

# SON CARE FOUNDATION



## Son Care Foundation - Shade Structure Construction

**Nicole Bocanegra**  
California Polytechnic State University  
San Luis Obispo, CA



# CAL POLY



The 4x4 posts connected to the concrete using metal post bases and SDS Screws.

This paper will outline the preconstruction and construction processes that took place to erect a shade structure for the Son Care Foundation. This project included the design, estimate, and construction of the 8 ft tall shade structure. The structure was composed of pressure-treated lumber, concrete, metal post bases, and corrugated metal roofing. While originally expected to be around 15 foot in length, the final structure ended up being closer to 20 feet long. Based on existing shade structure of the foundation, the roof of the shade structure is sloped one way towards the back of the structure. The construction and procurement of the project was split into corresponding phases due to the lack of storage available on site and the availability of the workers. The main phases included preconstruction, excavation, concrete, framing, and roofing. The structure was successfully built in the agility field on the ranch of the Son Care Foundation with funding from the Construction Management Advisory Council (CMAC). The main challenges that were faced during this project had to do with the initial design and procurement stages of the project. These challenges slightly affected the schedule and overall cost of the structure but did not affect the quality of the completed project.

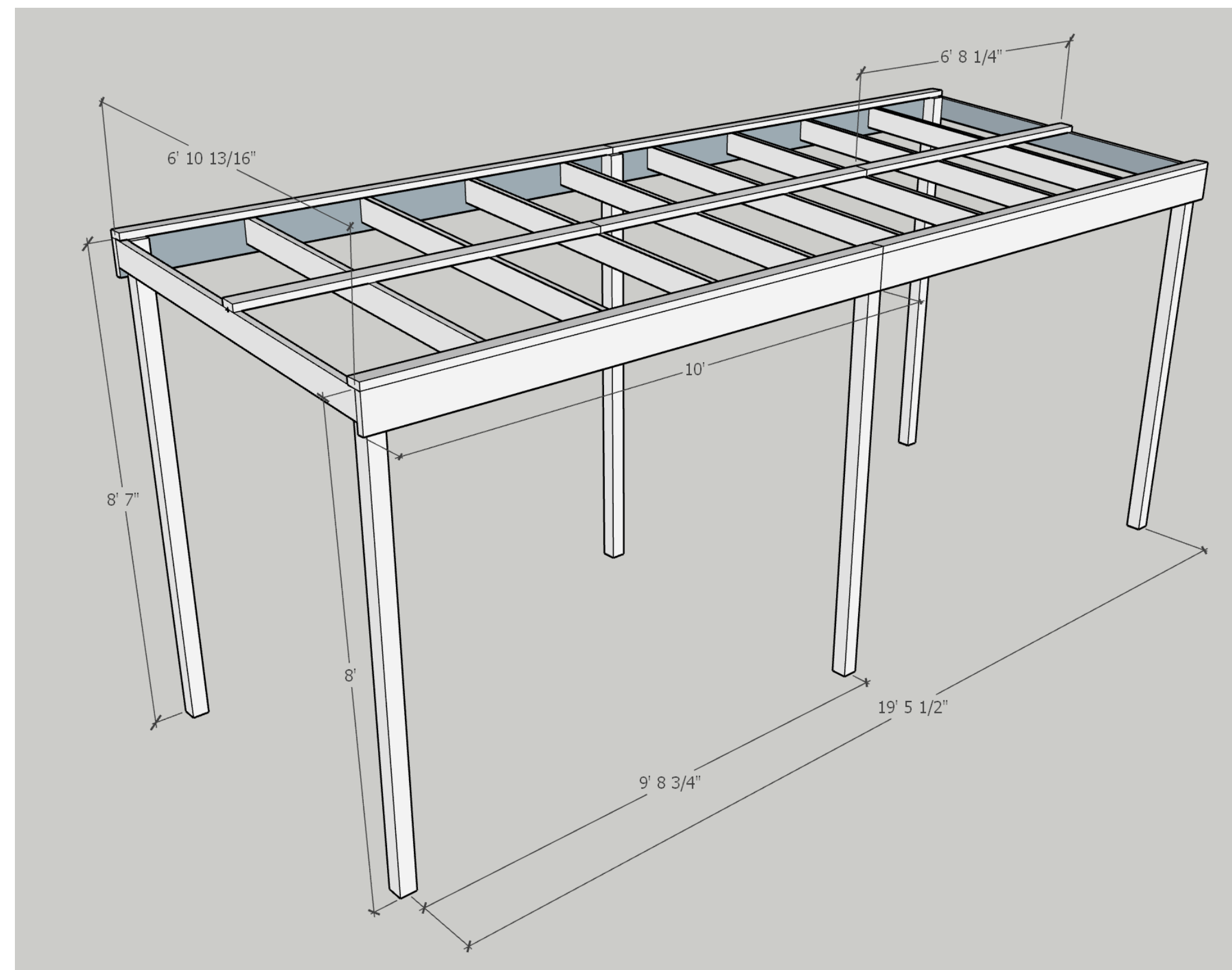
Key Words: Shade Structure, Construction, Lumber, Metal, Son Care



The completed wood framing of the shade structure prior to installation of the roof



The completed shade structure located along the side of the Son Care Foundation's agility field.



3D Model of the final design for the wood framing of the shade structure with dimensions called out. Created using SketchUp.



Picture of the project when the wood framing was about 50% complete.