City of San Diego **DEPARTMENT INSTRUCTION**	DI Number **1.1**	Department **Transportation**
Subject **Citywide Crash Analysis**	Page **1 of 2**	Effective Date **7/24/2024**
Division Applicability **Engineering and Asset Management Division**	Supersedes DI **1.0**	Dated **7/23/2024**

1. PURPOSE

   Identifying high-crash locations is an important first step to create and maintain a proactive traffic safety improvement program that reduces fatalities and injuries on City streets. The Engineering and Asset Management Division of the Transportation Department is responsible for evaluating the highest crash locations on a yearly basis and identifying improvements. This Department Instruction shall be used to guide the evaluation of crash locations and the subsequent steps and timeline for the yearly high crash location analysis.

2. SCOPE

   The scope of this Department Instruction includes three methods to analyze high crash locations. The three methods are crash rate, crash pattern, and crash frequency. This instruction outlines the timelines of gathering and analyzing the highest crash locations citywide along with the method of each type of analysis.

3. TIMELINE & FUNDING

   The Engineering and Asset Management Division's Traffic Safety Section will conduct a crash analysis of the highest crash locations. The crash analysis should be completed by July 31st of each year for the previous calendar year and provided to the Section(s) responsible for the identified locations.

   The Senior Engineer from each responsible Section will respond to the Safety Section by September 30th with a report listing the findings from the safety analysis for each location, the proposed improvements for each location, and cost estimates for each improvement. Each responsible Section will ensure the identified improvements are either funded, programmed or placed on the Transportation Unfunded Needs List until funding becomes available. Prioritizing for funding is based on Council Policy 800-14, CIP Prioritization Policy. Programming of funds available in the following fiscal year typically begins in November and is allocated in July. If no funding is available, the identified improvements should be added to the Transportation Unfunded Needs List.

   The Safety Section will prepare a final report consolidating the recommended improvements, cost estimates, and planned actions for improvements by October 31st. The Safety Section will also provide the reports to the website administrator to be posted and include systemic safety actions taken.

   If funding is received for a specific type of pedestrian safety infrastructure improvement, Council Policy 800-14, will be a factor in determining where pedestrian infrastructure is improved.

4. THREE METHODS OF CRASH ANALYSIS

   a. *Crash Rate*

   Compile all intersections with five or more intersection-related injury and fatal crashes reported for that year. The crash rate of an intersection is calculated using the following formula:

   $$\frac{(1{,}000{,}000 \times \text{Number of reported injury crashes})}{(\text{Entering average weekday traffic volume} \times 365 \text{ days})}$$

   To determine if an intersection is considered high crash, a cut-off point (critical rate) must be determined. The commonly accepted industry standard criterion for this purpose is one standard deviation above the average. All intersections with a crash rate at or above this critical rate are considered high crash locations. Include the Climate Equity Index category with each location listed.

   b. *Crash Pattern*

   Compile all intersections with five or more injury and fatal crashes of the same type and movement directions, excluding the locations on the High Crash Rate List for that year. Include the Climate Equity Index category with each location listed.

   c. *Crash Frequency*

   Identify locations where the most crashes happen within a calendar year. Include the Climate Equity Index category with each location listed.

   i. *Pedestrian*
   Identify the intersection(s) with the most pedestrian crashes.

   ii. *Intersection*
   Identify the intersection(s) with the most injury and fatal crashes

   iii. *Signalized left turns*
   Identify the traffic signal(s) with the most crashes involving left turns

   iv. *Segment*
   Identify the street segment(s) with the most injury and fatal crashes

Approval:

Bethany Bezak 7/26/24

Bethany Bezak, Director Date