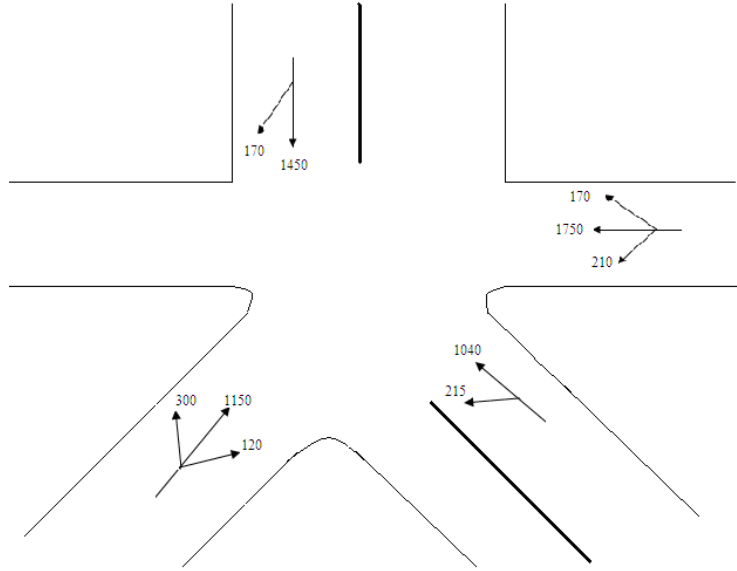


SHEET (6)

INTERSECTION CONTROL AND ANALYSIS

1. Find the number of conflict points for the following intersection:



2. As shown in Figure 1, the left turns on approaches (1) and (2) move in protected phasing. Assume lost time per phase equals to 2 sec. The following additional data are given.

- % Trucks = 15% -grade = 2%
- Number of parking maneuvers per hour = 20
- Number of buses stopping per hour = 30

For each approach, determine the following:

- a. Adjusted saturation flow rate.
- b. Capacity.
- c. Level of service.

3. The peak-hour volumes for a major intersection on an expressway are shown in the figure
2. Using the Webster method, determine suitable signal timing for the intersection using the suggested phasing system shown in figure 2. The following data is given:
 - PHF = 0.95
 - Left-turn factor = 1.4
 - PCE for buses and trucks =1.6
 - Truck percentage = 2 percent for south approach traffic and zero otherwise.
 - Saturation flow:
 - Through and through lanes 2000 veh/h/lane
 - Left lanes 1500 veh/h/lane
 - Each phase has a 3.5 seconds total lost time and 3.0 seconds yellow interval

Figure 1

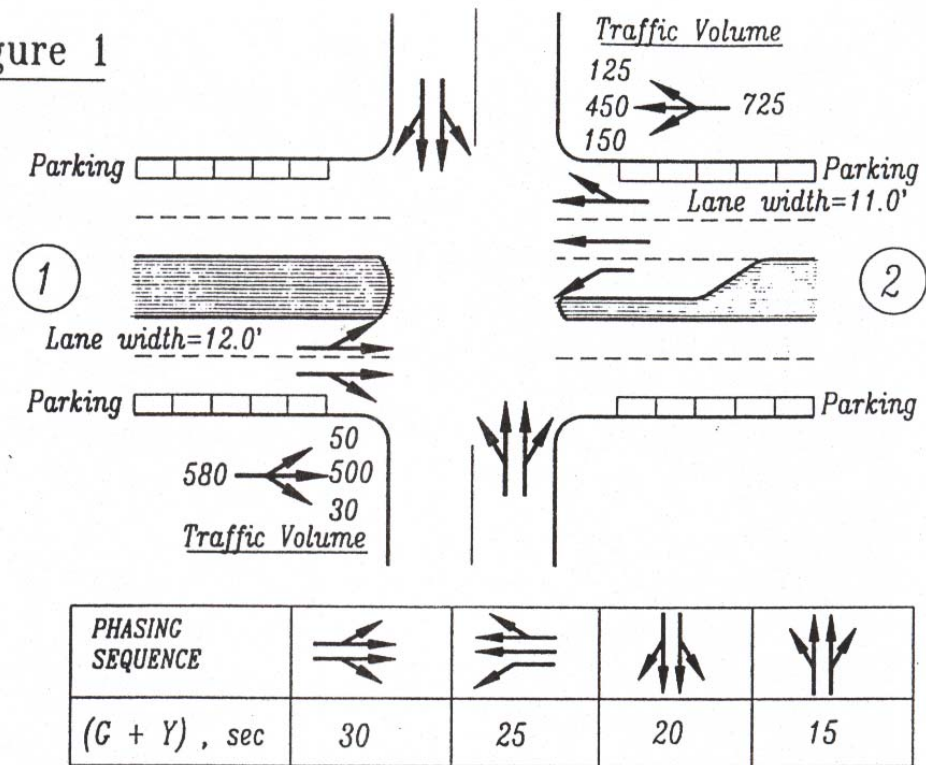


Figure 2

