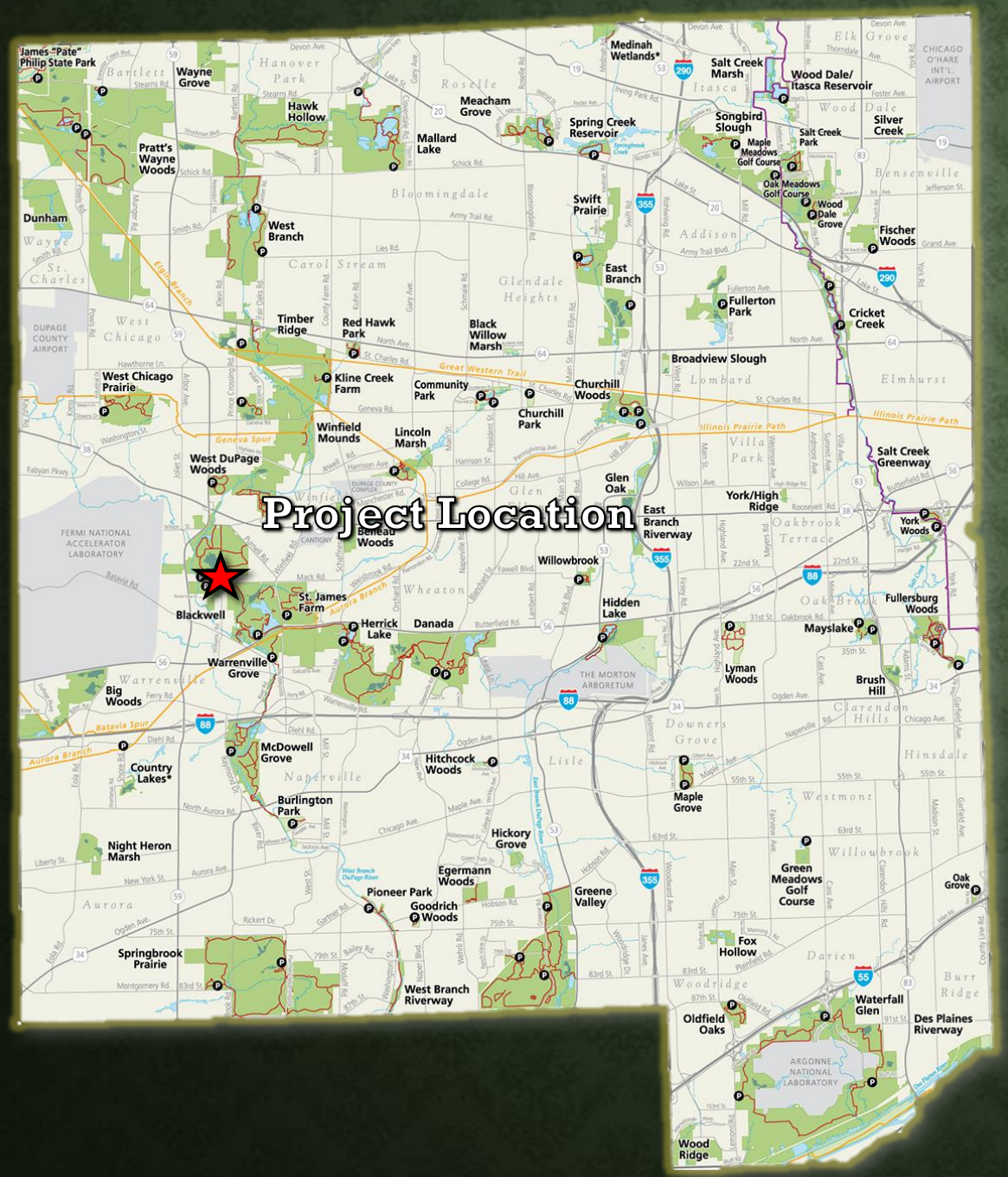

BLACKWELL SOLAR STUDY
AND DESIGN PROPOSAL
FEBRUARY 23, 2021
FOREST PRESERVE DISTRICT
DU PAGE
COUNTY

LOCATION MAP

- Blackwell Forest Preserve
  29W222 and 29W400 Mack Rd
  West Chicago, IL 60185



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2019 MASTERPLAN GREEN ENERGY STUDY

- To further strategic plan priorities to increase energy efficiencies and reduce the agency's carbon footprint, the Forest Preserve District should study ways to use solar and other renewable or sustainable energy sources. .
- Steps to reduce pollution and improve the environment benefit all living things.
- Restricted donation opportunity.

BLACKWELL SOLAR STUDY
WHY ARE WE PRESENTING THIS?

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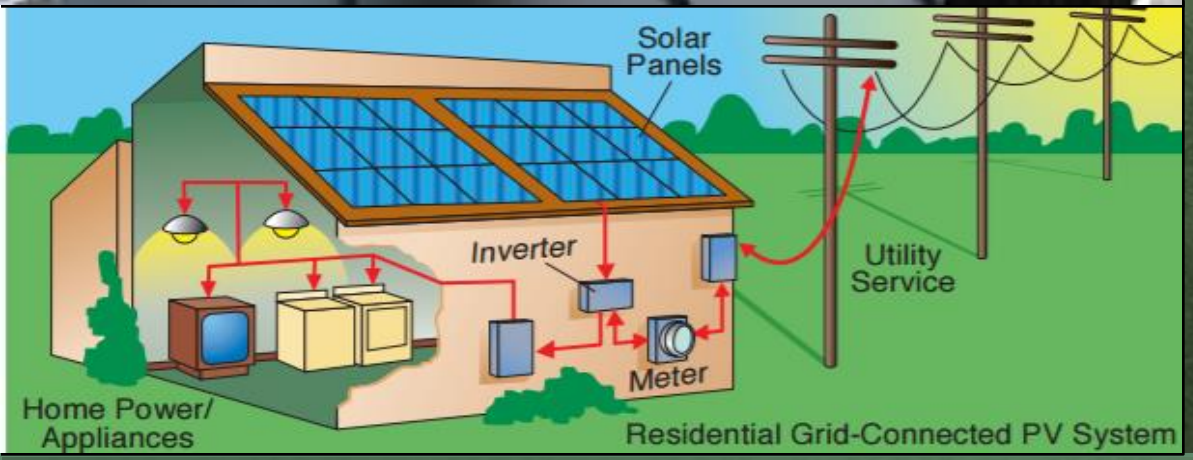

SITE EVALUATION CRITERIA

- Facility energy demand and costs.
- Building orientation.
- Roof construction type.
- Age of facility.
- Shading concerns.
- Potential obstructions or conflicts.
- Ability to access for maintenance.
- Visibility/awareness.

BLACKWELL SOLAR STUDY
WHY FLEET AND FACILITIES?

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BLACKWELL SOLAR STUDY
FLEET CONSIDERATIONS

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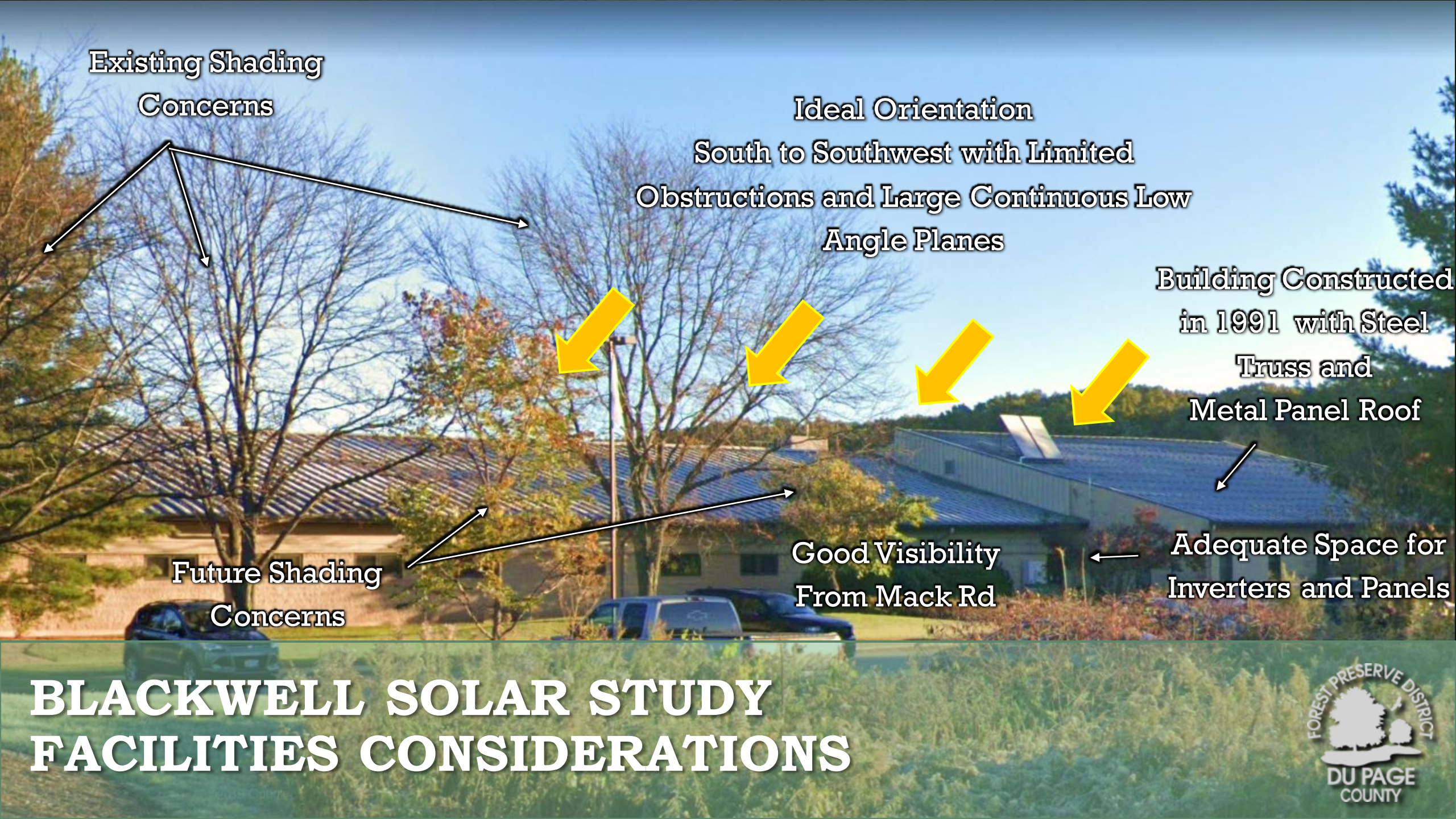

BLACKWELL SOLAR STUDY FACILITIES CONSIDERATIONS

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FLEET MANAGEMENT BUILDING

- $32,300 is Current Annual Energy Cost
- Over $807,500 is Est. Total Cost in 25 Years
- 23,000 SF of Roof Available for Solar Panels
- 1505 Hours of Sunlight Yearly / 96% Solar Access
- 352 kW Maximum Array Possible
- 282 kW is Needed to Offset 100% Demand
- Probable Est. of Cost to Construct is $735,000

BLACKWELL SOLAR STUDY
FLEET SOLAR OPPORTUNITIES

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FACILITIES MANAGEMENT BUILDING

- $14,900 is Current Annual Energy Cost
- Over $372,500 is Est. Total Cost in 25 Years
- 12,000 SF of Roof Available for Solar Panel
- 1485 Hours of Sunlight Yearly / 94.5% Solar Access
- 196 kW Maximum Array Possible
- 110 kW Needed to Offset 100% Energy Demand
- Probable Est of Cost to Construct $290,000

Shady — Sunny

BLACKWELL SOLAR STUDY
FACILITIES SOLAR OPPORTUNITIES

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TASKS PHASE I-III

- Photovoltaic design for up to 23,000 SF Roof
- Preliminary design report with conceptual layout, building condition assessment and recommendation for most cost effective system.
- Construction documents, specifications, permitting, and utility interconnection.
- Prepare final cost estimate.
- Provide bid assistance with RFI's and bid evaluation and recommendation.
- Assist with construction administration.

BLACKWELL SOLAR DESIGN PROPOSAL
SITE 1 - FLEET MANAGEMENT BUILDING

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TASKS PHASE I-III

- Photovoltaic design for up to 12,000 SF Roof
- Preliminary design report with conceptual layout, building condition assessment and recommendation for most cost effective system.
- Construction documents, specifications, permitting, and utility interconnection.
- Prepare final cost estimate.
- Provide bid assistance with RFI's and bid evaluation and recommendation.
- Assist with construction administration.

BLACKWELL SOLAR DESIGN PROPOSAL
SITE 2 - FACILITIES MANAGEMENT BUILDING

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ITEM DESCRIPTION	COST
Site 1 - Fleet Management Building	
Phase I Task (Preliminary Feasibility Report)	$ 14,000.00
Phase II Task (Construction Documents, Permitting, Bidding)	$ 16,595.00
Phase III Task (Construction Administration Assistance)	$ 4,390.00
Fleet Management Solar Design Cost	$ 34,985.00
Site 2 - Facilities Management Building	
Phase I Task (Preliminary Feasibility Report)	$ 14,240.00
Phase II Task (Construction Documents, Permitting, Bidding)	$ 16,135.00
Phase III Task (Construction Administration Assistance)	$ 4,000.00
Facilities Management Solar Design Cost	$ 34,375.00
Combined Sites Total Cost	$ 69,360.00

BLACKWELL SOLAR STUDY
DESIGN PROPOSAL COST

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Willowbrook Wildlife Center
Solar Array - October 2020

NEXT STEPS

- Preliminary design report for Board to consider costs and options with analysis for projected ROI and funding opportunities. (May 2021)
- Award design contract, pending Board approval. (June 2021)
- Propose installation costs (as confirmed by consultant review) for Board approval to be included in CY22 Budget. (Dec. 2021)
- If approved, permit & bid project and present bids for Board approval (Feb. 2022)

BLACKWELL SOLAR STUDY ANTICIPATED SCHEDULE

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QUESTIONS?
Cart Barn Solar Array - May 2020
The Preserve @ Oak Meadows
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