



C1.03 – Spring Lake Trail Rehabilitation

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Introduction

- As San Marcos grows exponentially, there is an increasing demand for maintaining and improving its natural areas for conservation and recreation.
- The San Marcos Greenbelt Alliance is a local non-profit organization that gathers the community to provide direct assistance to keep these natural areas protected and preserved.



Sustainability



Platinum

	3D Cellular Confinement with Natural Infill	Turnpike Trenching with Native Plants
Quality of life	77%	76%
Leadership	90%	90%
Resource Allocation	66%	60%
Natural World	44%	43%
Climate and Resilience	86%	88%
Overall	75%	74%

Sustainability requires that environmental, social, and economic impacts are measured in the context of this project. Considering a project's sustainability is important to combat escalating material costs, the energy crisis, depletion of natural resources, and environmental pressures.

Trail Section

Goal: Return trail to its intended width and improve functionality in wet conditions with natural materials and low impact design.



The 140-foot section of Spring Lake Trail

Alternatives

Three-Dimensional Cellular Confinement with Natural Infill



PET Waste Cell Membrane from



Bamboo Geocell Membrane from



Commercial Cell Membrane from

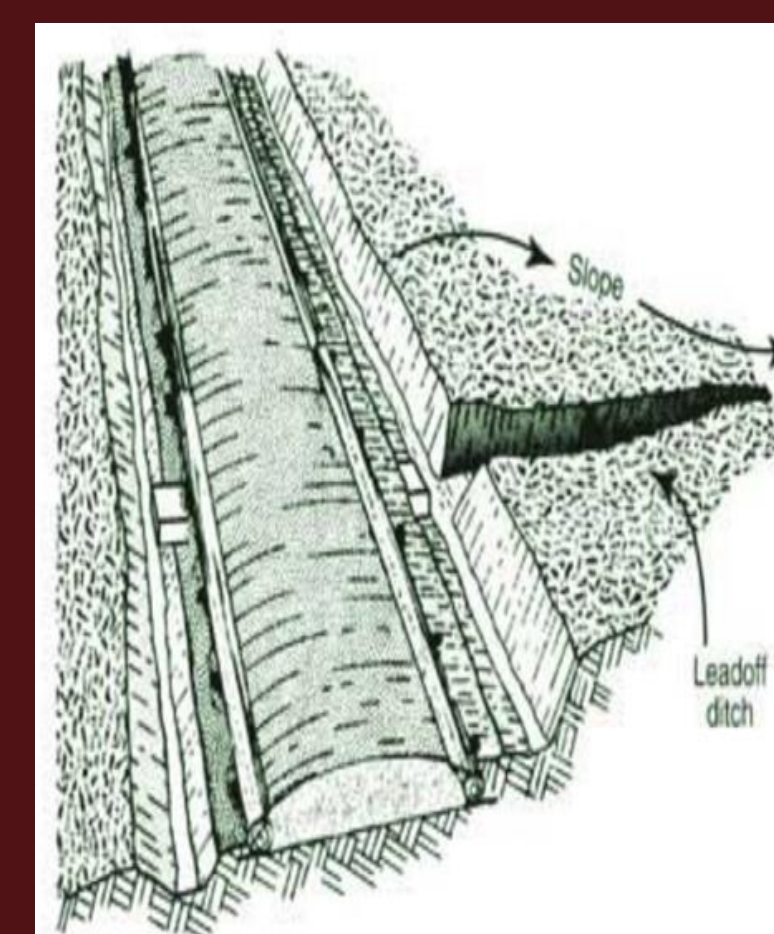


Red Granite Infill from



Concrete Sand Infill from

Turnpike Trenching with Bioswales

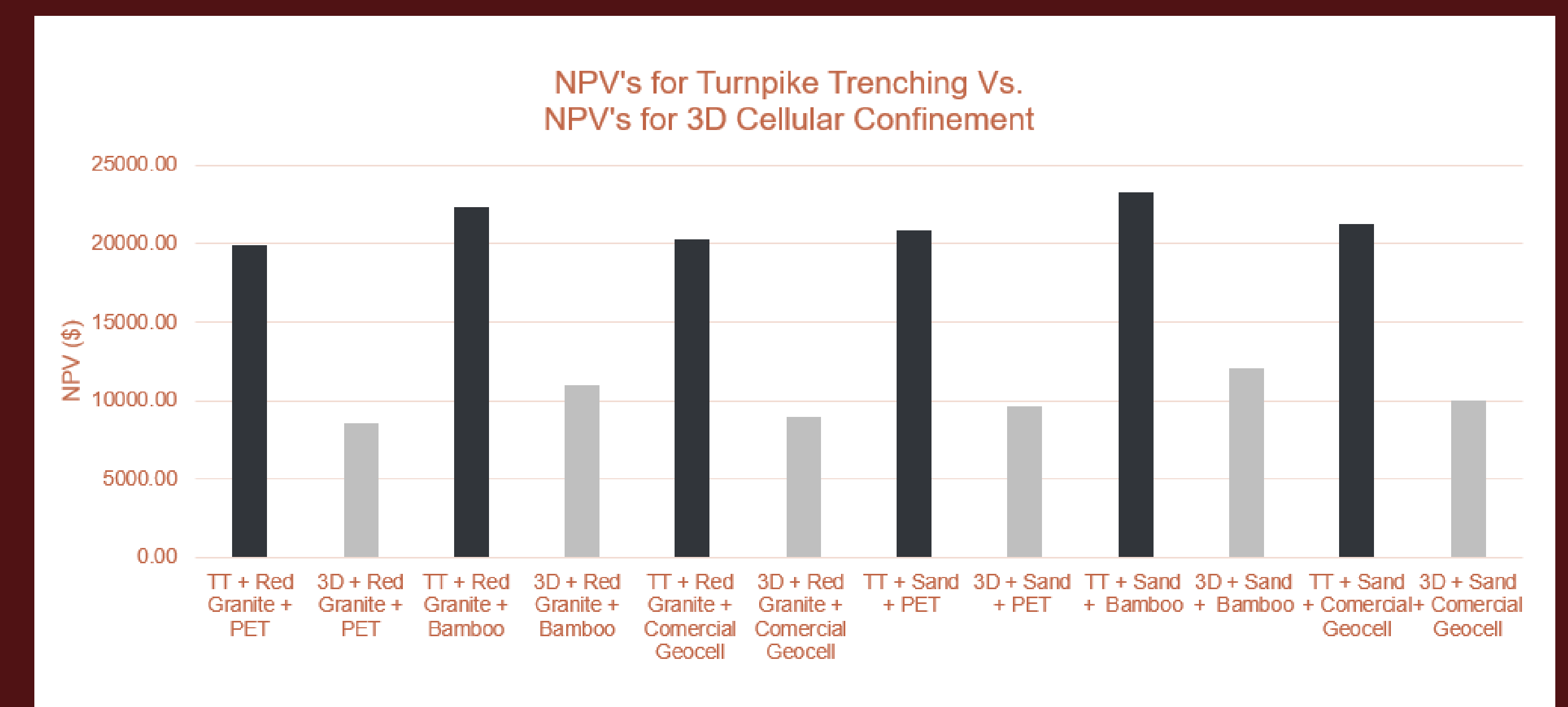


Turnpike Trench from



Bioswale from

Life Cycle Cost



Senior Design II

The next steps for this project:

- System design
- Element design
- Update sustainability score and life cycle costs



The section of trail is located 750 feet from the trailhead