**Transportation Planning/Engineering Basics**

1. Transportation Impact Analysis (CEQR)
   1. CEQR Technical Manual: <https://www1.nyc.gov/site/oec/environmental-quality-review/technical-manual.page>
   2. Reasonable Worst Case Development Scenario
      1. Existing Condition
      2. No Action/No Build
      3. With Action/Build
   3. Screening
   4. Trip generation
      1. Trip gen rate by land use
      2. Temporal distribution
      3. Modal split
      4. Directional split
      5. Vehicle occupancy
      6. Truck trip gen
   5. Trip assignment
      1. Trip distribution/Origin & Destination
      2. Assigning trips to the transportation network
   6. Level of Service (LOS) analyses
      1. Traffic
         * Volume
         * Geometry
         * Signal timing
      2. Subway/Rail
         * Line haul
         * Station element
      3. Bus
         * Bus load
      4. Ferry
         * Line haul
         * Ferry landing
      5. Pedestrian
         * Sidewalk
         * Crosswalk
         * Corner
      6. Parking
   7. Determination of significant impacts
   8. Mitigation/improvement
2. Travel Demand Model (<https://en.wikipedia.org/wiki/Transportation_forecasting>)
   1. Trip generation
      1. Trip purpose
   2. Trip distribution
      1. Trip attraction
      2. Travel cost
   3. Mode choice
      1. Discrete choice model
      2. Time
      3. Fare
      4. Comfort
   4. Trip assignment
      1. Dynamic equilibrium
   5. Calibration
      1. Compare with input data
   6. Validation
      1. Compare with other data
3. Traffic Engineering
   1. HCS
      1. standard software for traffic LOS analyses
   2. Synchro
      1. Network analyses
      2. Microsimulation