SYNCHRO AND SIMTRAFFIC (TE-13)

COURSE OUTLINE

DAY ONE
7:30 – 8:00  Check-in and Registration
8:00 – 8:15  Introduction of Instructors and Students
8:15 – 8:30  Background Information
  1. What is Synchro 8.0
  2. What is SimTraffic 8.0
  3. What will we learn in the next two days
8:30 – 9:00  Importing a Background (Bing, JPEG, Bitmap or DXF)
9:00 – 9:30  Drawing a Network
  1. Straight Links
  2. Intersections
9:30 – 9:45  Break
9:45 – 10:30 Drawing a Network (Continued)
  1. Curved Links
  2. Grade Separated Links
10:30 – 11:30 Intersection Geometrics
  1. Through Lanes
  2. Pocket Lengths
  3. Unique Geometries
11:30 – 12:30 Lunch
12:30 – 1:30 Intersection Geometrics (Continued)
  1. Channelized Right-turn lanes
  2. U-turns
  3. Lane Drops / Adds
1:30 – 2:00  Traffic Volumes
  1. Vehicles, Pedestrians, and Bicyclists
  2. Peak Hour Factor
  3. Heavy Vehicle Percentage
2:00 – 2:15  Break
2:15 – 3:45  Signal Timings
  1. Background
  2. Reading a Signal Timing Sheet
3:45 – 4:00  Wrap-up of Day One
4:00 – 5:00  Open Lab Class

**DAY TWO**

8:00 – 8:30  Review what we learned on Day One
8:30 – 9:45  Signal Timings (Continued)
1. Controller Type
2. Signal Phases
3. Entering Signal Timing Data
9:45 – 10:00  Break

10:00 – 11:00  Synchro Level of Service Analysis
1. Signalized Percentile Delay and LOS
2. Signalized Highway Capacity Manual (HCM) Delay and LOS
3. Pedestrian and Bicycle LOS
4. Unsignalized Delay and Level of Service
5. Roundabout Delay and Level of Service
6. Network-wide Measures of Effectiveness
7. Queuing Information

11:00 – 11:30  Optimizing a Single Traffic Signal
1. Background
2. Single Intersection
3. Review Results (Before and After)

11:30 – 12:30  Lunch
12:30 – 1:45  Optimizing a Group of Traffic
1. Group of Intersections (Single Corridor)
2. Network Wide Signal Optimization
3. Review Results (Before and After)

1:45 - 2:15  Converting Synchro to SimTraffic
1. Why use microsimulation?
2. Setting up and running SimTraffic

2:15 – 2:30  Break

2:30 - 3:45  Comparing Synchro versus SimTraffic Results
1. Intersection Level of Service
2. Arterial Performance Report
3. Network-wide Measures of Effectiveness
4. Queuing Information

3:45 – 4:15  Wrap-Up of the Two Day Course and Questions/Answer Session
4:15 – 5:00  Open Lab Class