



Agenda Item

City Traffic Commission

Item #: 4.3.

12/10/2025

File #: 25-0668

TO: Chair and Members of the City Traffic Commission

FROM: Larry Tay, Deputy Public Works Director/Traffic Engineer

1. SUBJECT

Discussion of potential traffic modifications and safety enhancements to the Orange Plaza.

2. SUMMARY

At the September 23, 2025, City Council meeting, staff presented an item to discuss potential traffic modifications to the Orange Plaza to further prevent vehicular intrusion into Plaza Park. City Council directed staff to conduct further analysis of incursion trajectories and refine recommendations, if appropriate. Staff was also directed to bring back a follow-up report to both City Traffic Commission and Council.

3. RECOMMENDED ACTION

Receive and File.

4. FISCAL IMPACT

None. This is a "receive and file" item.

5. STRATEGIC PLAN GOALS

Goal 5: Improve infrastructure, mobility, and technology

Goal 6: Ensure the preservation of historic resources

6. DISCUSSION AND BACKGROUND

Background

In response to historic concerns over Plaza incursions, several modifications had been implemented to the approaches to the circular roadway, including the installation of reflective raised pavement markers, supplemental traffic signs, roadway delineators, and nighttime traffic signal timing modifications.

In March 2022, City Council authorized the purchase of protective bollards to protect pedestrian walkways at select locations along the perimeter of Plaza Park. In November 2022, a construction contract was awarded to, among other things, install the protective bollards. The installation was completed in 2023.

September 23, 2025, City Council Report

After a recent vehicle incursion into Plaza Park, City Council directed staff to evaluate concepts, including roadway modifications, park enhancements, and operational changes that could potentially reduce frequency of future incidents. Staff presented the viability of said concepts, along with

recommendations, to the City Council at their September 23, 2025, meeting (staff report attached.)

At that meeting, City Council directed staff to: 1) Install additional raised pavement markers, 2) further analyze the incursion trajectories and potentially refine recommendations, and 3) present follow-up reports to the City Traffic Commission ("CTC") and Council.

The raised pavement markers were installed immediately following the City Council meeting, and the results of the additional analysis and recommendation refinements are presented below.

Because several potential concepts discussed in this report (and its associated attachments) involve matters that typically are not within the CTC's purview, the CTC is not being asked to act on this item (only receive and file.) Rather, the intent is to present the information to CTC to solicit input, including that from the public, before presenting to City Council for potential action.

Accident Trajectory Analysis

Working together with the Orange Police Traffic Bureau, staff plotted and analyzed all reported Plaza incursions between January 2018 and October 2025. The findings were discussed in a memorandum (attached for reference) containing various tables, charts, and exhibits that summarize the accident data. Moreover, key findings include:

- Since 2018, there have been 43 reported Plaza incursions.
- The number of accidents trended upward during the COVID/Plaza Paseo years - but has been significantly declining ever since (some supplemental measures deployed in last 3 years may have contributed to that reduction).
- Went from a peak of 12 accidents in 2022, to 1 in each of the past two years.
- Of the 43 accidents, 30 accidents (70 percent) involved DUI. Another was the result of a police chase involving Santa Ana PD.
- Of the remaining 12 accidents, 9 involved unsafe speed (entering the circular roadway - not necessarily speeding on the "spoke" streets), 2 involved improper turning movements, and 1 had a cause unknown.
- 38 of the 43 accidents involved a vehicle traveling on Chapman Avenue (27 eastbound, 11 westbound.) And 5 involved Glassell (4 northbound and 1 southbound).
- All 5 accidents on Glassell involved either DUI or the aforementioned police chase. A significant majority of the Chapman incidents involved DUI.
- All but one of these accidents occurred during darkness. All but two (both DUI) occurred between 10 PM and 5AM.
- The "spray pattern" from the plotted trajectories suggest that incursions from any given approach tend to occur between the prolongation of the approaching roadways' centerlines and right curb lines.
- Based on the accident trajectories, one option (that would achieve the intent while minimizing aesthetic impacts) is to enhance bollards on the Chapman sides of the Plaza, as originally

presented (expanding coverage and filling in the central gaps by adding 11 bollards to each approach,) and leave the Glassell sides as-is.

One more incursion occurred after October 2025, when the memorandum was prepared. The incursion involved an eastbound vehicle travelling after sunset and resulted in damage to a perimeter (non-crash rated) bollard and park bench. An Accident Trajectory Diagram, updated through November 2025, that includes this incident is attached.

Peer Review

Staff also retained Fehr and Peers to conduct a peer review of previous recommendations and provide additional input, the results of which are provided in the attached letter report.

Fehr and Peers concurred with all the findings and recommendations that staff presented to City Council on September 23rd. In addition, several additional concepts were discussed, including implementing raised crosswalks at Plaza entry points and on the Chapman Avenue approaches. While this concept had been contemplated by staff, it was not presented to City Council for consideration due to potential impacts to emergency response vehicles.

Refined Recommendations

Based on the September 23rd City Council report, Accident Trajectory Analysis, and Peer Review, viable recommendations to the City Council include:

1. Install enhanced bollards on Chapman Avenue approaches. Cost expected to be moderate, approximately \$300,000.
2. Install raised median “splitter” islands at all approaches. Cost is expected to be moderate, approximately \$300,000.
3. Evaluate the feasibility of raised crosswalks at Plaza entry points and on the Chapman Avenue corridor, including drainage and emergency services impacts. Cost cannot be determined until feasibility study is completed.
4. Turn off Plaza Park lighting during late night hours to reduce the appearance of a through street. Cost is expected to be minimal and involves minor electrical work.

Each of the above, especially when in combination, is expected to reduce the frequency of Plaza incursions. Conceptual exhibits showing the bollard and splitter island concepts are attached for reference.

Lastly, the raised crosswalks can be installed in conjunction with the raised median island and expected to calm traffic and enhance pedestrian comfort along the Chapman Avenue approaches to the Plaza.

7. ATTACHMENTS

- September 23, 2025, City Council Staff Report
- Analysis of Plaza Park Incursions Memo
- Accident Trajectory Diagram
- Fehr and Peers Letter Report
- Proposed Bollard Enhancement Concept
- Splitter Island Concept