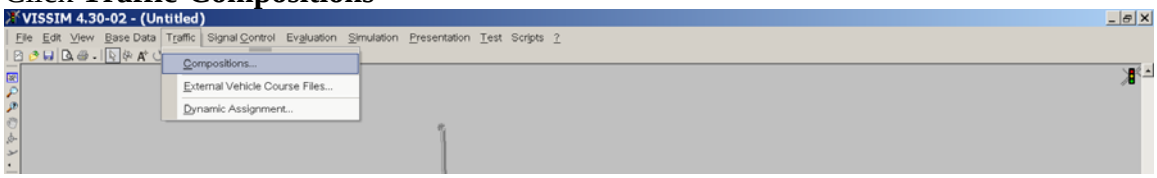
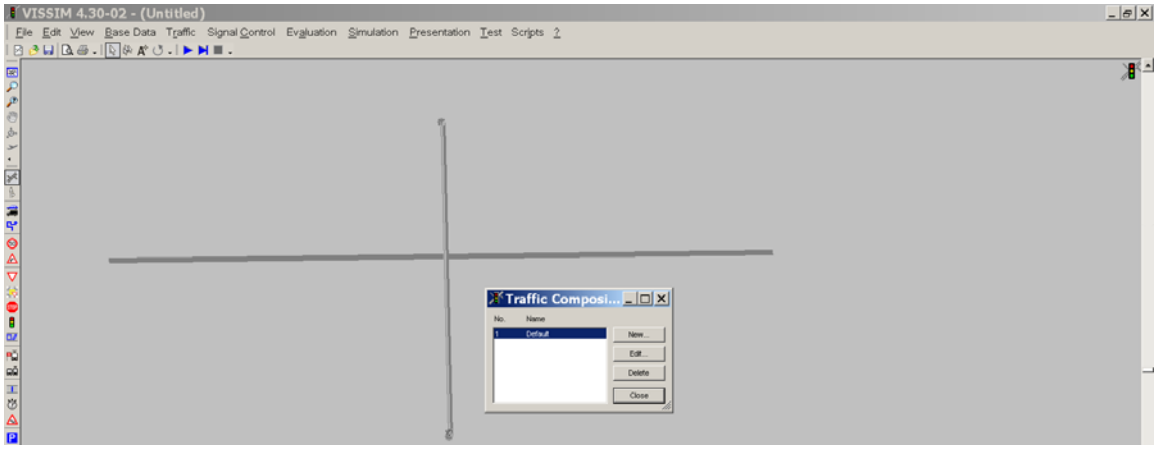
1. Traffic Compositions

Because VISSIM models the individual movements of vehicles, it is vital that the model have the same traffic composition as the observed "real life" traffic. This tutorial shows you how to enter observed traffic compositions into VISSIM.

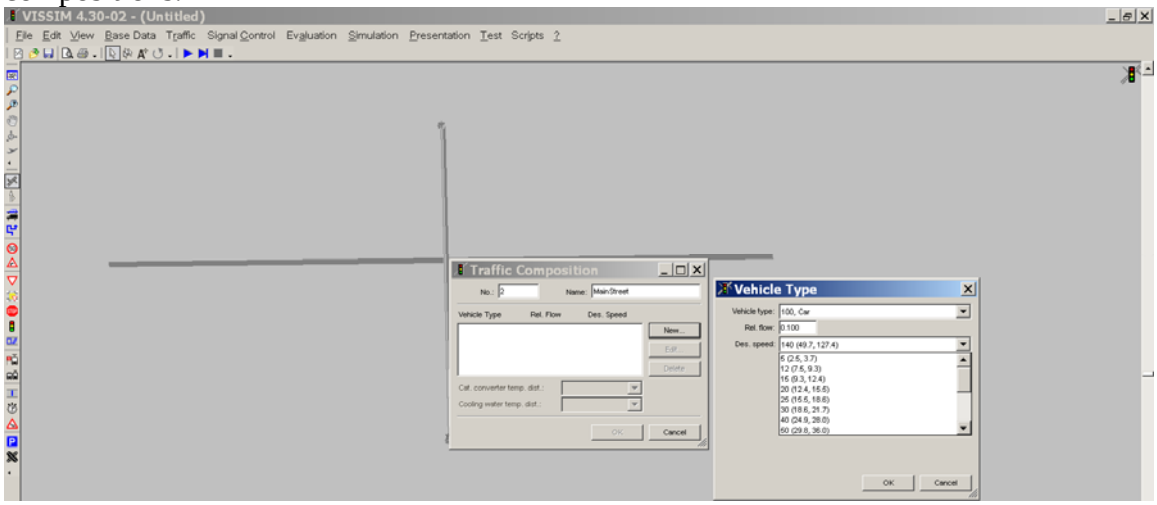
Click **Traffic-Compositions**



Click **New**

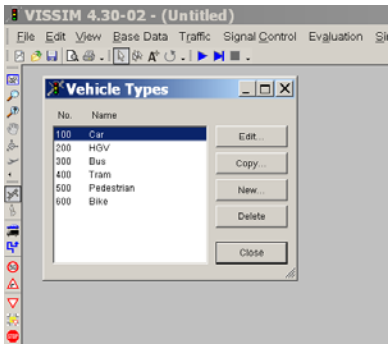


Then give the traffic composition a name, you may find that a single composition can be used for all the links in your network, but you may also find that you need multiple compositions.

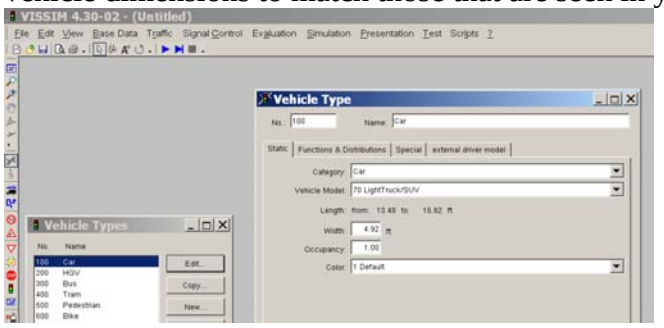


Click **New** to "build" a new composition of cars, trucks etc.
Note the HGV=heavy goods vehicles=heavy trucks
Rel. flow=proportion…. So if there you observed traffic is 65% cars use 0.65 etc.

You will notice that VISSIM comes pre-loaded with six vehicle types ranging from **100, Car** to **600, Bike.** You can review these by clicking **Base Data – Vehicle Types**.

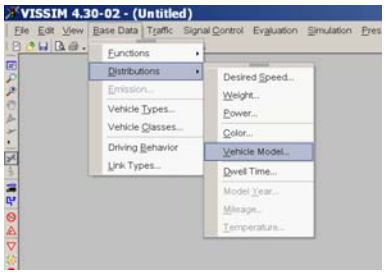


If you edit **100, Car** you will see that VISSIM's cars are only 4.92ft wide and range in length from 13.5ft to 15.62ft). Remember that VISSIM is German, where cars are smaller (on average) than in the US and pickups/SUVs are virtually non-existent (in Europe small vans that take the place of pickups/SUV). To be correct, you must, therefore, adjust vehicle dimensions to match those that are seen in your area.

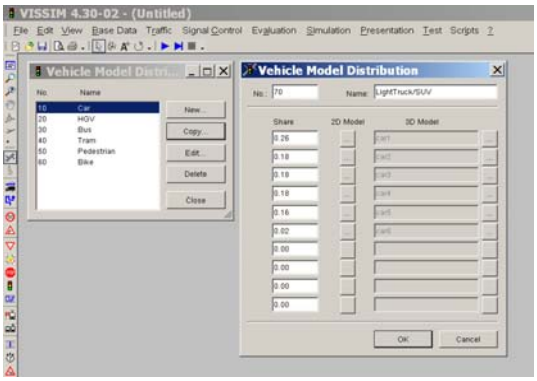


However, also realize that vehicle width will have no ***engineering*** impact on how the vehicle is handled in VISSIM other than in 2D models where the "blobs" will be narrower/wider. Length is important since longer vehicles will occupy more of the lane etc. Also, the operating characteristics are important, things like vehicle weight, acceleration and deceleration capability etc.

Since the manly men (and women) of Klamath County tend to drive pickups/SUVs in Large numbers, it would be wise to create a new vehicle model for pickups/SUVs. Click on **Base Data – Distributions -Vehicle Model**.

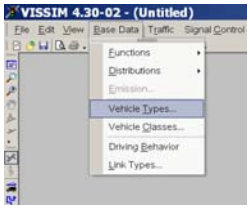


Then make a copy of **10 Car** and name it appropriately.

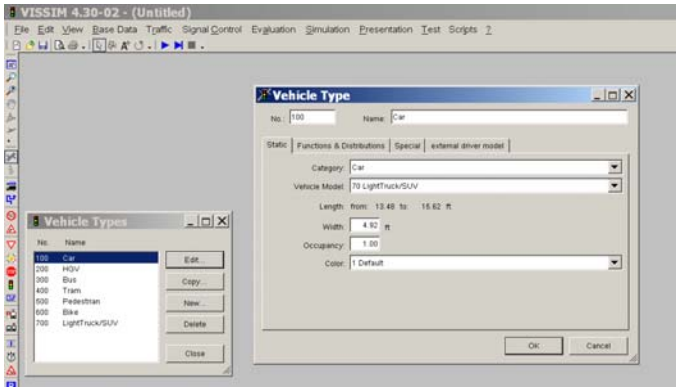


You can then edit the distribution – this means specifying what share (proportion) of the vehicles have certain lengths.

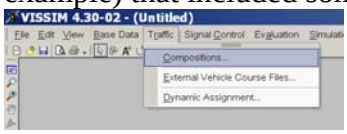
Then click **Base Data – Vehicle Types**

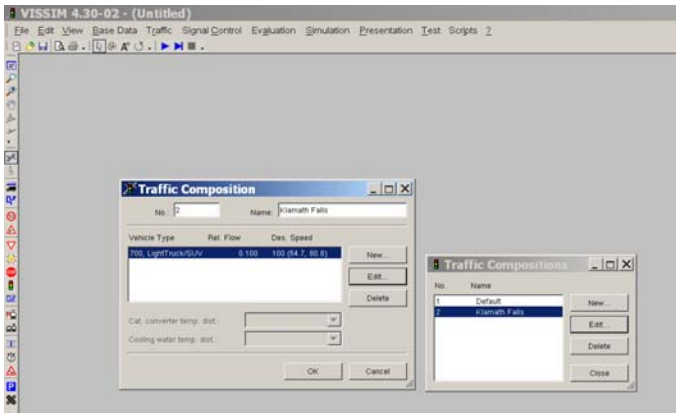


And create a copy of **100 Car**, to be named **700 LightTruck/SUV** and change the width to a reasonable number.



Now you will be able to create a new traffic composition (named 2, Klamath Fall for example) that included some **rel. flow** of **LightTruck/SUV** traffic





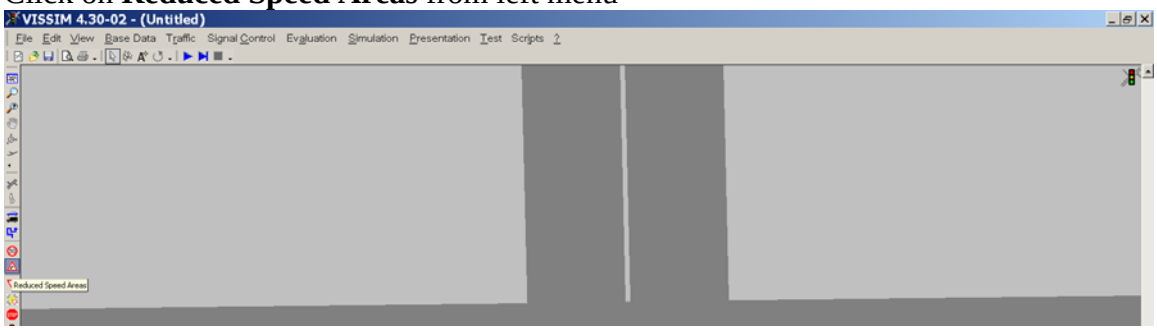
The names of the speed distributions under **Des. speed** (5,12,15,20 etc.) are actually metric names and imply the mean speed in km/h. If you are using US units, then the names will still be metric but the speeds will be in mph. For example the **"100"** distribution is traffic that has a range of speed from 54.7-80.8 mph. If you do not have field speed data from which to build your compositions, you will need to use some engineering judgment in determining speeds for your simulated vehicles.

When you build a traffic composition, you are including both the vehicle type and vehicle speed.

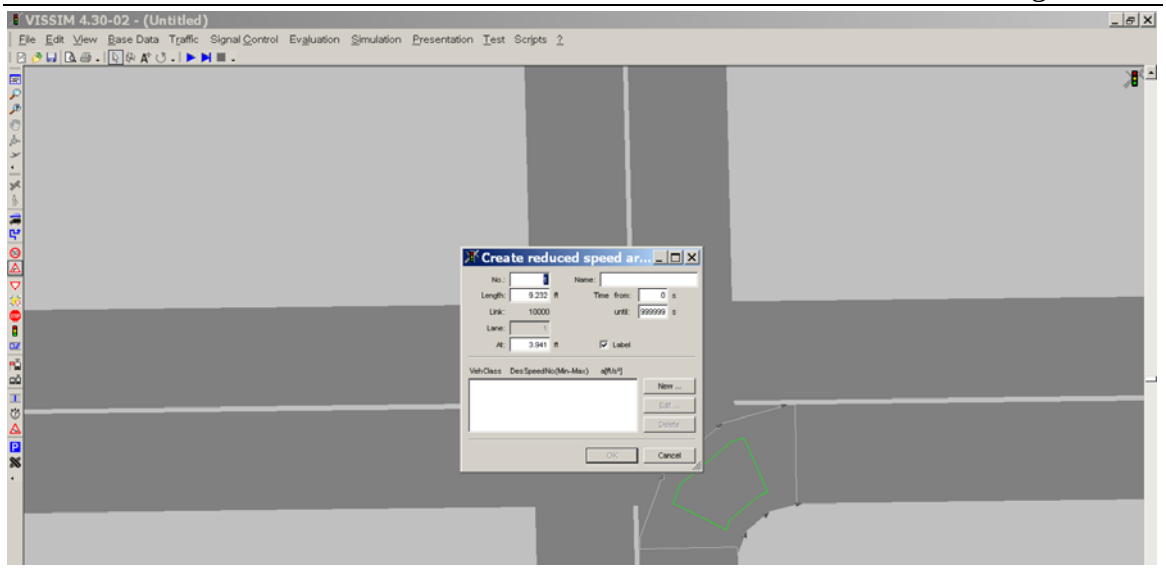
2. Reduced Speed Areas

When you observe your simulations, you will notice that vehicles do not slow as they take 90^{o} corners at intersections etc., they must be told to do so!!

Click on **Reduced Speed Areas** from left menu



Click on the connector/link where you want traffic to slow, then right click and drag a green box to outline the reduced speed area:



Click **New** and establish reduced speeds for each of the vehicle types you have in your composition. Again, some engineering judgment is needed when establishing these reduced speeds – you might try driving the network yourself and observing your speed.