

Life Cycle Cost Analysis		Original Design		Alternate 1		Alternate 2		Alternate 3	
		Describe: Sloped Metal Roof		Minimum Slope Membrane		Asphalt Shingles			
		Estimated Costs	Present Worth	Estimated Costs	Present Worth	Estimated Costs	Present Worth	Estimated Costs	Present Worth
Study Title:									
Initial Capital Costs	Description of Component/Item								
	Roof, Includes Structure		\$ 1,000,000	\$ 1,000,000	\$ 350,000	\$ 350,000	\$ 650,000	\$ 650,000	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
	<b>Total Capital Costs</b>			\$ 1,000,000		\$ 350,000		\$ 650,000	\$ -
<b>Initial PW Difference</b>					\$ (650,000)		\$ (350,000)	\$ -	
Replacement Cost	Replacement Cost ( Single Expenditure)	# of Years							
	Metal Roofing	50 years	\$ 400,000	\$ 34,881		\$ -		\$ -	\$ -
	Membrane Roofing	20 years		\$ -	\$ 150,000	\$ 56,533		\$ -	\$ -
	Asphalt Shingles	30 years		\$ -		\$ -	\$ 150,000	\$ 34,706.62	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
<b>Total Replacement Cost</b>			\$ 34,881		\$ 56,533		\$ 34,706.62	\$ -	
Annual Costs	Description of O&M/Annual Cost								
	Snow Control		\$ 5,000	\$ 73,327		\$ -	\$ 2,000	\$ 29,331	\$ -
	Patch and Repair		\$ 250	\$ 3,666	\$ 10,000	\$ 146,654	\$ 300	\$ 4,400	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
				\$ -		\$ -		\$ -	\$ -
<b>Total Annual Cost</b>			\$ 76,993		\$ 146,654		\$ 33,730	\$ -	
LCC	<b>Total Life Cycle Cost (Present Worth)</b>			\$ 1,111,875		\$ 553,187		\$ 718,437	\$ -
	<b>Life Cycle Cost PW Difference</b>					\$ (558,687)		\$ (393,438)	\$ -
	<b>Total Life Cycle Costs (Annualized)</b>		\$ (89,220) per year		\$ (44,389) per year		\$ (57,649) per year		\$ - per year
		<b>Discount Rate:</b>	<b>5%</b>	(The discount rate is the time/value of money and is a variable.)					
		<b>Life Cycle (years):</b>	<b>20</b>						
		<b>Escalation on Annual Costs</b>	<b>2%</b>	(The escalation factor is the inflation factor and is a variable.)					