

Example No. 1

Rehabilitation and expansion of a safety roadside rest area has been proposed. There are currently 25 passenger car parking stalls and 18 truck parking stalls. The 20-year design hourly volume is 200 vehicles, with 28% trucks. A parking study reported the average stay in the rest area is 15 minutes for passenger cars and 30 minutes for trucks. Assuming a uniform arrival rate, how many additional passenger car and truck parking stalls will be required to meet the 20-year demand?

- A. 11 passenger car stalls and 10 truck stalls
- B. 18 passenger car stalls and 12 truck stalls
- C. 23 passenger car stalls and 16 truck stalls
- D. 36 passenger car stalls and 28 truck stalls

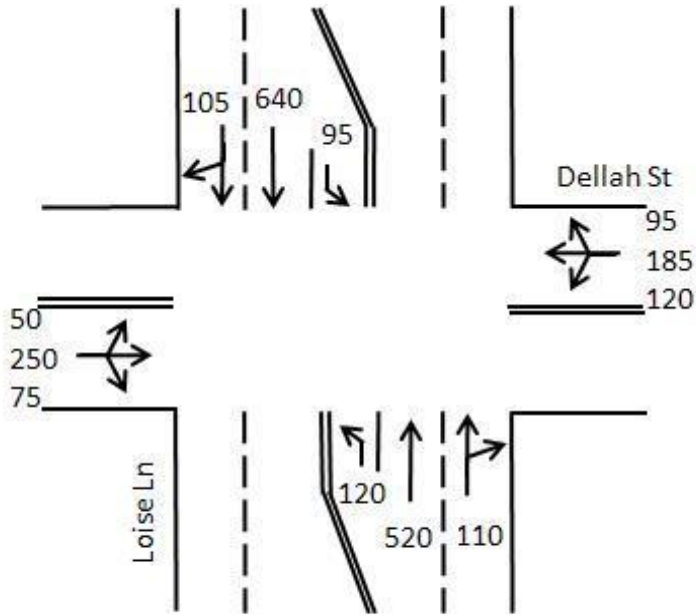
Example No. 2

A traffic signal operating in a coordinated system at a 120-second cycle length has 235 northbound vehicles per hour turning left. The signal has a protected left-turn phase and one 12-foot-wide by 200-foot-long left-turn lane. A new development is being built that will add an estimated 95 left-turning vehicles to this movement. What traffic signal or intersection modifications should be considered?

- A. Increase the width of the left-turn lane to 14 feet
- B. Increase the length of the left-turn lane to 250 feet
- C. Increase the cycle length to accommodate the left turns
- D. Increase the width of the roadway to add a second left-turn lane

Example No. 3

The intersection of Dellah Street and Loise Lane is to be signalized. There have been four left-turn related collisions on the Dellah Street approaches and six left-turn collisions on the Loise Lane approaches in the past 12 months. The p.m. peak hour turn movements are shown below. Which of the following left-turn phasing is most appropriate for the intersection?



All volumes
are in VPH

- A. Permissive on both Dellah Street and Loise Lane
- B. Protected on Dellah Street and permissive on Loise Lane
- C. Permissive on Dellah Street and protected on Loise Lane
- D. Protected on both Dellah Street and Loise Lane