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## *HCM Analysis*

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According to FHWA, HCM is good for analyzing the performance of isolated facilities with relatively moderate congestion problems that are not adversely affected by conditions on an adjacent roadway. It can help determine if a facility is operating above or below capacity, but it is limited in its ability to evaluate system effects or highly congested areas.

Any changes in default values must be documented and justified. Results from the analysis must be verified with the collected field data to ensure validity and accuracy. Measures of Effectiveness (MOEs) used from the analysis are listed below.

### MOEs

#### Intersections (Vistro/Sidra)

- Volume-to-capacity (v/c) ratio
- 50<sup>th</sup> and 95<sup>th</sup> percentile queue lengths
- Approach Control Delay (seconds/vehicle)

#### Segments (HCS)

- Density (flow rate [pc/mi/ln] (Level of Service (LOS)))
- free flow speed
- Actual average speed

#### Weaving (HCS)

- Weaving area segment speed (MPH)
- Weaving segment density (pc/mi/ln, LOS)

#### Ramps merge and diverge (HCS)

- Density (flow rate [pc/mi/ln] (Level of Service (LOS)))
- Speeds of ramp influence area (MPH)
- Speeds of outer lane (MPH)