

Student Name Grant Bauman Student ID \*\*\*\*\*Doctoral ☐ Degree in Chemical Engineering

Thesis Title:

Fundamental Investigation into 3-D Printed Liquid Crystalline Elastomers: Orientation, Rheology, and Stimulus-Response

Have you performed research involving human subjects which requires approval from the Institutional Review Board (IRB)? ☐ Yes ☒ No

IRB Protocol Number \_\_\_\_\_

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Attach the final copy of thesis/dissertation for committee review. While formatting changes may be requested by the Graduate School, the content of the attached document should be final.

**Approvals:**Committee Chair Name Timothy WhiteSignature  Date Signed 11/19/2023Committee Member Name C. Wyatt Shields IVSignature  Date Signed 11/14/2023

The final copy of this thesis has been examined by the signatories, and we find that both the content and the form meet acceptable presentation standards of scholarly work in the above-mentioned discipline.