Approved by the Regents
February 17, 2022

THE UNIVERSITY OF MICHIGAN
REGENTS COMMUNICATION

ACTION REQUEST

Subject: Hayward Street Geothermal Facility

Action Requested: Approval to Proceed with Project

Background:

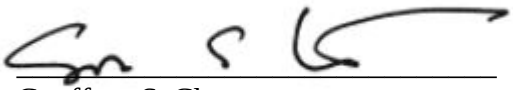
The President's Commission on Carbon Neutrality (PCCN) recommends the utilization of district geothermal systems for heating and cooling buildings to reduce carbon emissions and eventually achieve carbon neutrality. This project proposes to build a geothermal plant on Hayward Street adjacent to the Leinweber Computer Science and Information Building to supply its heating and cooling. Geothermal systems are considered renewable because of the earth's constant temperature underground. The Leinweber Building is ideal for this demonstration project because there is sufficient land available for the system and we can learn the dynamics of a geothermal system in our climate. The project will include 100 borings spaced twenty feet apart with underground piping to a depth of 700 feet in an area approximately two-thirds the size of a football field. The system will be an enclosed loop meaning there will be no contact with groundwater or soils. There will be a 4,000 square feet heating and cooling auxiliary building located near the field. As we study comprehensive district geothermal systems for North Campus, we envision this relatively small system could be interconnected as future systems are built.

The geothermal system and the Leinweber Building will be all electric and the first large-scale university building that will not rely on natural gas for heating. Currently, the university is sourcing 200,000 million kilowatt hours per year from renewable energy. We anticipate the remaining purchased electricity on the Ann Arbor Campus will be from renewable energy sources prior to the completion of the Leinweber Building resulting in a carbon neutral operation. Eventually, the local grid will be supplied from renewable energy sources as described in more detail in the PCCN report. The system will be located underground allowing the existing parking lot to be replaced in the same location. Although there will be a temporary loss of some adjacent parking spaces during construction, there will be no permanent impact on parking from this project.

The estimated cost of the project is $20,000,000. Funding will be provided from reserves. The construction cash flow may be provided, all or in part, by bond proceeds or increasing the commercial paper issuance under the commercial paper program, secured by a pledge of General Revenues, and authorized by the Board of Regents. The architectural-engineering firm of SmithGroup Inc. in association with Strategic Energy Solutions will design the project. The project is expected to provide an average of 18 on-site construction jobs. Construction is scheduled to be completed in the winter of 2025.

We recommend that the Board of Regents approve the Hayward Street Geothermal Facility project as described, and authorize issuing the project for bids and awarding construction contracts providing that bids are within the approved budget.

Respectfully submitted,



Geoffrey S. Chatas
Executive Vice President and
Chief Financial Officer

February 2022