(TE-01) Fundamentals of Traffic Engineering

Day 1	Capacity Analysis and Traffic Impacts	Rafat Raie
8:00-8:15 am	Introductions	All
8:15-8:30 am	Ice-breaker Exercise	All
8:30-8:45 am	Module 1: Training Framework – Need & Purpose	
8:45-9:30 am	Module 2: Geometric Design Concepts	
9:30-9:45 am	Break	
9:45-10:15 am	• *Exercise 1 – Geometric Design*	
10:15-11:00 am	Module 3: Capacity and Level of Service - Concepts	
11:00-11:45 am	Module 4: Freeway Capacity • *Exercise 2 – Freeway Capacity*	
11:45 am-12:45 pm	Lunch (on your own)	
12:45-2:00 pm	Module 5: Freeway Operations • *Exercise 3 – Freeway Operations*	
2:00-2:15 pm	Break	
2:15-3:30 pm	Module 6: Signalized Intersection Capacity • *Exercise 4 – Signalized Intersection Capacity*	
3:30-4:30 pm	Module 7: Traffic Impact Studies (TIS)	
4:30-4:40 pm	Course Evaluation for the Day	
4:40-5:00 pm	• *Exercise 5 – Traffic Impact Studies*	

Day 2	Traffic Operations Part I - Main Streets Concepts, Bike and Pedestrian, Intersection Control, and On-Street Parking	Rafat Raie
8:00-8:10 am	Q&A on Day 1 Topics	All
8:10-8:30 am	• *Exercise 1 - Traffic Operations Concepts*	
	PEDESTRIAN AND BICYCLE FACILITIES	
8:30-8:50 am	Module 1: Main Street and Complete Streets	
8:50-9:30 am	Module 2: Bicycle Considerations	
9:30-9:45 am	Break	
9:45-10:15 am	• *Exercise 2- Bicycle Considerations*	
10:15-11:30 am	Module 3: Pedestrian Considerations	
11:30 am-12:30pm	Lunch (on your own)	
12:30-1:30 pm	Walking Tour - Urban Streets and Intersections	All
	TRAFFIC DATA COLLECTION AND APPLICATIONS	
1:30-2:15 pm	Module 4: Intersection Control and Warrants	
2:15-2:30 pm	Break	
2:30-3:15 pm	• *Exercise 3- Intersection Improvements*	
3:15-4:20 pm	Module 5: Traffic Engineering Data Collection and Use (i.e., travel time studies, speed surveys, traffic counts, turning movement counts, delay analysis, queueing, vehicle occupancy, bicycle counts, pedestrians counts, etc.)	
4:20-4:30 pm	Course Evaluation for the Day	
4:30-5:00 pm	Module 6: Urban Street Parking	

Day 3	Traffic Operations: Part II – Signing, Striping, Design Concepts, and Traffic Signals	Crystal Killian
8:00-8:10 am	Introductions	All
8:10-8:40 am	Interactive Engagement to Review Days 1 & 2	All
8:40-9:40 am	Module 1: Traffic Control Devices and Principles	
9:40-10:00 am	• *Exercise 1 – ETS & Roadway Characteristics*	
10:00-10:15 am	*Break*	
10:15-11:00 am	Module 2: Traffic Signs and Markings	
11:00-11:30 am	• *Exercise 2 – Traffic Signage & Marking Exercise*	
11:30 am-12:00 pm	Module 3: Roadside Delineation	
12:00–1:00 pm	Lunch (on your own)	
1:00-1:30 pm	• *Exercise 3 – Design to Operations*	
1:30-2:30 pm	Module 4: Intersection Design/ Channelization	
2:30-2:45 pm	Break	
2:45-3:15 pm	• *Exercise 4 – Multimodal Considerations & Applications*	
3:15-4:15 pm	Module 5: Traffic Signals and Traffic Signal Systems	
4:15-4:30 pm	Course Evaluation for the Day	
4:30-5:00 pm	• *Exercise 5 – Traffic Signals*	

Day 4	Traffic Safety Analysis and Practice	Crystal Killian
8:00-8:10 am	Q&A on Day 3 Topics	All
8:10-9:10 am	Accessibility	
9:10-9:45 am	• *Exercise 1: Traffic Signal Warrants*	
9:45:00-10:00 am	Break	
10:00-10:30 am	Module 2: Strategic Highway Safety Plan (SHSP) – A Brief Overview	
10:30-11:00 am	• *Exercise 2 – Reviewing Crash History*	
11:00 am-12:00 pm	Module 3: Tort Liability – The Public Agency Perspective	
12:00–1:00 pm	Lunch	
1:00 -2:15 pm	Module 4: Roadside Safety / Reducing Collisions	
2:15-2:45 pm	• *Exercise 3 – Reducing Collisions*	
2:45-3:00 pm	Break	
3:00-4:00 pm	Module 5: Improving Safety at Railroad Crossings	
4:00-4:15 pm	Course Evaluation for the Day	
4:15-5:00 pm	• *Exercise 4 – Railroad Crossing Safety Case Studies*	