

# SOLAR ARRAY AND WINDOW REPLACEMENTS

501 BUILDING



## PROJECT DETAILS

### LOCATION

County Campus  
Wheaton, IL

### ISSUE

Existing building age allows for building envelope improvements

### SOLUTION

Embrace solar opportunity  
Replace windows with new

### BENEFIT

Produce green energy  
Improved building energy efficiency and conditions

### DISTRICTS REPRESENTED

US Representative Districts  
3, 5, 6, 8, 11, & 14

IL Senate Districts  
21, 23, 24, 25, 28, 39,  
41, 42, & 43

IL Representative Districts  
41, 42, 45, 46, 47, 48,  
49, 56, 77, 81, 82, 84, &  
85

County Board Districts  
1, 2, 3, 4, 5, & 6



## 501 SHERIFF / JAIL BUILDING

Portions of the 501 Sheriff/Jail Building were built in 1981, with the 'tower' addition built in 1990. Original building materials such as roofing and glazing are reaching their expected end-of-life, allowing for the opportunity to add solar and more efficient building envelope options.

### Solar [Photovoltaic] Panel Additions

- Portions of existing roof have been recently replaced and are ideal locations for solar panels
- Design is in progress for new array and required electrical infrastructure
- Current estimate for roof PV system: **\$230,000-\$260,000**

### Operable Skylight over 'B' Building Recreational Area

- Existing skylight [which opens horizontally to allow in fresh air and direct sunlight] is at end of expected lifespan

- Replacement of equipment and tracks along with new glazing structure
- Current estimate for new operable skylight: **\$150,000-\$200,000**

### Replacement of Facility Windows

- The storefront-type glazing [which includes a 'skylight' portion above] is now leaking in several areas. Replacing with new sealed glass [using modern UV and insulation standards] would substantially improve building energy efficiency.
- Current estimate for different phases of window replacements range from **\$1,000,000 each** to approximately **\$6,000,000 for entire building**