The appropriate O&M cost variables were then applied to the mile, hour, and peak vehicle estimates to calculate an estimate of annual operating costs. The cost factors for bus and light rail are based on total vehicle hours and total vehicle miles (rather than revenue vehicle miles and hours), since the ridership model produces total mile and hour estimates for these modes. The bus and light rail estimates also include an estimate of fixed and administrative costs based on the number of forecasted peak vehicles. Using a three variable model for these two modes (the bulk of DART's service and the only modes that vary across the alternatives) allows the O&M cost model to capture shifts in operating speed and peak to base ratio across time and across alternatives. In fact, the forecasts indicated that the average speed of DART's bus service will decrease in the future, while the average speed of the light rail service increases.

The cost factors for commuter rail and paratransit are based only on revenue vehicle hours, since the ridership model produces only this forecast variable for these two modes. Since the amount of service for these modes does not vary between alternatives (and does not vary much from actual service today), the simpler variable model will still capture costs at a sufficient level of detail.

Table 2-5 presents the O&M cost variables for each mode that are used to estimate the systemwide O&M costs.

TABLE 2-5
OPERATING AND MAINTENANCE COST VARIABLES

Variable/Mode	Bus	LRT	CRT	Paratransit
Cost/Vehicle Hour	$25.11	$27.36		
Cost/Vehicle Miles	$1.72	$2.91		
Cost/Revenue Hour			$1,16173	$70.51
Cost/Vehicle	$116,762	$558,558	8,785,636	12,269,284

Source: Nancy R. Edmonson, based on DART data, 2006

The cost estimates for the commuter rail and paratransit modes are based on the forecasted revenue hours for each alternative and the budgeted cost/revenue hour for FY 2006.

Table 2-6 presents annual O&M cost estimates by alterative and mode.

TABLE 2-6
OPERATING AND MAINTENANCE COSTS CONSTANT $2006

	Alternative	
	No Build	**Build**
Mode		
Bus	$218,551,304	$231,777,602
Light Rail	$ 90,133,061	$126,636,223
Commuter Rail	$ 23,549,487	$ 23,549,487
Paratransit	$ 29,520,088	$ 29,520,088
Systemwide	$361,753,940	$411,483,400

Source: Nancy R. Edmonson, 2006

2.3 OTHER ALTERNATIVES CONSIDERED

In addition to the LRT Alternative, which was selected as the preferred alternative, a No-Build Alternative was considered in the Draft EIS. The No-Build Alternative is used to determine the environmental impacts of not making major transit improvements in the project corridor. Evaluating this alternative also helps determine whether the benefits to be realized by implementation of the Build Alternative are acceptable, considering environmental, economic, and social impacts and their mitigation costs. The No-Build Alternative must be given full consideration and a thorough evaluation in order to compare it adequately to the proposed project.