## Abstract

This senior project is a facilities design for the plate production room at Hardy Diagnostics. This project was completed using a systematic layout planning approach. The main reason for this redesign was to consolidate all plate line production into one room. This would ensure better visibility for the managers. After the project was defined, the different departments were established and the relationships between those departments were found. The space requirements needed for those departments were then measured out to also include the aisle widths and any machinery or carts needed to complete each function. Having determined all requirements for this facility, three layouts were generated. The first layout is called the horizontal layout because of the direction of all of the plate lines. The second is called the vertical layout because all the plate lines are positioned vertically. The last is called the modified vertical layout because it is similar to the vertical layout with some modifications on plate line locations. After evaluating each layout, the modified vertical layout was chosen. The implementation costs about $3880 with a payback period of approximately 3 years.