

# Yaakov Knobloch

## Project Abstract - Minnesota Department of Administration, Facilities Management



### INTERN

**Yaakov Knobloch**

BS Mechanical Engineering; University of Minnesota 2020

### PROJECT FOCUS

**Energy, Water**

### ADVISOR

**Jon Vanyo**

### COMPANY

**Minnesota Department of Administration  
– Facilities Management**



### COMPANY DESCRIPTION

The Minnesota Department of Administration is tasked with overseeing and managing the administrative functions of other executive branch state agencies, including their purchasing and contracting, facilities management and more. With \$176.5 million in annual operating costs and 475 full-time employees, the Department of Administration oversees \$2.1 billion in state purchases, maintains 4.4 million square feet of owned

space and leases an additional 3.6 million square feet of space for over 100 state agencies, boards and councils.

### **INCENTIVE**

The Facilities Management Division (FMD) of the Department of Administration would like to become more sustainable in its uses of energy and water consumption. Governor Walz solidified this goal with executive order 19-27.

### **GENERAL APPROACH**

Energy and water efficiency are being addressed in this project through four targeted focus areas: lighting, compressed air, water fixtures, and irrigation.

### **FOCUS OF RESEARCH / RECOMMENDATIONS**

There are four main recommendations. Replacing fluorescent bulbs with high efficient LED bulbs will save energy with a payback period of under two years. Switching the VAV boxes from pneumatic controls to direct digital controls will save energy by reducing compressed air use in the Transportation Building. Replacing the flush valves in water closets and urinals to low flow flush valves will save millions of gallons of water in these buildings. Optimizing the use of irrigation water on Capitol Mall grounds will save millions more.