

Module 1: Crash Prevention

Lesson 4: Traffic Congestion

Crash Case Study: 405 Freeway near Hawthorne, California

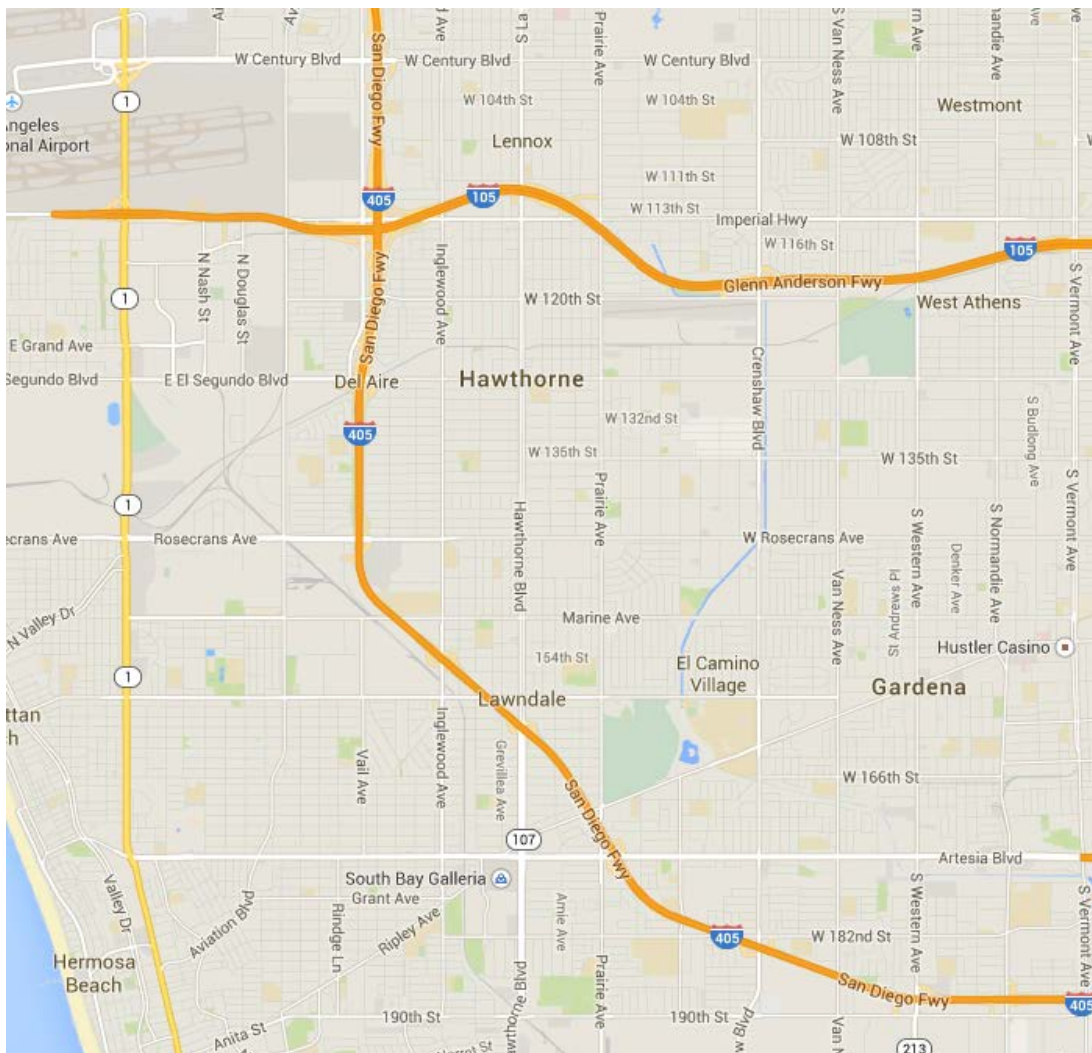
Summary of Crash Event

The 405 freeway, also known as the San Diego Freeway, is one of the most congested highways in the US. It is a bypass of Interstate 5 and it runs North/South. It connects urban areas of Southern California and is famous for the O.J. Simpson car chase in 1994. This case study occurred on October 24, 2014 in the Hawthorne area. A 10- car pile up occurred and blocked the Northbound lanes of the freeway near the El Segundo Blvd exit. At least 7 people reported injuries. The incident occurred about 10 PM. Lanes were closed until 11:16 PM. Exact causes of the crash were not reported.

Link to News Story

<http://losangeles.cbslocal.com/2014/10/24/7-injured-in-10-car-pileup-on-405-freeway-in-hawthorne/>

Map of the Surrounding Area



Analysis questions

1. Did this crash cause congestion?
2. Use Google Maps to determine the closest emergency response unit. Estimate how long it would have taken for EMS to arrive. How does this affect congestion and injury outcome? Are there alternative routes that the EMS could take to improve travel time if the roads are congested?
3. Did the transportation authority use any special traffic management strategies or technologies to help manage traffic during this incident?
4. What changes would you make in order to reduce the amount of congestion during this incident? Be specific. What strategies and technologies would you use?
 - a. How would you alert drivers of the growing congestion?
 - b. What technologies could you use to warn or divert traffic?
 - c. If re-routing traffic, how could traffic be re-routed in order to reduce the congestion caused by the crash? And what implications would this have on the surrounding roads? Can these roads handle the volume of traffic that you have diverted? Will there be additional delays caused by re-routing? Will this new method provide a shorter travel time compared to simply staying on the main road?

Task

Prepare a PowerPoint presentation to explain your findings and solution to the class. Be sure to include a quick explanation of the crash scenario, the strategies that were employed on the scene, and the strategies that you would recommend implementing to reduce congestion and improve traffic flow.