

Using the Peak Hour Factor Adjustment in SimTraffic

In SimTraffic, there are several methods to account for the peaking conditions, or peak hour factor (PHF) within an hour simulation. One method would be to simulate 4 intervals of 15 minutes using the UTDF feature (see the topic, DATABASE ACCESS in the SimTraffic help file). In this case, SimTraffic reads the 15-minute counts from a database and let the simulation model handle the peaking of the volumes. You can then get reports in SimTraffic for each interval and an aggregate total.

Another approach would be to use the PHF adjust in SimTraffic. In this case, set one of four intervals with the PHF adjust, and the other three intervals with the anti-PHF adjust.

Consider an example where you have a total of 1000 vph in the system with a PHF of 0.8. If this peak occurs during interval 2 (assumes 4-15 minute intervals simulated), do the following:

1. Int 1: Set **Anti PHF**, Volume simulated = $(1000/4) * (1 - (1/PHF - 1)/3) = 250 * (1 - (1/0.8 - 1)/3) = 229$ veh
2. Int 2: Set **PHF Adjust**, Volume simulated = $(1000/4)/0.8 = 313$ veh
3. Int 3: Set **Anti PHF**, Volume simulated = 229
4. Int 4: Set **Anti PHF**, Volume simulated = 229
5. Total Volume for hour = $229 * 3 + 313 = 1000$ vph.

SimTraffic Parameters									
Fuel-Buses		HC Emissions		CO Emissions		NOx Emissions			
Vehicles		Drivers		Data Options		Fuel-Cars		Fuel-Trucks	
Intervals		1	2	3	4				
Interval Name		Recording	Recording	Recording	Recording				
Start time (hhmm)		05:00 P	05:15 P	05:30 P	05:45 P				
Duration (min)		15	15	15	15				
Record Statistics		Yes	Yes	Yes	Yes				
Growth Factor Adjust		Yes	Yes	Yes	Yes				
PHF Adjust		No	Yes	No	No				
AntiPHF Adjust		Yes	No	Yes	Yes				
Percentile Adjust		No	No	No	No				
Percentile Adjust (%ile)									
Timing Plan ID									
Data Start Time (hhmm)									
Random Number Seed: <input type="text" value="1"/>									
<input type="button" value="Insert"/>		<input type="button" value="Delete"/>							
<input type="button" value="OK"/>		<input type="button" value="Cancel"/>							
Start time for interval as hhmm in 24 hour format.									