THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: November 20, 2020

TO: Gary Pence, Senior Traffic Engineer, Operations Section, Transportation
               Engineering Operations Division (TEO)
               Steve Celniker, Senior Traffic Engineer, Traffic Signals Section, TEO

FROM: Julio Fuentes, Senior Traffic Engineer, Safety Section, TEO

SUBJECT: High Crash Rate and Pattern Intersections for Calendar Year 2019

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For calendar year 2019, three (3) intersections with high injury crash rates (1 standard deviation or more above average) were identified, along with one (1) intersection with a pattern of injury crashes (6 or more of the same crash type from the same directions).

Segments were evaluated but did not produce significant results. This is consistent with the Systemic Safety Analysis Reporting Program (SSARP), which shows that most serious collisions happen at intersections, not segments. In place of segment analysis, the primary focus will remain on intersections and systemic analysis, particularly for pedestrians.

This year the High Crash Location analysis used only injury crashes instead of all crashes, excluding property-damage-only crashes. This helps to focus staff time and City funds toward eliminating more severe crashes, which provides a much greater societal benefit. Due to this change, there are fewer intersections than in previous years. This is compensated for by the many locations that are identified and improved using systemic analysis and countermeasures, especially pedestrian crash locations.

Since the start of SSARP, we have applied for 4 systemic grants. The intersections in each of those grants were identified using systemic analysis, and propose systemic countermeasures.
  - GRANT 1 – 66 intersections Lead Pedestrian Interval Systemic Safety
    o STATUS: Approved. IO number has been created. Preparing to purchase items needed. Expected completion before end of May 2022.
    o Total Project Cost of $1,206,100
    o Countermeasures:
      ▪ Blank-out signs and controllers to support Leading Pedestrian Intervals
      ▪ Pedestrian countdown signal heads
      ▪ High-visibility marked crosswalks

- GRANT 2 – 215 intersections Pedestrian Signal Improvements
    - o STATUS: Approved. IO number has been created. Preparing to purchase items needed. Expected completion before end of May 2022.
    - o Total Project Cost of $249,500
    - o Countermeasures:
        - ▪ Pedestrian countdown signal heads
- GRANT 3 – 16 intersections Traffic Heads Visibility Systemic Grant
    - o STATUS: submitted to Caltrans, waiting for approval
    - o Total Project Cost of $3,280,000
    - o Countermeasures:
        - ▪ Improve signal hardware: lenses, back-plates with retroreflective borders, mounting, size, and number
        - ▪ Pedestrian countdown signal heads
- GRANT 4 – 12 intersections Left Turn Phasing Systemic Grant
    - o STATUS: submitted to Caltrans, waiting for approval
    - o Total Project Cost of $2,273,400
    - o Countermeasures:
        - ▪ Provide protected left turn phase (left turn lane already exists)

Please review the attached list of segments to determine what traffic engineering measures, if any, are expected to improve safety. Crash summaries and crash location diagrams have been prepared to assist you. If you have any questions, please contact Phil Rust at (619) 533-3714.

Julio Fuentes
Senior Traffic Engineer
PR/am

Attachment: CY 2019 High Crash Rate List and Pattern List

CC: Duncan Hughes, Deputy Director, TEO
       Everett Hauser, Program Manager, TEO
       Gary Chui, Senior Traffic Engineer, Systems Oversight Section, TEO
       Brian Genovese, Senior Traffic Engineer, Bike Program Section, TEO
       Joseph Jimenez, Senior Traffic Engineer, Operations Section, TEO

INTERSECTIONS WITH HIGH CRASH RATES[1]
CALENDAR YEAR 2019

INTERSECTION	CRASH RATE[2]	TOTAL INJURY CRASHES	ENTERING TRAFFIC[3]
1. Market St & 15th St (2WSC)	1.26	6	13,014
2. Imperial Av & 16th St (S)	1.13	6	14,588
3. National Av & 28th St (S)	0.93	8	23,673

[1] High crash rate intersections have a crash rate equal to or greater than one standard deviation (0.308) above the average crash rate (0.579). The crash rate was calculated for the forty-seven (47) intersections that had six (6) or more reported crashes in 2019. Property damage only crashes are not reported.

[2] The crash rate equals: (number of reported crashes x 1 million) divided by (entering traffic x 365 days).

[3] Entering traffic is the number of vehicles entering the intersection on an average weekday.

INTERSECTIONS WITH HIGH CRASH PATTERNS[4]
CALENDAR YEAR 2019

INTERSECTION	CRASH PATTERN	TOTAL INJURY CRASHES
1. 10th Avenue & A Street (S)	(SB vs. EB) Broadside	10

[4] The intersections on this list were identified by reviewing a list of forty-seven (47) intersections that show six (6) or more crashes for Calendar Year 2019. Any intersection with six (6) or more crashes of the same type and from the same direction were placed on this table (excluding the locations on the calendar year 2019 High Crash List).

(S): Signalized intersection.

(2WSC): 2-way-stop-controlled intersection.