

C1.01 - Spring Lake Trail Foot Bridge

Cason Grumbles, Hayden VanderRoest, Ian Lattie, Isaac Nino
 Jon Cradit, Greg Moore, Todd Derkacz

Team & Project Grading



From left to right Isaac N., Ian L., Cason G. & Hayden V.



Bobcat Bridge Builders
 (BBB) Logo

Envision Grading

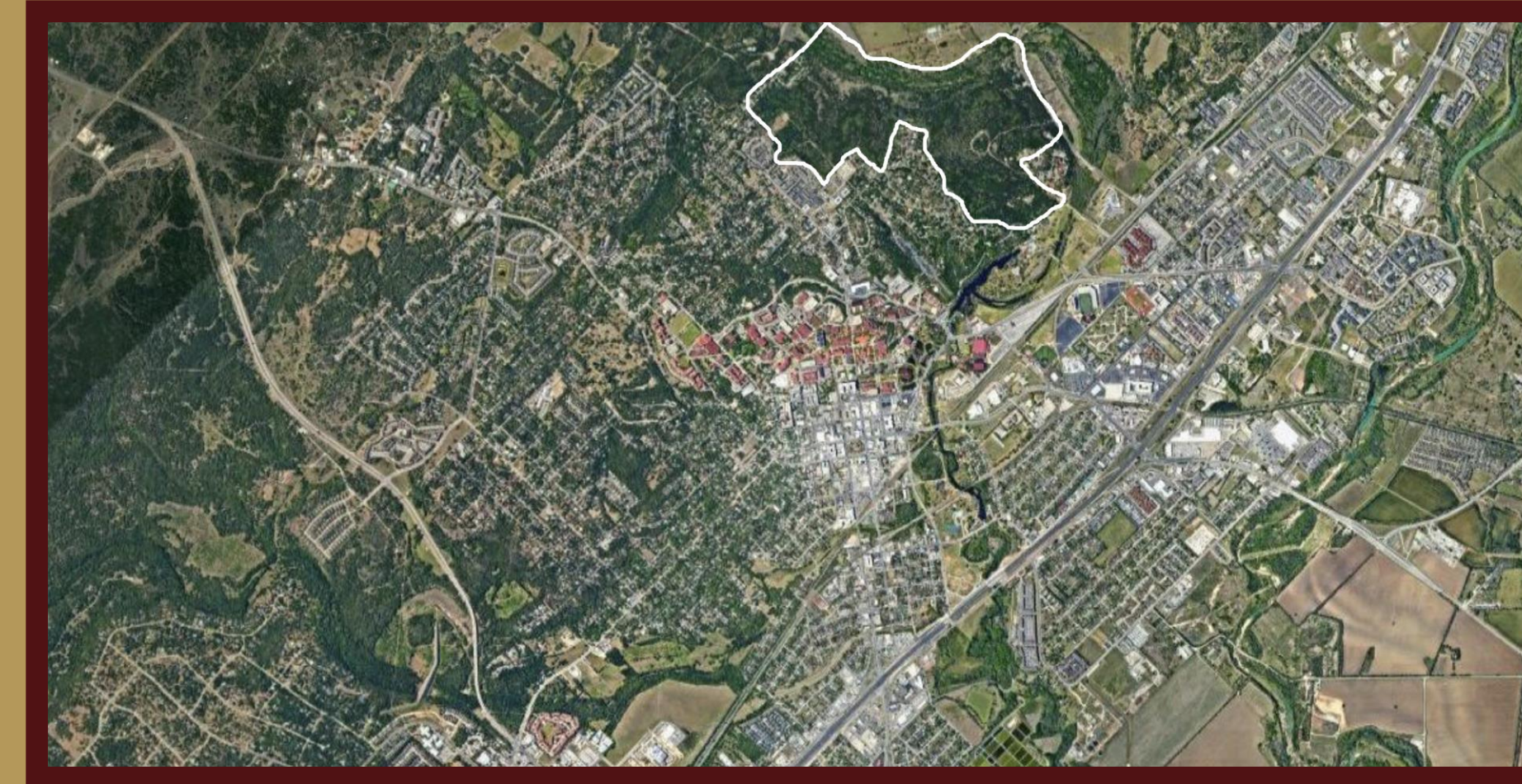
Credit Category	Available	Score (RC)		Score (Pre-fab)	
		Earned	Percent	Earned	Percent
Quality of life	146	46	32%	46	32%
Leadership	164	80	49%	80	49%
Resource Allocation	134	10	7%	18	13%
Natural World	184	9	5%	13	7%
Climate & Resilience	190	2	1%	15	8%
Total Points / %	818	147	18%	172	21%

Reinforced Concrete on the left side of the table, Prefabricated on the right.

Project Introduction

Our Sponsor's Story:

Since being established in 1998, San Marcos Greenbelt Alliance (SMGA) has worked to protect the quality of life in San Marcos through the creation of interconnected parks and natural areas. If you enjoy the natural world, we would love to have you join us. SMGA is a 501(c)(3) organization.



The Project:

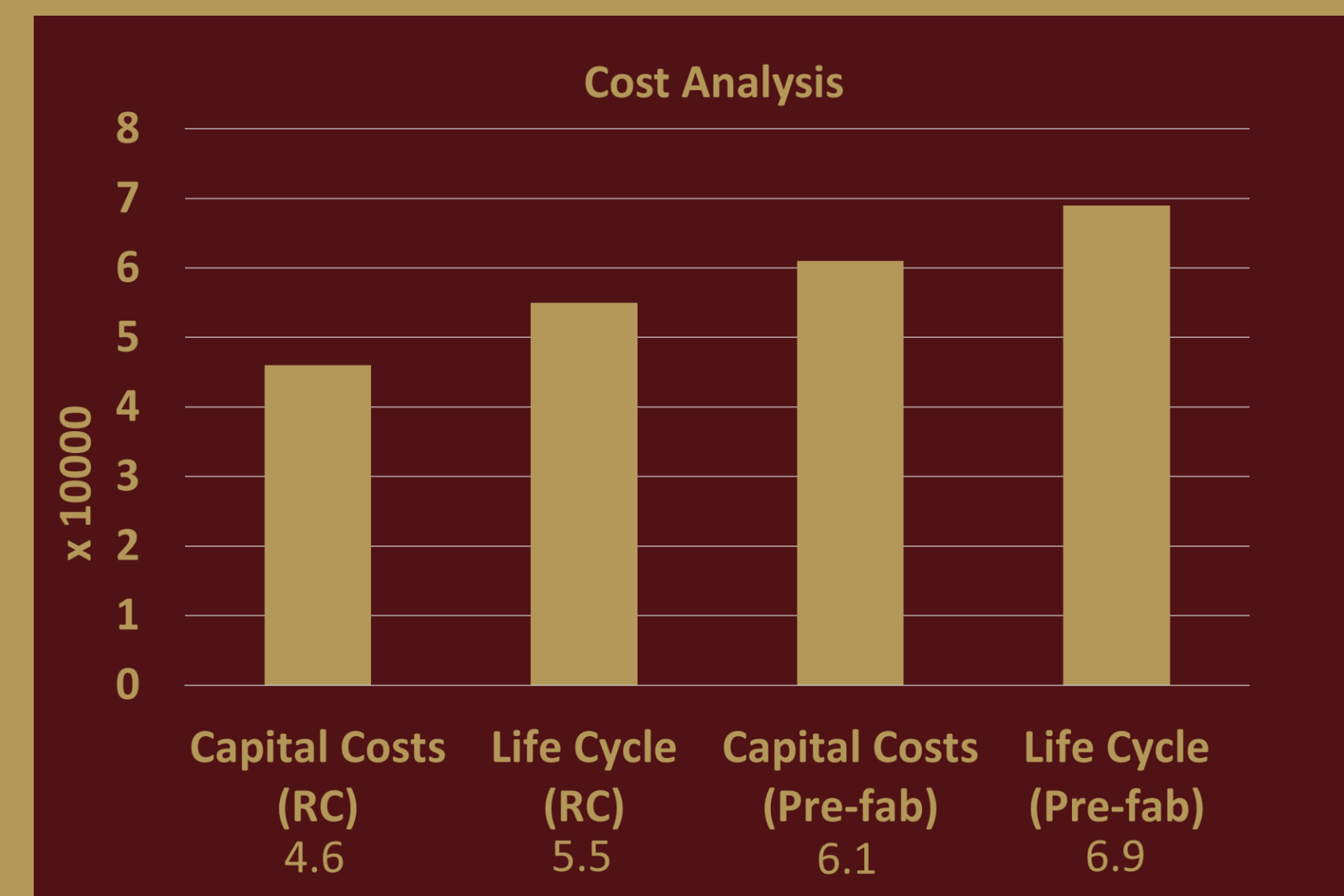
BBB will design a bridge for pedestrians in the Spring Lake Natural area. The Bridge will complement the beauty of Spring Lake park while fulfilling our clients' needs'.

Clients Requirements:

- No motorized vehicles
- Minimal environmental disturbance
- Support a load of 2 horses or UTV
- Create an experience

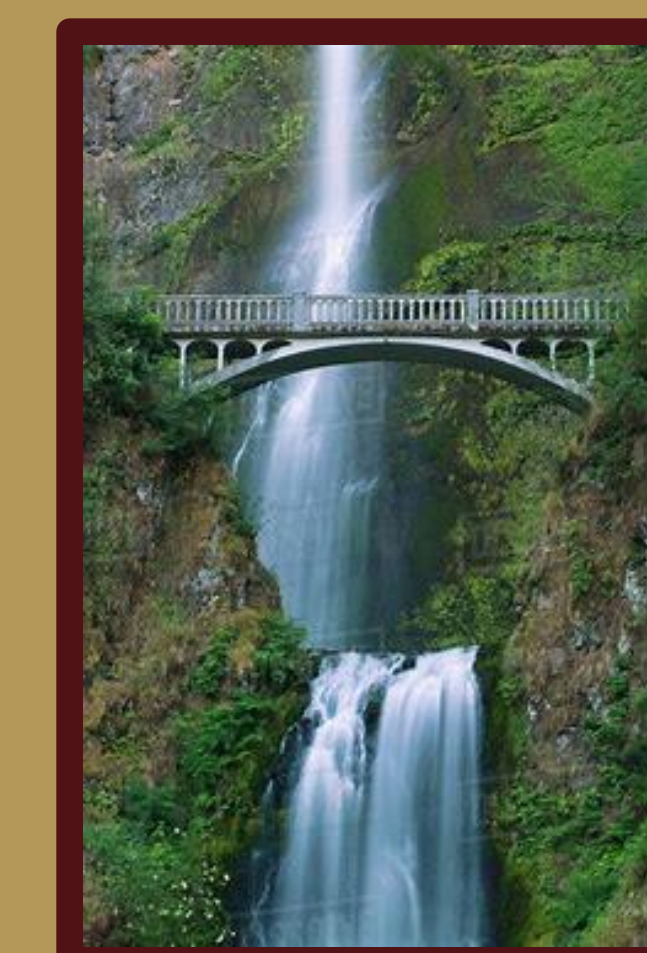
Project Overview and Future Plan

Life Cycle Analysis



- **Capital Costs Includes:**
 - Foundation
 - Concrete/Rebar
 - Metal Framing and deck
- **Life-Cycle Includes:**
 - Regular Maintenance
 - Deck/Railing Replacement
 - Demolition and Recycling

Inspiration for Alternatives



On the left is a bridge built across the San Maros River near the Lions Club Tube Rental. On the right is Multnomah Falls Bridge in Oregon. Both bridges inspired and led to the decision of both alternatives, a prefabricated or a reinforced concrete bridge.

Next Steps

- Meet with SMGA and choose a final design
- Method of concrete transportation from parking lot to construction site
- Create a detailed plan for foundation excavation and construction
- Establish a construction schedule for the two foundations and bridge