CITY OF DULUTH
PURCHASING DIVISION
Room 120 City Hall
411 West First Street
Duluth, Minnesota 55802-1199
218/730-5340
purchasing@duluthmn.gov

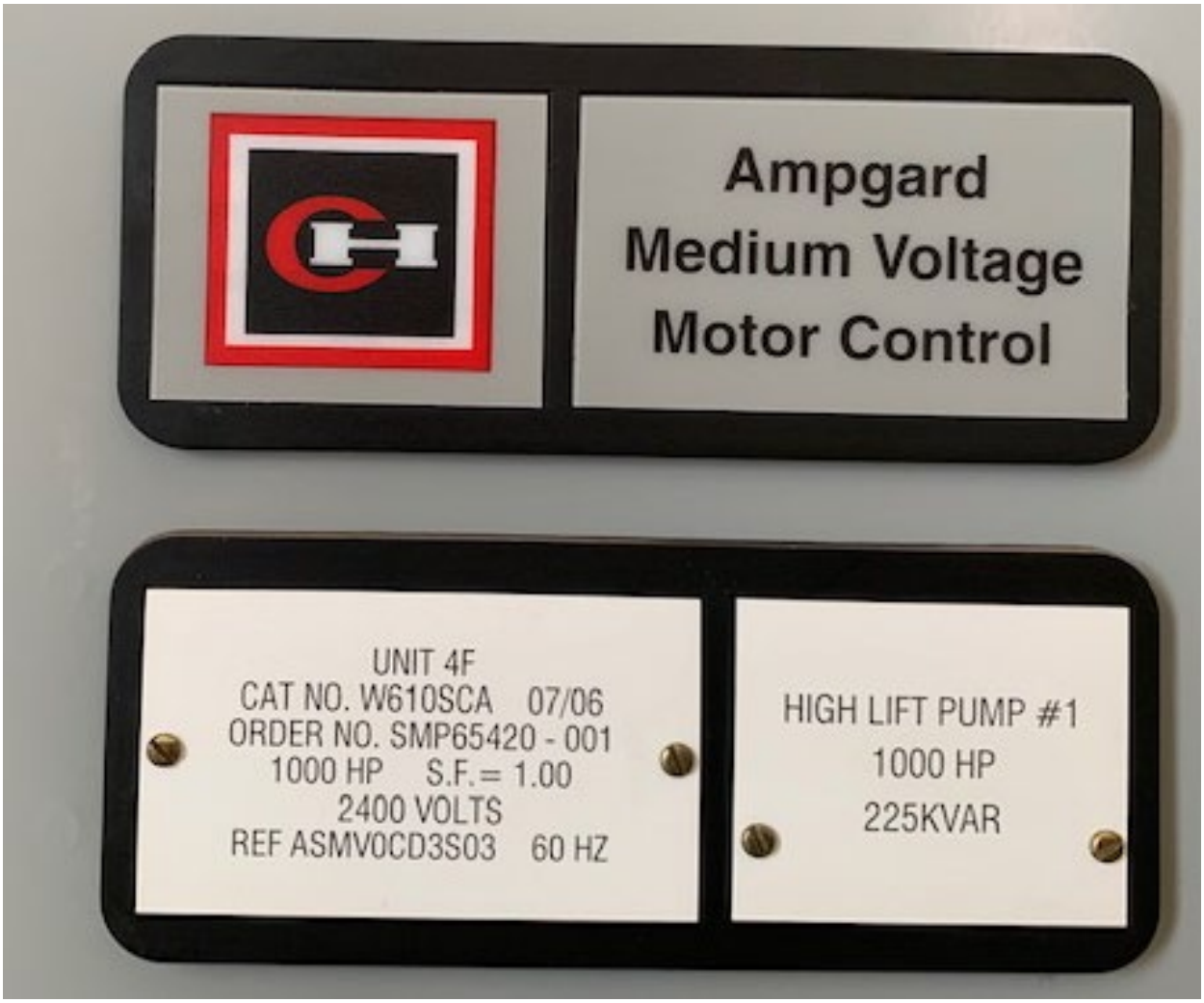
Addendum 2
File 19-05AA
RFP Develop and Implement an Energy Service Micro-Grid System

This addendum serves to notify all bidders of the following changes to the solicitation documents:

1. Will prevailing wages need to be paid on this project?
   It is anticipated that prevailing wages will need to be paid on this project.
2. In paragraph I-7, the language is changed so proposals must remain valid for 120 days or until a contract is fully executed, whichever is later.
3. The pre-bid meeting sign-in sheet has been uploaded to the bid folder on the website.
4. What is the software that is currently used in the plant?
   Wonderware. An ICS software (Primex).
5. Describe the pumping operations.
   Pumps run continuously. In the winter, the demand is approximately14 million gallons per day (mgpd), and it's not unusual for the pumps to shut down once per week because all of the reservoirs are full. In the summer, we alternate between Pump Set 1 and Pump Set 2 unless we have to shut down. Water is pumped from the lake up to the filter house where we add chemicals that aid in binding particles. Then it is filtered through an anthracite sand filter. The pumps are started and stopped manually; they are not set up to be fully automatic at Lake Wood.
   Pump Set 1 is made up of two 1000gpm pumps that are most used and move water at approximately 14mgpd. Low 1 moves water from the lake to the filter house for cleaning. High 1 takes the water and sends it down the line to the first reservoir in the system. Pump Set 2 is made up of two 1500gpm pumps that are used intermittently when the system needs to catch up. For this project, the expectation is to run only Pump Set 1 indefinitely.
6. How much of the load is considered critical?
   100% of the load is critical.
7. Please confirm the incoming voltage is stepped down to 480VAC.
   In the water filtration building, the transformer stepped down to 480v. In the pumphouse, lighting and outlets are 120v single phase. Pumps are on a 2300v transformer that is located inside the pumphouse.
8. What size is the transformer?
   500kva for the treatment buildings. 480/277v 120/208v transfer throughout building. 600 amp switch building disconnect. Then flows through the basement to the MCC in the center of the building. At the pump house, electricity enters into the transformer in the basement and from there to the MCC into gear sections in the control room. From there, power goes to the pumps. For 120/240v three phase into the building. Transformers are on the pole outside for lighting and low voltage electrical.
9. Please provide details on the existing step-down transformer, including make, model, ratings, location, age, etc.
   Please see the attached photo of the name plate.
10. Has the overhead electric service ever been down?
    No. Power coming in from Woodland and Lakeside have both been down at the same time before, but not the overhead service.

11. What heats the plant?
    Natural Gas heats both the water filtration and pumphouse buildings. In the water filtration building, hydronic water (not steam) heats the water, and it's distributed with fan forced radiators. The pumphouse is heated with five natural gas unit heaters.
12. There is a 2nd SCADA cabinet in the control room.
    a. SCADA in the pump house communicates to the filter building for operations.
    b. SCADA in the filter building incorporates the pump house operations and the different pumping operations around town.
13. The drive and capacitor downstairs in the pump house don't work.
14. Where can solar be installed?
    The areas in white on the site drawing could hold solar. Solar cannot be installed in the black shaded areas due to access requirements for cleaning.
15. The 2300 volt transformer is our weakest point. Being an oddly sized transformer, we've been told that a replacement is nearly a two-month lead time. This is a problem that we would like to correct, so it's expected that design will incorporate a power feed into pump set one that does not utilize that transformer.
16. Will you be adding reservoirs and pumps?
    Not in this phase, but it's possible this might happen sometime in the future.
17. Do you currently have a backup generate on site? If so, what make and model?
    There is currently no backup generator on site.
18. Are the generators hardwired?
    Although we do have some hard-wired generators to support our sanitary sewer operations, we do not have any hard-wired generators for the water treatment plant system. Portable generators have been brought in to some of the pumping stations during emergencies.
19. Do you want the new backup generator to be diesel, natural gas, or dual-fuel?
    We are open to recommendations and hearing the justification for your choice. We understand there are pros and cons for each way.
20. Would the new generator need to be sound attenuated?
    Yes. There has been no level or standard set, but it should be largely unnoticeable by our neighbors.
21. How many pump houses are there?
    Eight pump houses and two booster stations. All electric standalone systems.
22. Do you have a topography survey or drawing of the site or something that can show those of us who weren't able to make the site meeting how flat the site is? If not, any details you can offer on how flat the site is would be appreciated.
    A topographic map can be found at https://gis.stlouiscountymn.gov/landexplorer/ if you search by the address (8130 Congdon Blvd). Select the layers icon on the left of the screen, and select elevation.
23. Photos of the name plates for low lift pump 1, high lift pump 1, transformer for the pumps, motor control cabinet high 1 and low 1 are attached.

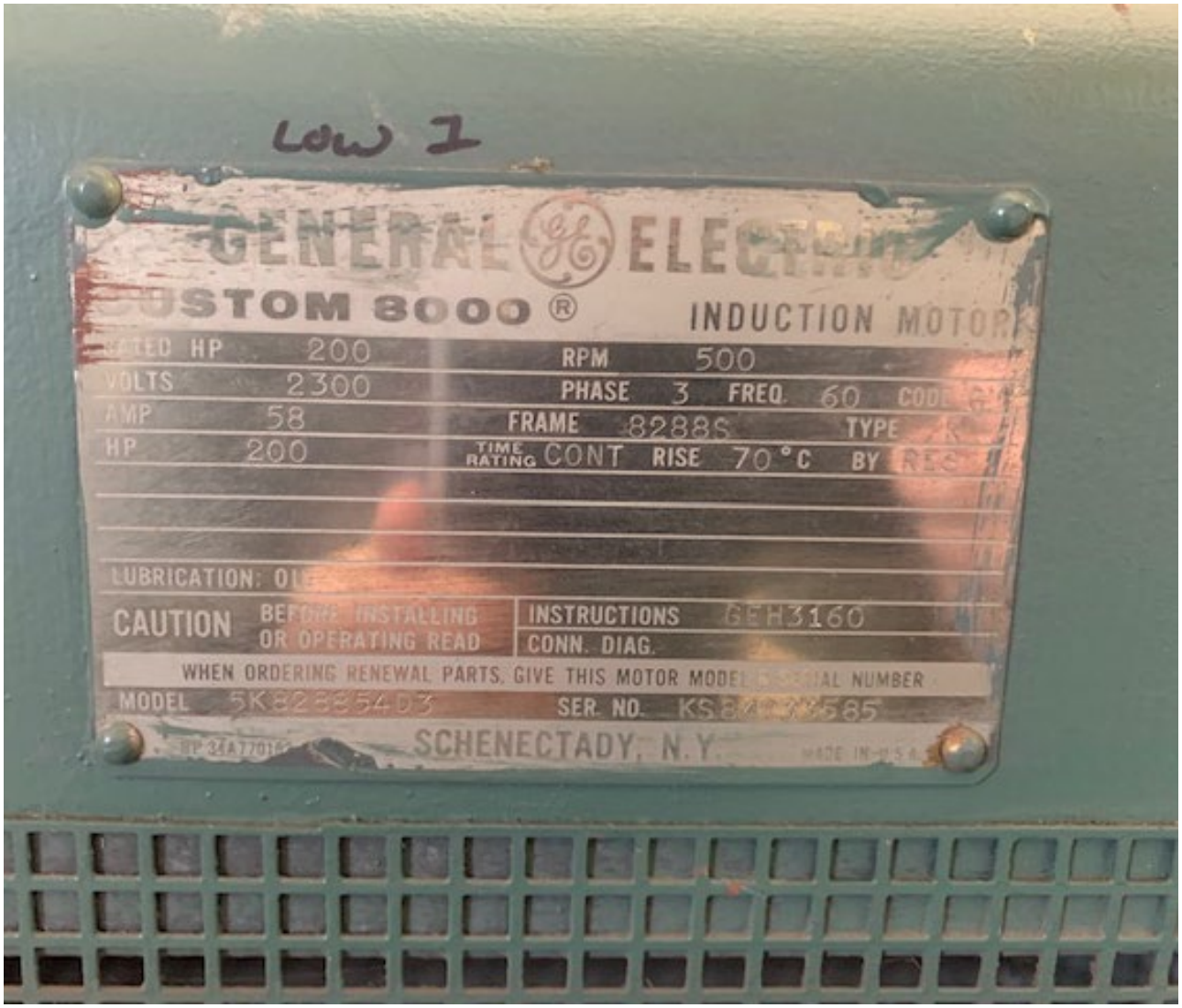
Please acknowledge receipt of this Addendum by including it with your proposal.
Posted: **March 8, 2019**



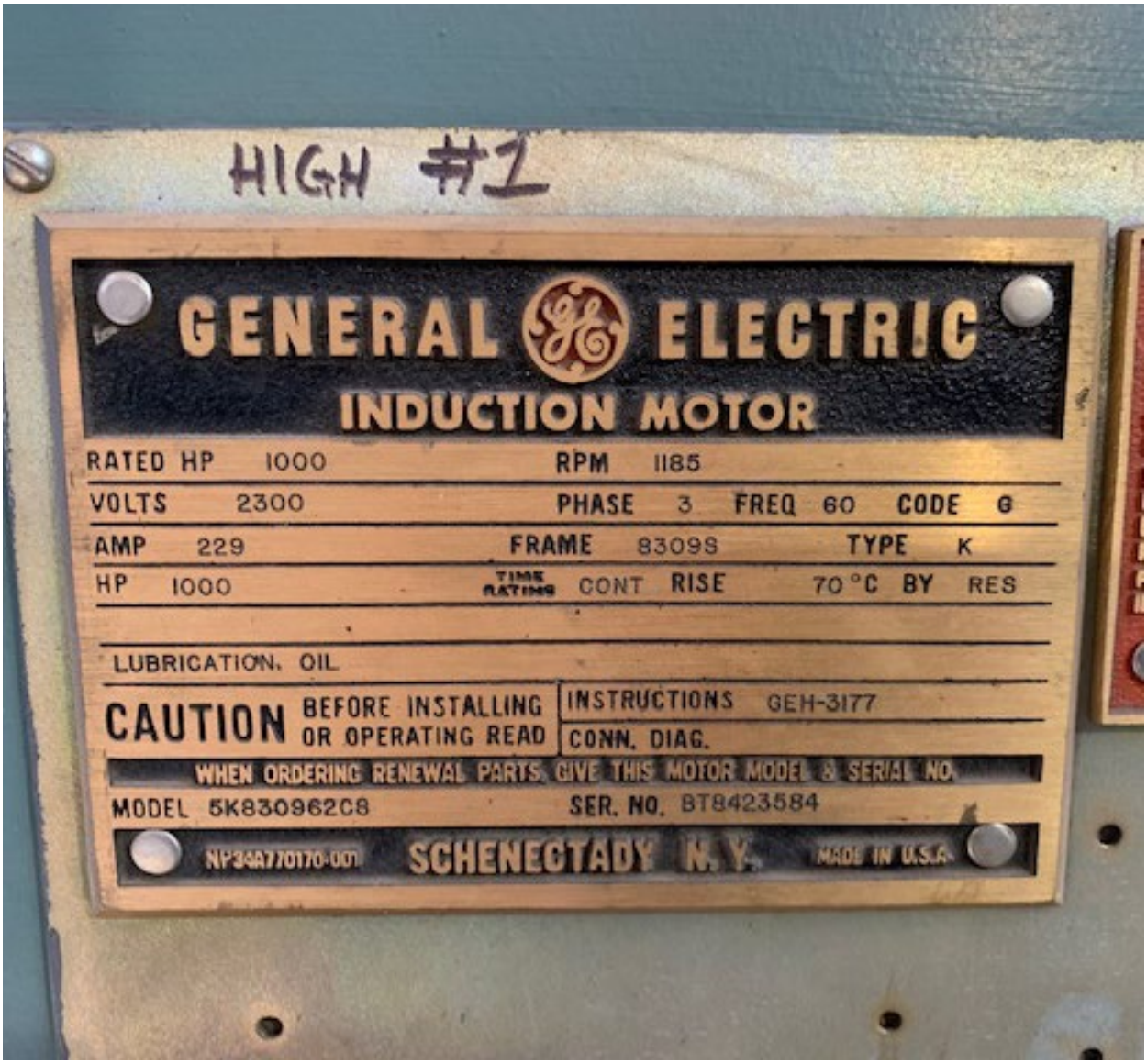
Motor Control Cabinet for High Lift Pump 1

Motor Control Cabinet for Low Lift Pump 1

Transformer for Pumps



Low Lift Pump 1



High Lift Pump 1