

Table 5
Level of Service Characteristics by Highway Type

Level Service	Controlled Access Highways	Multilane Rural without Access Control	Two Lanes	Urban and Suburban Arterials
A	Free flow. Average travel speeds at or greater than 60 mph. Service flow rate of 700 passenger cars per hour per lane.	Average travel speed 57 mph or greater. Under ideal conditions, flow rate is limited to 700 passenger cars per lane per hour or 36 percent capacity.	Average speeds of 50 mph or higher. Most passing maneuvers can be made with little or no delay. Under ideal conditions, a service flow rate of 420 passenger car per hour, total two way, can be achieved.	Average travel speed of about 90 percent of free flow speed. Stopped delay at signalized intersections is minimal.
B	Reasonably free flow conditions. Average travel speed at greater than 57 mph. Service flow rate not greater than 1,100 passenger cars per hour per lane.	Reasonably free flow. Volume at which actions of preceding vehicle will have some influence on following vehicles. Flow rate will not exceed 54 percent of capacity of 1,100 passenger vehicles per lane per hour at a 53 mph average travel speed under ideal conditions.	Average travel speeds of 55 mph or higher. Flow rates may reach 27 percent of capacity with continuous passing sight distance. Flow rates of 750 passenger cars per hour, total two-way, can be carried out under ideal conditions.	Average travel speeds drop due to intersection delay and inter-vehicular conflicts, but remain at 70 percent of free flow speed. Delay is not unreasonable.
C	Operation stable, but becoming most critical. Average travel speed of 54 mph, service flow at 77 percent of capacity or not more than flow rate of 1,550 passenger cars per hour per lane.	Stable flow to a flow rate not exceeding 71 percent of capacity of 1,400 passenger cars per lane per hour, under ideal conditions, maintaining at least a 50 mph average travel speed.	Flow still stable. Average travel speeds of 52 mph or above with total flow rate under ideal conditions equal to 43 percent of capacity with continuous passing sight distance of 1,200 passenger cars per hour total two-way.	Stable operations. Longer queues at signals result in average travel speeds of about 50 percent of free flow speeds. Motorists will experience appreciable tension.
D	Lower speed range of stable flow. Operation approaches instability and is susceptible to changing conditions. Average travel speeds approx. 46 mph. Service flow rate at 93 percent of capacity. Flow rate cannot exceed 1,850 passenger cars per hour per lane.	Approaching unstable flow at flow rates up to 87 percent of capacity or 1,750 passenger cars per hour at an average travel speed of about 40 mph. under ideal conditions.	Approaching unstable flow. Average travel speeds approx. 50 mph. Flow rates, two-direction, at 64 percent of capacity with continuous passing opportunity, or 1,800 passenger cars per hour total two way under ideal conditions.	Approaching unstable. flow. Average travel speeds down to 40 percent of free flow speed. Delays at intersections may become extensive.
E	Unstable flow. Average travel speeds of 30-35 mph. Flow rate at capacity or 2,000 passenger cars per hour per lane under ideal conditions. Traffic stream cannot dissipate even minor disruptions. Any incident may produce a serious breakdown.	Flow at 100 percent capacity or 2,000 passengers cars per lane per hour under ideal conditions. Average travel speeds of about 30 mph.	Average travel speeds in neighbourhood of 45 mph. Flow rate under ideal conditions, total two-way, equal to 2,800 passenger cars per hour. Level E may never be attained. Operations may go directly from Level D to Level F.	Average travel speeds of 33 percent of free flow speed. Unstable flow. Continuous backup on approaches to intersections.