lanes, Columbia St and Orange Grove Ave. Striping = \$150K (2019-20 FY)
  - Garfield Ave and Monterey Road Traffic Signal = \$400K (2019-20 FY)
  - Garfield Ave and Oak Street Traffic Signal = \$400K (2019-20 FY)
  - Fremont Avenue and Huntington Drive Signage = \$140K (2021-22 FY)
  - Grevalia Street and Fair Oaks Ave Striping and Signal Timing = \$50K (2021-22 FY)
  - Fair Oaks, El Centro/Oxley, Meridian, Fremont Bikeway Improvements = \$69K (2021-22 FY)
  - Total Measure M Funding (Year 1 to 5) = \$1.2M



# Measure M MSP Project Summary

- Updated Measure M MSP Project List:
  - Garfield Ave and Monterey Road Traffic Signal = \$400K (2019-20 FY)
  - Meridian Ave Complete Street = \$922K (2020-21 FY)
  - Diamond Ave and Lyndon St Intersection Improvement = \$200K (2020-21 FY)
  - Mission St, Arroyo Dr, and Stoney Dr Intersection Improvement = \$200K (2020-21 FY)
  - Total Measure M Funding (Year 1 to 7) = \$1.7M