

Handout 3: Exercises Packet

Service Plan Operational Data						
Service	Current Revenue Hours	Current Revenue Miles	Scenario 1 New Revenue Hours	Scenario 1 New Revenue Miles	Total Revenue Hours	Total Revenue Miles
Fixed Route	7,650	71,250	765	7,125	8,415	78,375
Demand Response	18,900	211,500	5,200	55,281	24,100	266,781
Total	26,550	282,750	5,965	62,406	32,515	345,156

Service Operational Cost Formula			
Service Unit Costs	Hours-Based cost per Rev. Hour	Miles-Based Cost per Rev. Mile	Fixed Cost Factor
Fixed Route	\$ 61.26	\$ 3.60	35%
Demand Response	\$ 57.86	\$ 3.64	35%

Forecasted Operational Cost					
Service	Hours-Based Cost	Miles-Based Cost	Variable Cost	Fixed Cost	Total Operational Cost
Fixed Route	\$515,526	\$282,095	\$797,621	\$281,078	\$1,078,699
Demand Response					
Total	\$1,909,934	\$1,252,534	\$3,162,469	\$1,114,440	\$4,276,909

Proportion of Cost by Function						
Service	Mode	Vehicle Operations	Vehicle Operations-Fuel	Vehicle Maintenance	Facility Maintenance	General Administration
Fixed Route	MB	47.8%	11.5%	14.7%	0.4%	25.6%
Demand Response	DR	43.4%	13.4%	17.1%	0.4%	25.6%

Forecasted Operational Cost	
Service	Total Operational Cost
Fixed Route	\$1,078,699
Demand Response	\$3,198,210
Total	\$4,276,909

Operational Cost by Function							
Service	Mode	Vehicle Operations	Vehicle Operations-Fuel	Vehicle Maintenance	Facility Maintenance	General Administration	Total
Fixed Route	MB	\$515,526	\$123,750	\$158,345	\$4,623	\$276,455	\$1,078,699
Demand Response	DR						
Total		\$1,903,721	\$552,190	\$706,557	\$18,330	\$1,096,111	\$4,276,909

Table 1: Service Plan Operational Data

Service	Current Revenue Hours	Current Revenue Miles	Scenario 1 New Revenue Hours	Scenario 1 New Revenue Miles	Total Revenue Hours	Total Revenue Miles	Scenario 1 Peak Vehicle Requirement*
Fixed Route	7,650	71,250	765	7,125	8,415	78,375	4
Demand Response	18,900	211,500	5,200	55,281	24,100	266,781	14
Total	26,550	282,750	5,965	62,406	32,515	345,156	18

* includes current and new service

Table 2: Vehicle Needs Using Peak Vehicles (PV) Approach

Service	Current Peak Vehicles	Current Vehicles w/ Spares	Scenario 1 Peak Vehicles	Target Spare Ratio**	Scenario Target Vehicles w/ Spares	Additional Needed?	Vehicle Needs
Fixed Route	3	4		25%		Yes / No	
Demand Response	12	15		25%		Yes / No	
Total	15	19					

** Based on ATA fleet management policy

Table 3: Vehicle Needs Cross Check Using Service-to-Vehicle (StV) Ratio

Service	Service-to-Vehicle (StV) Ratio	StV Target Vehicles (rounded up)	StV-Based Vehicle Needs	PV-Based Vehicle Needs	Diff (StV - PV)	Final Vehicle Needs
Fixed Route	17,813					
Demand Response	14,100					
Total						

Table 4: Vehicle Costs

Service	Vehicle Type	Cost per Vehicle (Current)	Projected Cost per Vehicle (2% inflation)	Additional Vehicle Costs
Fixed Route	35-foot bus	\$300,000	\$306,000	
Demand Response	Van	\$70,000	\$71,400	
Total				

Demand Response					
Financial Element	Notes	Operating (50%)	Maintenance (80%)	General Administration (80%)	Total
Cost		\$1,816,635	\$561,919	\$819,655	\$3,198,210
Forecasted Fares	10% increase				\$277,130
Net Cost	Cost less fares				\$2,921,079
Sources of Applied Revenue					
Federal 5307/5311					
<i>Section 5307</i>	Not applicable				
<i>Section 5311</i>	Same total as prev. year				\$1,000,000
State	Same total as prev. year				\$400,000
Local					
<i>Contract Revenue</i>	Same as prev. year				\$577,818
<i>County Government</i>	Same as prev. year				\$200,000
<i>Misc. Local Funding</i>	Same as prev. year				\$89,610
Balance (Need)		\$272,077	\$112,384	\$269,191	\$653,651