

Project Title: [Boat Lift Redesign](#)

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Area: [Mechanical Engineering](#)

Sponsor: [Triton Metal Products](#)

Triton Metal Products is an industry leading metal fabrication company based in Hamilton, Indiana. Triton specializes in the engineering and manufacturing of products using a business-to-business model. Recently, Triton expressed an interest in entering the business-to-consumer sector. It was decided that a boat lift would be one of the first products they would bring to market. Triton currently has an unfinished boat lift design that was developed over ten years ago, but this design is outdated and does not take advantage of Triton's advanced manufacturing methods. Triton has requested that a new boat lift be designed that would make use of their new TRUMPF tube laser. This machine laser cuts metal tubing efficiently to reduce manufacturing cost by combining multiple machining processes. They have asked that our boat lift be designed to handle a load of 11,250 pounds and lift a 24-foot tritoon boat with the potential of configuration for other watercraft. This boat lift must include a 10-foot pull in width to ensure adequate spacing and boat alignment.

The design and development budget for the project is \$15,000 excluding any Triton manufacturing costs. This budget will cover the material, prototyping, and development costs associated with this project.