Minnetonka Public Works

REQUEST FOR PROPOSAL
Solar for Public Buildings Grant

Fire Station 1 – Roof Array

Date of Issue: **July 22, 2024**

Proposal Due Date: **12:01 p.m. August 14, 2024**

City of Minnetonka

REQUEST FOR PROPOSALS
for Solar for Public Buildings Grant

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I. Contents

II. OBJECTIVE

City of Minnetonka is soliciting competitive sealed proposals from qualified contractors to design, build, and maintain a solar installation on local government property and provide power to local government facilities. The city has been approved to submit a full grant application for two sites through the Minnesota Solar for Public Buildings Grant Program.

Responses shall be submitted no later than 12:01 p.m., August 14, 2024; late responses will not be considered. Each response shall be treated as confidential until this deadline, after which each response shall become public.

III. OVERVIEW

City of Minnetonka is seeking proposals from interested firms capable of designing, engineering, installing, and maintaining a solar PV ground-mounted array.

In the long term, the local government may be interested in developing solar energy for other sites, and the results of this RFP may be used for future projects. For the purposes of this RFP, respondents should limit their responses to only this site identified herein.

The local government believes on-site PV power generation will provide a long-term financial benefit by reducing energy costs through the reduction of peak demand loads and daily energy consumption at the sites. Through on-site PV solar generation, the Local Government hopes to:

- Reap the financial benefits of more affordable electricity at minimal cost.
- Reduce environmental impact.
- Provide an example of successful renewable energy generation and showcase our organization as a leader in the development of renewable energy sources.

Through this RFP process, the Minnetonka intends to select only one provider for each solar project and is looking for the "best value" proposal based on the selection criteria stated within this RFP.

IV. RFP SCHEDULE

The following schedule and deadlines apply to this solicitation:

Pre-Bid Conference – Available in person or via Zoom
Tuesday, July 30, 2024 - 1:00 PM CDST

Location: Minnetonka Public Works
11522 Minnetonka Blvd.
Minnetonka, MN 55305

Join from the meeting link :

https://logis.webex.com/logis/j.php?MTID=m1cb4d2ecaaa5c04cd851d47ea0966626
Tap to join from a mobile device (attendees only)
+1-312-535-8110,,26346603664## United States Toll (Chicago)
+1-415-655-0001,,26346603664## US Toll Meeting number (access code): 2634 660 3664
Meeting password: sfEnrJgm938

Submit RFP questions to: Kevin Maas, SFP Facilities Manager/Public Works
(952) 988-8412
kmaas@minnetonkamn.gov

Final question submittal by Noon, Tuesday August 6, 2024.

Request for Proposals Due: 12:01 p.m. August 14, 2024.

Send proposals to:

William Manchester, P.E.
wmanchester@minnetonkamn.gov
Email Subject Line: "Minnetonka Solar for Public Buildings RFP – Fire 1"

or mail to: City of Minnetonka Public Works
C/O Solar on Public Buildings RFP – Attn: William Manchester
11522 Minnetonka Blvd
Minnetonka, MN 55305

V. SITE INFORMATION

From January of 2021 to May of 2024 the City of Minnetonka has averaged 25,504,254.51 kilowatt-hours (kWh). Approximately 52% of our demand is enrolled in Community Solar Gardens.

The site identified by the City of Minnetonka for the solar on public buildings grant request is our Central Fire Station at 14550 Minnetonka Boulevard, Minnetonka MN 55345. (Fire Station 1) The facility finished construction in 2022 and has roof designed for 14 lbs. per square foot of solar. The roof material is an adhered EPDM system white in color. While the roof is somewhat remote to pedestrians on the Civic Campus, open houses and tours of Fire Station 1 are common occurrences. The provider will be responsible for ensuring roof warranties remain in place and avoid damage to existing roofs.

VI. EXAMINATION OF SITE BEFORE SUBMITTING PROPOSAL:

Each provider must inform themselves fully of the conditions relating to the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of the obligation to carry out the provisions of the contract.

The provider will design, install, and maintain a solar photovoltaic system to maximize the solar resources considering the facilities' electrical demand and load patterns, proposed installation site, available solar resources, applicable zoning ordinances, installation costs, and other relevant factors, which shall be discussed in the provider's proposal. The provider should make every effort to visit the site and determine the best course of action. The ability to tour the site will be part of the pre-bid conference.

VII. PROVIDER QUALIFICATIONS

To qualify as the provider for the award of this agreement, the provider must either individually or collectively demonstrate extensive training, relevant expertise, and a thorough knowledge of the professional services, functions, activities, and related responsibilities to successfully perform their role in this solar photovoltaic installation.

VIII. PERSONNEL QUALIFICATIONS AND ABILITIES

Specialized experience is required of the proposed project personnel to undertake the work assignments. Proposals must demonstrate the capability, academic background, training, certifications, and experience of the proposed personnel. The availability of the proposed staff is also of crucial importance and must be demonstrated. The specific responsibility of staff to be assigned to the project must be included, as well as the professional background and caliber of previous experience of key persons and consultants to be assigned to the project. If sub-consultants are employed, similar information must be provided and the portions to be sub-consulted must be identified. (There is no penalty for the use of sub-consultants; the qualifications of the entire team will be evaluated).

Provider(s) shall possess:

- Valid and pertinent State of Minnesota contractor construction licenses.
- Minnesota Professional Engineering (PE) registration for photovoltaic/electrical, structural, civil, and fire protection work.
- North American Board of Certified Energy Practitioners (NABCEP) certification.

IX. PROJECT SCOPE AND STANDARDS

The provider will design, provide, install, and maintain the solar photovoltaic systems. The scope of this project is all-inclusive and includes planning, engineering, labor, materials, delivery, installation, and commissioning, as well as all warranties and maintenance. This includes all structural and utility modifications that are required. The provider shall include in its proposal all elements necessary for a turn-key project including rebate applications, grid connection agreement, all permits and approvals from governing agencies, and all labor, taxes, services, and equipment. The provider shall apply for and obtain all necessary required approvals and permits. All fees required shall be the responsibility of the applicant.

The provider shall decide on the best location for metering and the number of meters required. If a roof-mounted array is deemed the best option as opposed to the proposed ground-mounted array, all proposed roof-mounted solar panels, tracks, and anchoring equipment shall not exceed ten pounds per square foot. The provider shall verify the structural capacity of the roof.

The provider shall submit the Solar for Public Buildings full grant application to the State of Minnesota and abide by grant requirements.

Ownership of Solar Renewable Energy Credits (RECS) or Certificates should be assumed to be owned by the local government unless otherwise specified by the provider as part of the proposal.

The provider is responsible for all connections and agreements with the utility, Xcel Energy. City staff shall provide support in of the Provide; recognizing that the City is a large commercial customer and has current agreements in place; including a franchise agreement and community solar gardens.

All equipment shall be UL listed. All installations shall comply with current local government-approved building and electrical codes. The guaranteed minimum output from the system shall be 85% of the expected performance output from the system.

X. CONTENT OF PROPOSAL

To maintain uniformity with all proposals furnished by the provider, proposals shall include the following:

- Overview of Principal Elements. A project understanding summary that includes an overview of the principal elements of the proposal, a demonstration of an understanding of the project objectives, and a description of your approach to solar systems. Include any suggestions or special concerns that the local government should be made aware of, the proposed configuration of equipment, and any additional scope of work tasks you feel are necessary for the successful completion of the project. Include a discussion of work assignments between the provider and subcontractors used, if any.

- Schematic Design Layout. Provider shall provide a system schematic design layout for the systems, including photovoltaic model type and model no., wattage, number of modules, year 1 production, degradation percentage, inverter type and model, mounting system type, azimuth, tilt, system size AC and DC, and the impact on the utility rates and demand charges.

- Cost. The local government is eligible to receive a grant of 50% of the cost of the project. Additionally, the local government intends to apply for elective pay from the federal government. The provider shall incorporate the grant and federal incentives into the proposal. Provider shall identify costs to the local government and anticipated savings over 25 years. Please identify the breakeven years before any federal incentives.

- Minimum Qualifications. Sufficient information to evaluate the provider's ability to complete the scope of work and to meet the following minimum qualifications:
    - Appropriate business and contracting licenses in good standing
    - Appropriate other licensing in good standing
    - A list of personnel who will work on the project, including resumes of proposed project team members that delineate education, current licenses and certificates, prior employment, and titles.
    - Project Team Structure: An organizational chart describing the roles and responsibilities of each person.

- References. A list of similar projects that your firm completed within the last 5 years. To be considered, respondents are required to have designed, installed, operated, maintained, and completed a minimum of five (5) solar PV projects in the United States that are commercial grid-connected solar PV systems. One (1) of the referenced projects must be with a local government, school, state, or tribal government.

  Project information should include a short project description, agency or client name along with the person to contact, telephone number(s) and e-mail addresses, year completed, and project construction and design cost.

- Proposal submittal and signature. The proposal shall be signed by a company official with the power to bind the company in its proposal. All proposals must be completely responsive to the RFP.

- Warranties/Guarantees. The Respondent shall provide the following minimum warranties/guarantees:
  • 10-year inverter warranty.
  • 20-year PV panel warranty, with a maximum of 20% degradation.

XI. TECHNICAL SPECIFICATIONS

The following technical information should be discussed in this section.

- Major equipment manufacturers
- Description of technology and configuration
- Solar system layout of equipment and characteristics
- Electrical interconnection and metering/net-metering
- Foundation of PV support system
- Level of efficiency
- DC and AC capacity rating
- Expected annual energy production in kWh
- Communications, control and instrumentation
- Facility limitations that may constrain operation
- Project Management plan
- Start-up and testing
- Design life loading (wind, seismic, etc.)
- Description of frequency and duration of scheduled maintenance
- Provide any information that could impact the cost, construction schedule or output capability of the project.
- Proposals shall demonstrate a proven, comprehensive data acquisition system with current and historical data available remotely through a real-time internet site capable of tracking, but not be limited, to the following:
  - Site-specific actual kWh production (average and cumulative totals)
  - Site-specific instantaneous maximum kWh production
- Proposals shall provide evidence the proposed technology and equipment would meet or exceed all currently applicable and proposed safety and interconnection standards. All equipment components must be listed or recognized by an appropriate safety laboratory (e.g., Underwriter's Laboratory [UL]), and meet existing facility structural and fire safety requirements.
- Proposals shall provide evidence the proposed technology and equipment would meet or exceed all currently applicable and proposed environmental standards.
- Proposals shall provide evidence the proposed technology and equipment are designed for normal operation in the Minnesota climate.
- Proposals shall provide evidence the proposed technology does not incorporate proprietary components and that the system design allows for multiple sources of supply and/or repair.
- Proposals shall describe reusability or recyclability of proposed technology and equipment.

XII. OPERATIONS AND MAINTENANCE

Describe the basic philosophy for performing O&M and include a discussion of contracting for outside services, if applicable. The successful respondent shall provide copies of the complete O&M manuals for all components of the system upon system commissioning.

The O&M plan shall include recycling for any solar module or inverter that needs to be replaced for any reason over the life of the system. At the time of any project-level work order execution, the Contractor shall use solar PV system components that are readily reusable or recyclable. The provider shall track solar system equipment that ceases to function as intended and report on an annual basis the recycling of any modules or inverters to the Minnesota Pollution Control Agency.

XIII. PROJECT SCHEDULE

All proposals must include a project schedule that includes the following milestones:

- Permitting begins
- Final design plans complete.
- Equipment ordered.
- Construction begins.
- Electrical generation begins.

XIV. FINANCIAL STATEMENTS

Please submit a detailed financial report prepared per generally accepted accounting principles (GAAP) reflecting the current (as of the most recent financial statement date) financial condition of the provider. Such a report must include a balance sheet, income statement, and statement of cash flows, along with applicable footnotes, dated concurrently for at least each of the preceding three years ending on the most recent fiscal quarter such statements were prepared. Public entities or subsidiaries should attach SEC Form 10-K along with, as applicable, detailed unaudited statements for the provider. Non-public entities may attach either unaudited financial statements or copies of tax forms and schedules that are filed with the Internal Revenue Service where applicable. Please include a statement whether the company can provide a payment and performance bond (or other surety) for the project either in its entirety or a portion, if required.

XV. SELECTION COMMITTEE

The local government has established a Selection Committee to evaluate provider proposals. The evaluation of each proposal will be based on technical criteria and qualifications, reference checks, and other information that will be gathered independently.

XVI. LOCAL GOVERNMENT RESPONSIBILITY

The local government will be responsible for the following:

- Providing all available existing relevant plans and records.
- Coordinating access to the site for review before the bid due date.

XVII. PROVIDER SELECTION CRITERIA

The local government, based on the requirements of this RFP has designated the following items as selection criteria for the successful provider. Each item will be individually and separately scored by Selection Committee members.

A. Proposal Completeness (10 points): The measure for which the provider has provided all the requested information in a clear non ambiguous way as requested in this RFP.
B. Cost/Best Value: (35 points): Cost information provided by the provider detailing the cost to the owner and potential savings over a 30-year period.
C. Targeted Group (5 points): Utilize certified Women, Minority, Disabled, or veteran-owned businesses to supply materials or services.
D. Financial Strength and Stability (10 points): Provide information indicating the provider's financial strength in terms of capital and liquid assets sufficient to complete the project listed in this RFP; and the stability of the provider in terms of length of service, professional capabilities, construction experience and capabilities over time. Ability to provide surety or bond
E. Photovoltaic engineering, project, and construction experience, including a minimum of three successful photovoltaic projects within the scope of this RFP (20 points). Project commissioning process and warranty.
F. Project engineering analysis (10 points). Information provided by the provider detailing the estimated KWh generated by the proposed photovoltaic systems in this RFP; including all necessary assumptions for example sunlight availability, dark time, maintenance downtime, MTBF (mean time between failures), efficiency of the systems proposed, efficiency losses, net metering, etc. Project close out, commissioning and warranty.
G. Photovoltaic performance monitoring (5 points). The provider's capabilities of monitoring photovoltaic generating systems, for example, how many systems does the provider monitor in centralized stations, etc.
H. Provider customer service, and maintenance capabilities (5 points). The ability of the provider to respond quickly, efficiently, and cost-effectively to service calls so the photovoltaic systems are operating at optimum output.

XVIII. RIGHT TO REJECT PROPOSALS

Respondent proposals shall remain valid for 60 days after the opening of the proposals.

The local government reserves the right to reject any or all proposals.

All costs incurred in the preparation of the proposal, the submission of additional information, and/or any aspect of a proposal before the award of a written contract will be borne by the provider.

The local government will provide only the staff assistance and documentation specifically referred to herein and will not be responsible for any other cost or obligation of any kind that may be incurred by the respondent. All proposals submitted become the property of the local government.

XIX. RFP EXHIBITS

ATTACHMENT A: MN Solar Suitability App report
ATTACHMENT B: PV Watts Report
ATTACHMENT C: 24 Months of Utility Bills
ATTACHMENT D: Map of Proposed Location
ATTACHMENT E: City Permitting Information
ATTACHMENT F: Roof Plan – Wold Architects and Engineers

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Results

50,163 kWh/Year*

System output may range from 47,615 to 51,307 kWh per year near this location.

Solar Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at //sam.nrel.gov) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

The energy output range is based on analysis of 30 years of historical weather data, and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)
January	2.27	2,495
February	3.46	3,393
March	4.55	4,737
April	5.06	4,883
May	5.44	5,286
June	6.08	5,590
July	6.79	6,319
August	5.74	5,398
September	4.55	4,303
October	3.51	3,533
November	2.25	2,280
December	1.77	1,948
Annual	4.29	50,165

Location and Station Identification

Requested Location	14550 Minnetonka Blvd; 55345
Weather Data Source	Lat, Lng: 44.93, -93.46 0.7 mi
Latitude	44.93° N
Longitude	93.46° W

PV System Specifications

DC System Size	40 kW
Module Type	Standard
Array Type	Fixed (open rack)
System Losses	14.08%
Array Tilt	20°
Array Azimuth	180°
DC to AC Size Ratio	1.2
Inverter Efficiency	96%
Ground Coverage Ratio	0.4
Albedo	*From weather file*
Bifacial	No (0)
Monthly Irradiance Loss	Jan 20% Feb 15% Mar 10% Apr 5% May 3% June 5% July 1% Aug 5% Sept 10% Oct 12% Nov 18% Dec 20%

Performance Metrics

DC Capacity Factor	14.3%

Solar Suitability Report

Latitude: 44.940487 Longitude: -93.464328

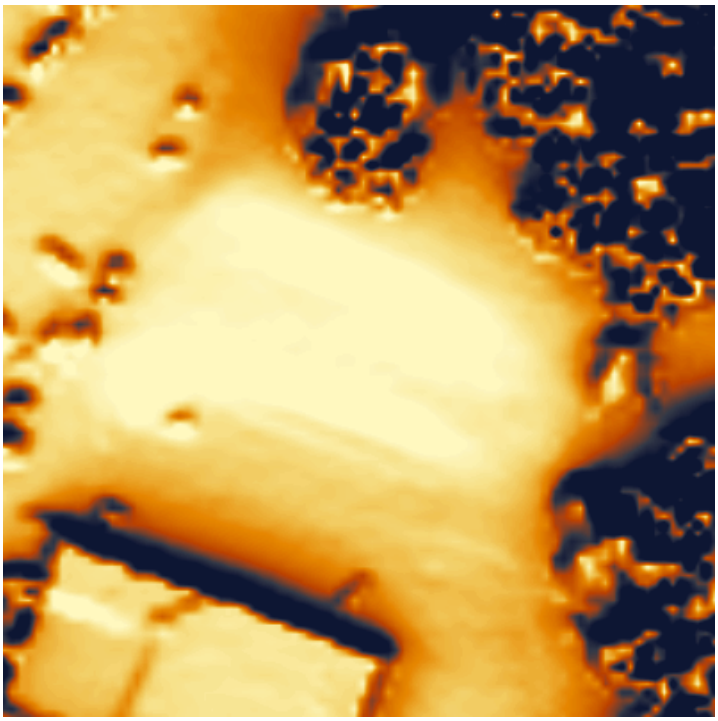
mn.gov/solarapp

Wed Jul 17, 2024

Site Name: Minnetonka Fire Station #1

Site Address 14550 Minnetonka Boulevard

Site Notes: Roof Design by Wold Architects and Engineers

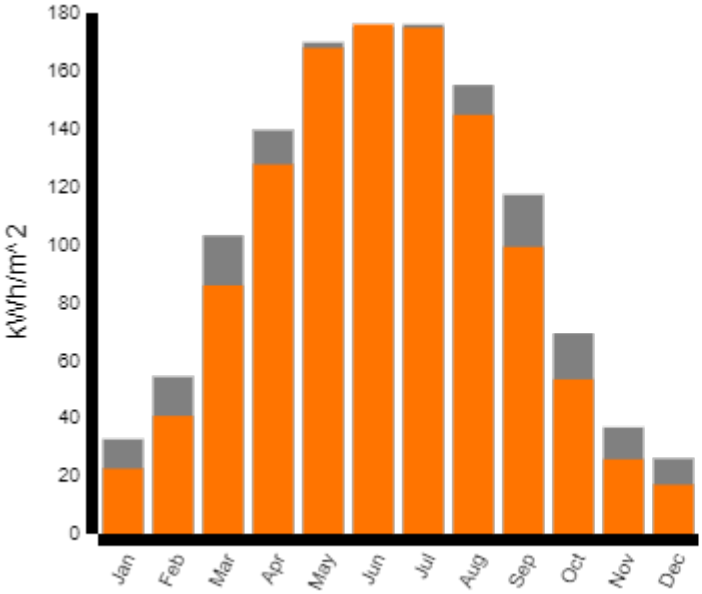


This site is **Good**. It would need a **4.80 kW** system to generate **50%** of average household use. This system would cost approximately **$18,016**. With *Xcel Solar Rewards* and other incentives estimated system payback is **7.8 years**.

Utility Service Provider:
Xcel Energy
414 Nicollet Mall
Minneapolis, MN 55401
(612) 330-5500
www.xcelenergy.com

Site Details:
Total Annual Insolation: 1165.92 kWh/m^2
Avg Insolation per Day: 3.19 kWh/m^2
Source Data: Spring and Fall 2011

Amount Actual Sun



Solar Calculator

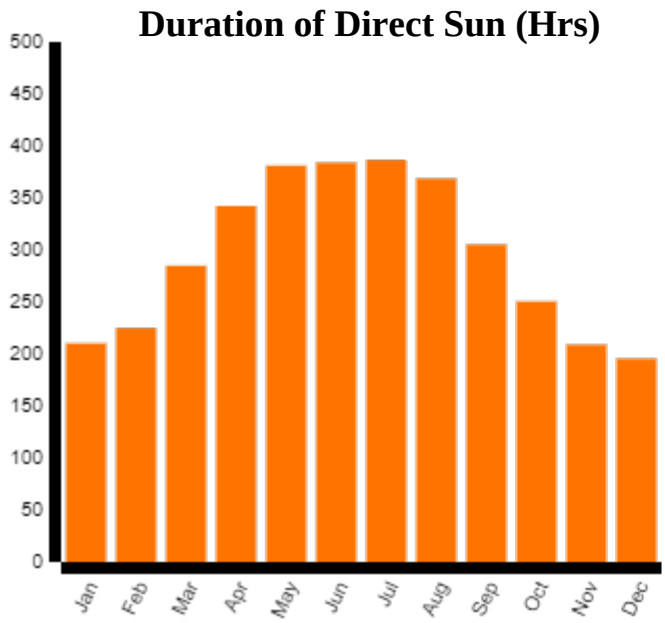
User Input	Value	Tips and Notes
Average utility use (per month)	800 kWh	The average residential household uses 800 kWh/month. If you know your monthly usage, fill it in here.
Cost / kWh	$0.12/kWh	Minnesota's average residential cost of electricity is $0.12/kWh. If you know your cost of electricity enter it here.
Percent of electricity provided by solar	50%	Experiment with different percentages here to see how system cost varies. Think about how energy efficiency improvements bring down the cost of your solar system.

Outputs	Value	Tips and Notes
Size of system needed	4.80 kW	Result is based on values provided for monthly electricity use and desired percentage covered by solar. It also includes a derate of 0.87. A factor accounting for conversion of the array's DC nameplate capacity to the system's AC power rating at Standard Test Condition.
System cost estimate	$18,016	Result is based on an average 2020 Minnesota residential system cost of $3,750 per kW. Costs will vary depending on the specifics of your system.
Payback without incentives	17.71 years	Result assumes that electricity costs will rise 3.5% each year over 25 years.
Payback with Tax Credit	13.10 years	Your system may be eligible for a federal tax credit. This result shows the payback of your system with the 26% tax credit applied.

Outputs	Value	Tips and Notes
Payback with Tax Credit and Solar*Rewards incentive	7.79 years	The Xcel Solar*Rewards Incentive Program utilizes a performance-based incentive (PBI). A PBI pays an incentive based on the amount of annual energy (kWh) generated by the system. Therefore, the more shading a system has the lower the PBI will be. Applications are accepted by Xcel Energy on a first come first serve basis through 2021.Read More »

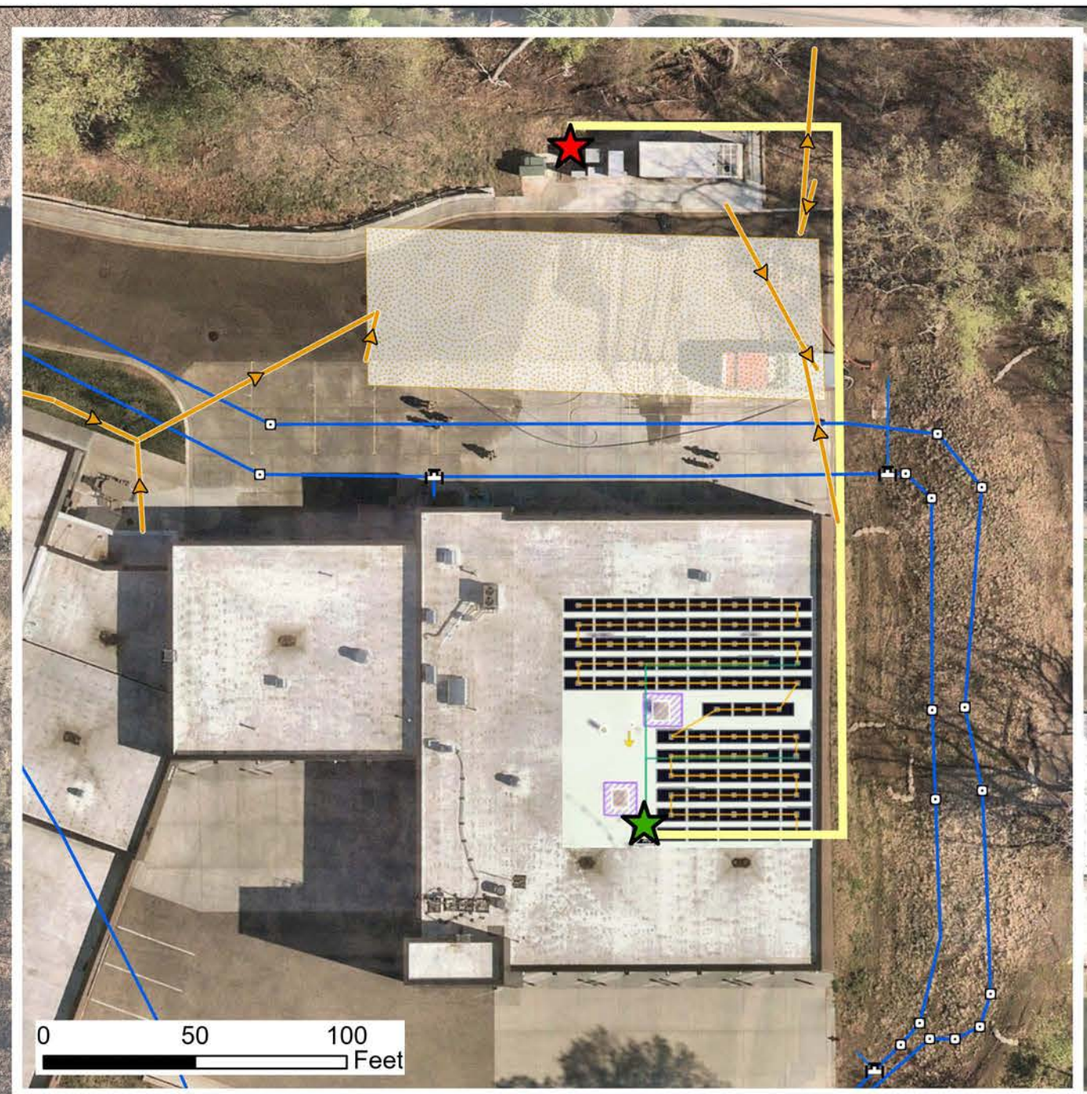
Month	Actual % Sun**	Total kWh/m2	Duration (Hrs)
January	77%	25.07	210.2
February	81%	43.91	224.9
March	87%	89.25	284.9
April	94%	130.78	342.3
May	99%	168.88	381.1
June	100%	175.70	383.9
July	100%	175.17	386.5
August	95%	147.58	368.7
September	88%	102.60	305.2
October	82%	56.89	250.5
November	77%	28.46	208.9
December	73%	19.09	195.5

**These percentages should be used as the monthly shading derate factors % on the Xcel Solar Rewards application



This service made possible by:

COMMERCE DEPARTMENT
ENERGY RESOURCES



Current utility locations with proposed solar hookup routes

City of Minnetonka - Fire Station 1
14550 Minnetonka Blvd Minnetonka, MN 55345
Solar on Public Buildings - 5/31/2024

Xcel Energy®

MAILING ADDRESS	ACCOUNT NUMBER		DUE DATE
CITY OF MINNETONKA ATTN: FINANCE DEPARTMENT 14600 MINNETONKA BLVD MINNETONKA MN 55345-1597	51-6869491-9		05/21/2024
	STATEMENT NUMBER	STATEMENT DATE	AMOUNT DUE
	876208978	05/06/2024	$10,957.02

SERVICE ADDRESS: **14550 MINNETONKA BLVD MINNETONKA, MN 55345-1501**
NEXT READ DATE: 05/17/24

ELECTRICITY SERVICE DETAILS

PREMISES NUMBER: 304964069
INVOICE NUMBER: 1104953228

METER READING INFORMATION

METER 30955402 - Multiplier x 120 Read Dates: 03/18/24 - 04/16/24 (29 Days)

DESCRIPTION	CURRENT READING	PREVIOUS READING	MEASURED USAGE	BILLED USAGE
Total Energy	9818 Actual	9535 Actual	283	33960 kWh
Reactive Energy	604 Actual	593 Actual	11	1320 kVArh
Demand	Actual			67.2 kW
Billable Demand				67 kW
Power Factor Demand	**99.92%**			

ELECTRICITY CHARGES — RATE: General Service

DESCRIPTION	USAGE UNITS	RATE	CHARGE
Basic Service Chg			$25.98
Energy Charge	33960 kWh	$0.047650	$1,618.19
Fuel Cost Charge	33960 kWh	$0.035491	$1,205.29
Energy Chg Crd	8031 kWh	- $0.018250	- $146.57 **CR**
Demand Charge Winter	67 kW	$11.900000	$797.30
Affordability Chrg			$8.00
Resource Adjustment			$169.93
Subtotal			**$3,678.12**
City Fees			$13.50
Total			**$3,691.62**
Premises Total			**$3,691.62**

DAILY AVERAGES	Last Year	This Year
Temperature	41° F	41° F
Electricity kWh	1220.7	1171.0
Electricity Cost	$142.10	$127.30

INFORMATION ABOUT YOUR BILL

For an average non-demand customer, 68% of your bill refers to power plant costs, 14% to high voltage line costs, and 18% to the cost of local wires connected to your business. For an average demand-billed customer, 78% of your total bill refers to power plant costs, 14% to high voltage lines, and 8% to the cost of local wires connected to your business.

Fire Station #1	
Premise Number	304964069
Meter Number	30955402
1/14/21-2/13/21	3240 kWh
2/13/21-3/16/21	6600 kWh
3/16/21-4/14/21	5160 kWh
4/14/21-5/13/21	4680 kWh
5/13/21-6/14/21	6960 kWh
6/14/21-7/14/21	9360 kWh
7/14/21-8/12/21	12360 kWh
8/12/21-9/13/21	23520 kWh
9/13/21-10/12/21	27840 kWh
10/12/21-11/10/21	22560 kWh
11/10/21-12/13/21	28080 kWh
2021 Year	**150,360 kWh**
12/13/21 - 1/16/22	39960 kWh
1/16/22 - 2/14/22	34800 kWh
2/14/22 -3/16/22	36720 kWh
3/16/22 - 4/14/22	33840 kWh
4/14/22 - 5/15/22	35280 kWh
5/15/22-6/14/22	35880 kWh
6/14/22-7/14/22	36000 kWh
7/14/22 -8/14/22	37200 kWh
08/14/22 - 9/13/22	35640 kWh
9/13/22 - 10/12/22	33240 kWh
10/12/22 - 11/10/22	33720 kWh
11/10/22 - 12/13/22	39480 kWh
12/13/22-1/17/23	41400kWh
2022 Year	**473,160 kWh**
1/17/23 - 2/15/23	36480 kWh
2/15/23-3/19/23	39360kWh
3/19/23-4/17/23	35400kWh
4/17/23-5/16/23	34800kWh
5/16/23-6/15/23	36600kWh
6/15/23-7/17/23	39840kWh
8/14/23-9/14/23	38520kWh
9/14/23-10/15/23	38040kWh
10/15/23-11/13/23	35280kWh
11/13/23-12/14/23	38160kWh
2023 Year	**372,480 kWh**
12/14/23-1/17/24	39960kWh
1/17/24-2/15/24	35160kWh
2/15/24-3/18/24	37080kWh
3/18/24-4/16/24	33960kWh
2024 Year	**146,160 kWh**

City of Minnetonka – Solar on Public Buildings – Exhibit E

1 page w/links

City of Minnetonka Solar Permit Links

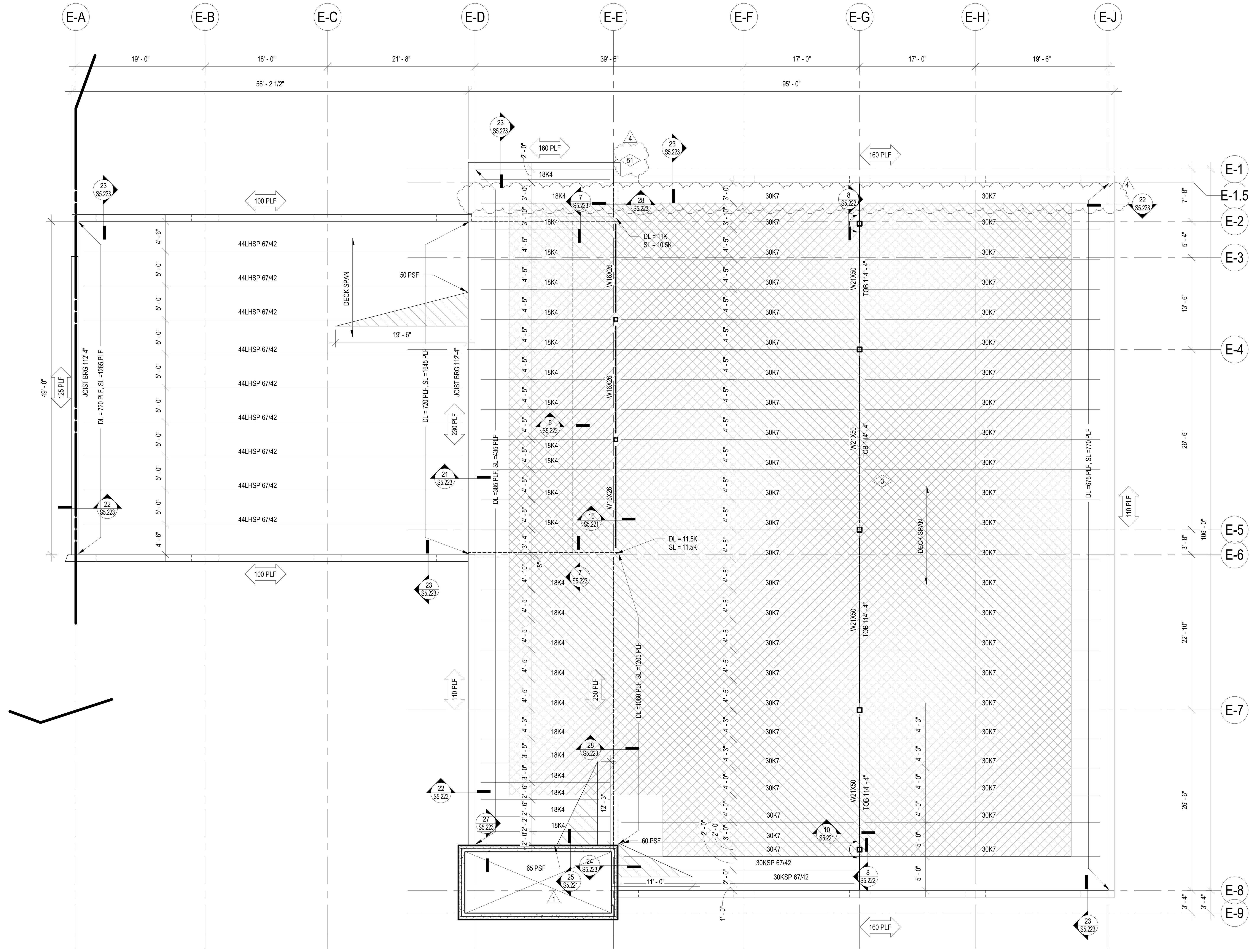
- Electrical and Building Permit
- Forms: Solar Electric System (it says residential, but we use it for commercial also) and Solar PV Inspection Checklist
- Fees: These are based on the valuation of the project. See linked for building and electrical permit values and corresponding fees.
- Height: A building/solar panel elevation drawing needed to confirm height. I believe both the Central Fire Station and Lake St. Ext. sites would have a 35-foot height maximum. Let me know if this height is a problem, as it may require special approval (variance).
- Contact Dale Gronberg and Scott Kessler for technical permit questions (electrical or building)
- Timeline:
    - No special review needed if solar panels are under 35 feet tall (building height + panel)
    - Submit electrical permit with needed drawings from checklist
    - Staff Review: 15 businesses day maximum

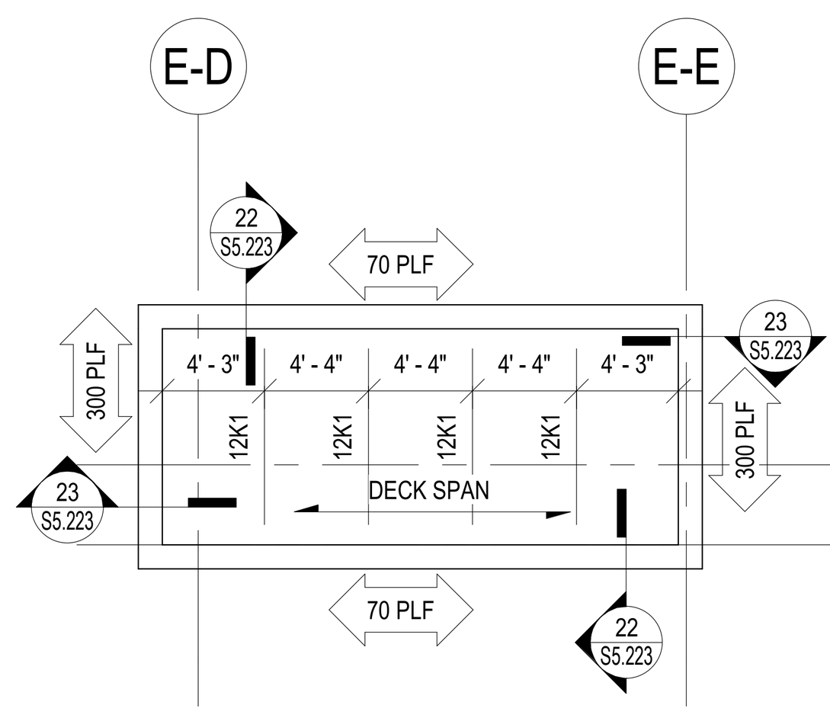
City of Minnetonka Staff Planning Contact:

Drew Ingvalson | He, Him, His
Senior Planner
City of Minnetonka | minnetonkamn.gov
14600 Minnetonka Blvd. | Minnetonka, MN 55345
Office: 952-939-8293
dingvalson@minnetonkamn.gov

City of Minnetonka Summer Office Hours
Monday-Thursday: 8am-4:30pm
Friday: 8am-12pm

MN





1 HIGH ROOF FRAMING PLAN AREA E

UNLESS NOTED OTHERWISE:

1. SEE SHEET S0.000 FOR STRUCTURAL NOTES, ABBREVIATIONS AND SYMBOLS.
2. SEE SHEET S6.201 FOR SCHEDULES.
3. 1 1/2" - 20GA. WIDE RIB ROOF DECK.
4. TYPICAL JOIST BEARING/TOP STEEL BEAM EL. = 114'-4".
5. SEE 1/S5.221 FOR TYPICAL DECK ATTACHMENT TO JOISTS.
6. PROVIDE 2-5/16" WEB STIFFENER PLATES AT STEEL BEAMS RUNNING OVER COLUMNS OR WALLS. CENTER ON SUPPORT.
7. AT BEARING WALLS LOCATE MECHANICAL OPENINGS MIN. 1'-4" FROM BEAM BEARING LOCATIONS. OPENINGS 12" TO 42" PROVIDE 2-L5x3 1/2x5/16 LLV IN 8" CMU AND 2-L6x6x5/16 IN 12" CMU. OPENINGS 43" TO 72" PROVIDE W8x18 W/5/16" BOTTOM PLATE. SEE MECHANICAL DRAWINGS FOR OPENING LOCATIONS.
8. SEE 4/S5.211 & 14/S5.211 FOR STEEL BEAM BEARING PLATES AT CMU WALLS.
9. SEE 2/S5.221 FOR TYPICAL ROOF OPENING FRAMING. COORDINATE WITH ARCHITECTURAL/MECHANICAL DRAWINGS FOR OPENING LOCATION AND SIZE.
10. JOIST SUPPLIER TO DESIGN JOISTS FOR:
    TOTAL LOAD/LIVE LOAD (PSF) NOTED IN JOIST DESIGNATION.
    MECHANICAL POINT LOADS AND SNOW DRIFT LOADS SHOWN ON PLAN.
    LOADS SHOWN ON DETAILS.
11. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, SLAB SLOPES, STEPPED SLABS AND PARTITION WALLS.
12. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.
13. DIAPHRAGM SHEAR LOADS SHOWN ON PLAN ARE DUE TO WIND AND ARE ULTIMATE LOADS.
14. BEAM AND JOIST GRAVITY REACTIONS SHOWN ARE SERVICE LEVEL.

2 FIRE - ROOF FRAMING TRAINING TOWER

UNLESS NOTED OTHERWISE:

1. SEE SHEET S0.000 FOR STRUCTURAL NOTES, ABBREVIATIONS AND SYMBOLS.
2. SEE SHEET S6.201 FOR SCHEDULES.
3. 1 1/2" - 20GA. WIDE RIB ROOF DECK.
4. TYPICAL JOIST BEARING/TOP STEEL BEAM EL. = 125'-0".
5. SEE 1/S5.221 FOR TYPICAL DECK ATTACHMENT TO JOISTS.
6. AT BEARING WALLS LOCATE MECHANICAL OPENINGS MIN. 1'-4" FROM BEAM BEARING LOCATIONS. OPENINGS 12" TO 42" PROVIDE 2-L5x3 1/2x5/16 LLV IN 8" CMU AND 2-L6x6x5/16 IN 12" CMU. OPENINGS 43" TO 72" PROVIDE W8x18 W/5/16" BOTTOM PLATE. SEE MECHANICAL DRAWINGS FOR OPENING LOCATIONS.
7. SEE 4/S5.211 & 14/S5.211 FOR STEEL BEAM BEARING PLATES AT CMU WALLS.
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    LOADS SHOWN ON DETAILS.
10. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RAMPS, SLAB SLOPES, STEPPED SLABS AND PARTITION WALLS.
11. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.

KEYNOTES	
3	HATCHED AREA INDICATES ROOF SOLAR ARRAY, VERIFY EXTENTS WITH ARCHITECTURAL. ASSUMED WEIGHT = 12PSF.
51	SEE DETAIL 23/S5.223.

POLICE & FIRE ADDITION AND RENOVATION
14550 Minnetonka Blvd,
Minnetonka, MN 55345

172061

City of Minnetonka
14600 Minnetonka Boulevard,
Minnetonka MN 55345

Wold

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Minneapolis, MN 55430
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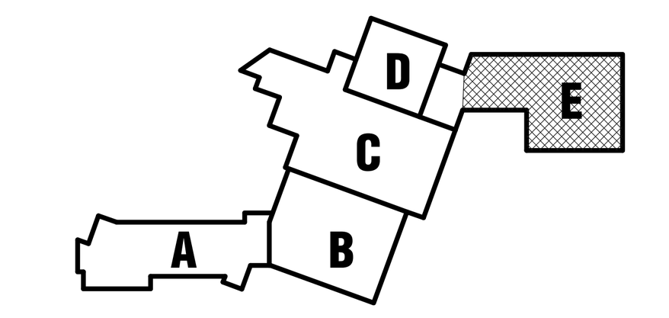

KEY PLAN

BKBM Job No. 17327.00

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Magnus Carlsson
Registration Number **44685** Date **10/25/2019**

Revisions		
Description	Date	Num
Addendum #1	**11/07/19**	**1**
SI #12	**4/17/2020**	**4**

Comm: **172061**
Date: **10/25/2019**
Drawn: **CAC**
Check: **MC/GLS/JP**

North

HIGH ROOF FRAMING PLAN AREA E

S2.03e