Synchro 9 includes a few new signal timing optimization features that users can select prior to the start of the signal optimization routine. This edition of Synchro Snippets will highlight these features and how they can be used to improve your development of signal timing plans. A complete step-by-step example using these features can be found in the Synchro Studio 9 Examples document located within the c:\Program Files (x86)\Trafficware\Version 9 Directory.

Users can now apply weighting factors to coordinated or individual phases during the set-up of the signal optimization routine. Once the parameters have been entered, be sure to select Manual.

### Optimize → Network Cycle Lengths

<table>
<thead>
<tr>
<th>Purpose</th>
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<tbody>
<tr>
<td>Use this feature to focus the signal optimization towards reducing delay of particular phase(s) at one or more intersections. For example, adding a Weighting Factor to a high volume left phase will most likely lead to a decrease in the 95th percentile queue.</td>
</tr>
</tbody>
</table>

1. Choose **Phs Weighting** to enable Synchro to focus on one or more phases. Within the **Timing Settings** window, be sure to enter a Weighting factor (1 to 5) within the **Optimize Phs Weights - Delays** row.

2. Choose **Optimize using RefPhs Weight of** (1 to 5) if the focus is on a coordinated arterial.

### Optimize → Network Offsets

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<th>Purpose</th>
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<td>Simply stated, use this feature to increase arterial bandwidth. Depending on the congestion levels, an increase in bandwidth may not be obtainable if overall delay increases.</td>
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1. Choose **Weight Ref Phase**
In addition to the new optimization features, a detailed summary table within Synchro is created to allow users the opportunity to review all of the optimization results. Users have the option to save the results via three CSV files. The result tables can also be *Appended* based on timing adjustments by the user.

In summary, Synchro 9 provides the user with additional features aimed at improving signal timing plans. Users have the ability to fine tune the signal optimization process based on their specific timing preferences. Detailed summary tables are now available for comparison among different timing plans.

**Transfer → Append Timing/MOE Data**

1. Use this command to Append/Update the Timing/MOE summary files that were created at the completion of the optimization routine

*Detail* - Results summarized for each signalized intersection (node) by approach and lane group for each cycle length included in the optimization routine.

*Sum By Cycle* - Results summarized for each cycle length for the total network. These results match those within the Select Cycle Lengths table displayed when manual is selected for optimizing the network.

*Sum By Cycle/Node* - Delay results for each cycle length are summarized by node.

**Purpose**

Obtain updated results after adjustments have been made within the *Timing Settings* window. This feature allows users to determine the effect of a particular timing change along an intersection or arterial.