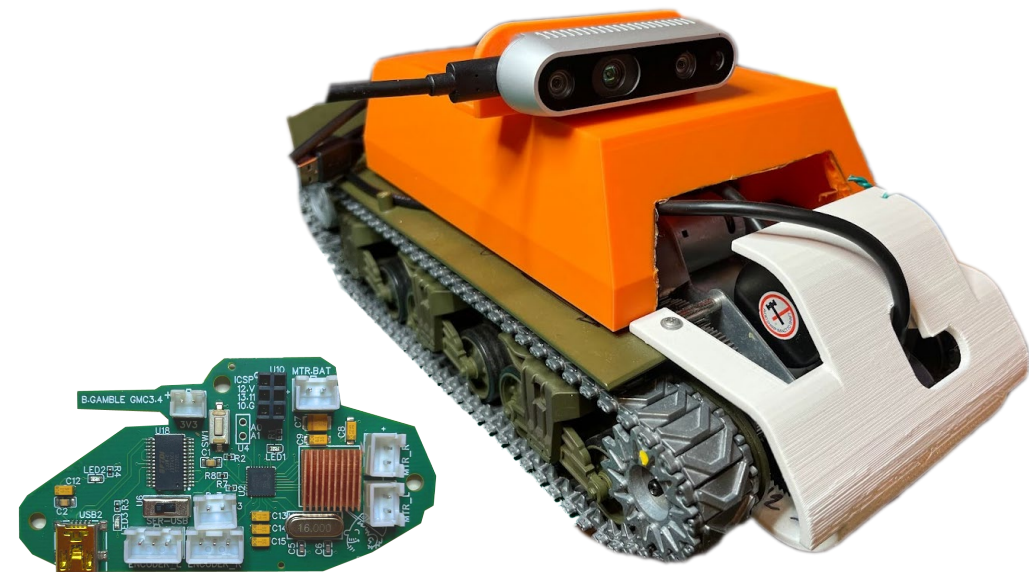


# HIVE 3.0 Enhanced Culvert Inspection Robot

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# Hydraulic Inspection Vehicle Explorer (HIVE)

- The HIVE 3.0 is a modular sensing and control package designed for enhanced culvert inspection.
- This project is supported by NSF and VTrans.
- Research on this project has been conducted by Brandon Gamble, Evan Trombley, Krisha Reddy, and Jon Burton.
- Project advised by Dryver Huston, Tian Xia, James Kay, Eva Cosoroaba.

# How the HIVE Affects Your Drive to Work...

- ...to the grocery store, and any time you get in a car:
- Culvert failures have major impacts on the community, shutting down major intersections for years at a time and costing millions to repair



Berlin, 2020: \$1.4 million, 2 years



Richmond, Ongoing: \$10 million

# More at the Poster Presentation:

- Demo of HIVE 3.0 autonomous follower using computer vision.
- Inspection applications of HIVE 3.0.
- Future developments of the scalable HIVE 3.0 package:
  - 3D mapping
  - Crack monitoring
  - Fully autonomous inspection

