

# NWTC Solar Advanced System Design

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Dear Mr. Cook and Ms. Puckhaber,

Thank you for allowing our class to evaluate your site for solar energy. It is always a pleasure to assist others with the conversion from fossil fuels to renewable energy. The Mauthe Center is on its way to becoming a clean green energy efficient building.

We developed a power point presentation to describe the possible options for a solar electric system. This includes mounting options, possible array locations, and ways to reduce electrical consumption, increase efficiency, estimated production data and cost. Also included are 3 potential system designs.

The most practical option for the Mauthe Center is a ballasted roof mount system. With a ballasted roof mount there is no moving parts and is easy to maintain. As well as putting the modules in landscape mode will minimize the wind load. The minimal shading of the location will generate maximum production. The estimated production of this system is 7,200 kWh/yr. The system cost is estimated from \$24,000 - \$36,000.

Two options to bid for the system at the Mauthe Center are for a 6 kW ballasted system or for the \$30,000 budget for the system. Our class would gladly assist the Mauthe Center in reviewing bids to ensure the center receives a quality job. Once again thank you for this great opportunity to help our community one module at a time.

We will gladly assist in the installation of this system. NWTC would not have any liability for this installation, although all students would be covered by NWTC insurance while on your site.

Let us know if you have any questions. We look forward to working with you more on this project.

Best Regards,  
Students of the Solar Advanced System Design Class