



### PV Site Assessment Worksheet

Lead Assessor: Roger Date Assessed: 15 January 2016  
 Organization: Solar Endowment Program: \_\_\_\_\_

**Client Information**

Name UMN 21st Ave Parking Ramp			
Site Address 400 21st Ave	City Minneapolis	State MN	Zip 55455
Mailing Address	City	State	Zip
County Hennepin	GPS Coordinates	Township	Miles from HQ
Email	Phone(s)		
How did client hear of RREAL / REAL Solar?			
What are client's goals with the system?			

**Solar Resource**

Azimuth (90=E, 180=S, 270=W) 180, Due South	Tilt TBD	Shading (always take pathfinder photo) >95%, See Pathfinder Report; Pathfinder taken at roof level, PV to be elevated for less shade
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**Proposed System Type and Description**

System Type, Description, Size Carport shade awning on top deck of parking ramp - Up to ~500kW depending on Design	
Rebate Program	PV Module and Inverter Make/Model

**Mounting Options**

**Roof:**

Contiguous Space (provide drawing, consider roof setback) 225'x150'=38,250 total [from google, get building plans] no all space may be usable	Mounting Obstructions Lights, Inter-row Shade, Existing Structure	
Roof Trusses (size, spacing, material, span length) Existing ramp concrete structure will dictate carport design		
Roofing Material (make and model for metal)	Roof Pitch	Age of Roof
Roof Access Location and Method Road access 20th Ave, 4th St, 21st Ave with Crane	Height to Roof at Access Point Check building height, Crane equipment to rooftop	

**Ground:**

Soil Type and Condition	Obstructions (site, trench, buried)
Trench Route and Length	Building Entry Location

**Utility and Building Details**

Utility Company UMN and Excel Energy	Building Zoning Type Commercial	Building Permit Req'd? AHJ Contact
Utility Rate (special rate? off peak?) Special Metering with UMN Generation and Xcel Connection	Special Utility Req's (disconnect, meter) Check on Disconnect Location for Remote Metering	
Meter(s) (quantity, location, size/amp rating, type, off peak?) Remote metering, single meter for campus, each building not individually metered by Xcel. UMN has digital energy monitoring at Transformer		
Electrical Inspector Name and Contact Info	Within City Limits or Township Minneapolis	

**Electrical Details**

Make and Model of Existing Main Service Panel FPE FA1 Switchboard, OLD	Service Voltage and Phase 120/208V 3P	Main Breaker/Disconnect Location and Size 800A Main (225kVA 13.8V transformer)
Location of Service Panel In mech room at East wall of first floor	Service Panel Bus Bar Amp Rating	
Point of Interconnection (location, type) Line Side, likely in Transformer Room	BOS Equipment Mounting Space (location, space) Limited space in Mech and Transformer rooms	
Rapid Shutdown (required, location, type)	Location of proposed PV disconnect	
AC Wire (length, route, obstructions) Vertical down height of building	DC Wire (length, route, obstructions) Locate central inverter on roof to shorten DC	

**Data Monitoring**

Monitoring Equipment (type, location)	Internet Equipment (type, model, location)
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**Off Grid Details**

Average Daily Consumption (complete load chart)	Maximum Amp Draw (simultaneous largest load usage)	
Days of Autonomy	Generator (size, fuel, autostart)	Battery Bank Location, Space

**Use Space Below for Other Project Notes and Drawings**

Carport Proposed: Rooftop carport system proposed. Design subject to existing structure and structural review. Target tilt angle of 25 degrees or greater for snow shedding and performance if manufacture design allows. Shallower tilt for less inter-row shade and more power density. Rack design from Schletter, Solarie Generation, Florian or other. Could be up to ~500kW depending on rack design, power density and existing structure. Use central inverter cabinet, likely located on rooftop.