

Playground Development Project
Child Care Center of UMBC

Prepared by: Orange Zone Construction
Date: March 27, 2002

Cost-Benefit Analysis

Project A – “All-In-One” Playground Kit

This project involves the addition of an “all-in-one” playground to the existing playground area. We will leave the existing playground structure in place and install the all-in-one kit in the space available outside the Child Care Center. There is enough empty space outside to allow for plenty of room for the playground. As of now, the available space consists of grass. With the all-in-one kit, we are able to install on the ground, so the grass will not be disturbed. The installation of this kit is fairly simple, so as a team, we have decided to donate our time to install the playground for the Child Care Center. The project’s costs and benefits break down as follows:

Costs:		\$999.99
Includes:	Play deck (4’ x 8’) – Covered and Sundeck area	
	10’ Wave Slide	
	Rock Climbing Wall	
	Flat Steps on access ladders for ease of use	
	Commando ladder	
	Two sling swings w/ quality seats	
	Two-person glider swing	
	Sandbox	
	Safety handles	
	UV protected canopy	
	Picnic table	
	Sand	\$120 (\$6/bag x 20 bags)
	Tool Kit	\$200 (\$50/kit x 4 kits)
	(tool kit includes tape measure, level, hammer, phillips screwdriver, socket wrench, 3/8” socket, 7/16” socket, 1/2” socket, 7/16” wrench, 1/2” wrench)	
	Shipping	Free (pick up from Costco)
	Installation	Free (we volunteer to install)
Total Costs		<u>\$1319.99</u>

Costs for remaining years:

Maintenance contract w/ Orange Zone Construction **\$150** (per year)

Benefits (Intangible)

- Easy Installation – Assembly time = 4-6 hours
- Recessed, pre-drilled holes
- No digging required
- No cement required (unit sets on ground)
- Inexpensive labor
- No cracking or checking on 4” x 4”s – guaranteed
- 10-year warranty against wood rot or termite decay on red cedar and wood guard
- 1-year warranty on all other parts

Better quality than what is currently available to children
 Due to more advanced equipment, will last longer than existing playground structure

Benefits (Tangible)

Increase in Enrollment **\$14,400** (estimated)
 (2 available spots x \$150/wk x 48wks = \$14,400)

Project B – Replacement/Refurbish of Equipment

This project involves the replacement of certain components of the playground, while the existing structure remains in place. This project will not include the removal of any part of the playground structure, but simply the replacement of functional equipment. We will remove some of the playground components in order to utilize the available space. Due to the manner in which the playground components are set up now, the space is not being used as efficiently or as effectively as it could be. There is a great deal of empty space within the structure that can be used for the installation of additional playground equipment.

In this project, some components will be replaced with similar equipment in order to fit more components within the available space of the structure. This project will basically consist of the enhancement of the existing structure in order to add more equipment. These enhancements will allow more children to use the playground at the same time. This project involves more assembly knowledge, so as a team, we have decided to outsource the labor in order to install the playground equipment. The project's costs and benefits break down as follows:

Costs:

New Equipment to Replace Existing Equipment

2 Sling Swing with Chain	\$ 46.00
Ring Trapeze with Chain	\$ 37.00
Back-to-Back Molder Glider	\$ 75.00
Plastic Wave Slide	\$149.00
Monkey Bar Kit	\$105.00
S Hooks (to hang equip.)	\$ 10.00
Glider	\$ 79.95
Rope Ladder	\$ 59.95

Add On to Existing Structure

Fireman's Pole	\$ 49.00
Chin Up Bar	\$ 39.00
Free Standing Sandbox w/ cover	\$159.00
Wood Planks/Beams (4'x4';6'x6')	\$250.00
Shipping (from Websites)	\$150.00
Installation	\$720.00 (\$15/hour x 16 hours (2days) x 3 workers)
Tools	N/C (To be provided)

Total Costs \$1928.90

Costs for remaining years:

Maintenance contract w/ Orange Zone Construction **\$150** (per year)

Benefits (Intangible)

Extended life to existing structure

By refastening or replacing nuts and bolts the structure will last longer

By building on, will produce larger play area as well as more equipment available

Benefits (Tangible)

Increase in Enrollment (same as project 1)

\$14,400 (estimated)

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Weighted Scoring & Net Present Value Analysis
