The differences in the distribution of population across for the two land use scenarios has an observed impact on trip distribution, average travel distances and mode splits. Based on an evaluation of the travel patterns for the base year (2016), approximately 1,113,000 kilometres were travelled by auto and 61,000 passenger kilometres travelled by transit in the AM peak hour. Given the projected increase in population and employment by 2051, a comparable evaluation was carried out to test the sensitivity of two growth scenarios (Table 3-1). The estimated distance travelled by automobile during AM peak hour increases from 2016 to 2051 by 48.2% under No Boundary Expansion and 58% under Ambitious Density. However, the observed vehicle hours travelled in 2051 shows an over 105% increase when compared to the base year. The estimated travel time increase is primarily related to the effect of congestion which will result in lower average travel speeds as growth increases.

For transit, there is a measurable impact on city-wide mode shares with the No Urban Boundary Expansion. Measured in terms of 'motorized shares', transit shares are projected to be 11.4% for the ambitious density scenario and 11.9% for the no boundary expansion scenario. *Note that due to the model configuration, these are different than the description of TMP targets whereby mode split is expressed as a percentage of all trips including walking and cycling.*

Passenger kilometres travelled would be higher for the ambitious density scenario due to longer average trip distances.

Table 3-1: Peak Hour vehicle and passenger distance travelled

Performance Indicator	2016 Base Year	2051 Ambitious Density	2051 No Boundary Expansion	% Increase	
				Scenario 1: Ambitious	Scenario 2: No Boundary Expansion
Vehicle Kilometres Travelled	1,113,000	1,759,000	1,71,000	58.0%	54.0%
Vehicle Hours Travelled	18,000	38,000	37,000	111%	105%
Passenger Kilometre Travelled	61,000	101,000	95,000	65.6%	55.7%
Transit Mode Share (% of motorized trips)[a]	11.7%	11.4%	11.9%		

Notes: [a] Excludes walking & cycling trips.