

Garrett J. Hart III

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EDUCATION

Virginia Tech | Blacksburg, VA | B.S. in Mechanical Engineering, May 2014

Senior Project: VT High Performance Alternator Design and Modeling Team

- Used SolidWorks and ANSYS Maxwell to iteratively design a new rotor shape to increase the power output of automotive alternators while limiting size and weight. Built a testing setup to compare the performance of our design prototypes against off-the-shelf competitors at various RPMs

PROFESSIONAL EXPERIENCE

The Porter Company Mechanical Contractors | Mechanical Estimator

Service & Special Projects Division | Austin, TX | October 2018 – September 2020

- Perform cost estimates and write proposals for HVAC, plumbing, medical gas, & process piping RFPs
- Projects consist of equipment repairs, replacements, preventative maintenance, renovations, and new construction projects ranging from several thousand dollars to \$6 million
- Correspond with dozens of vendors for quotes, assemble submittals, and procure materials and equipment for awarded projects
- Acted as project manager on jobs in commercial, aerospace industrial, and hospital settings
- Built an interactive spreadsheet to track all bids and active jobs to provide weekly status updates

Bechtel Corporation | Mechanical Field Engineer

Hanford Nuclear Waste Treatment Plant | Richland, WA | June 2014 – September 2017

Part of the small team tasked with installing all equipment on a \$17 billion project for the U.S.

Department of Energy. Personal responsibilities included:

- Translate all design documents and applicable engineering and construction codes into work packages and records for installing, aligning, and testing equipment including: pumps, motors, fans, FCUs, humidifiers, vessels, cranes, hoists, and remote robotic manipulators
- Troubleshoot any installation or operation issues that the skilled craft encounter and create field changes to the design documents to fix the problems
- In 2015, completed all training and exams to become a Certified Rigging Engineer, additional duties included: checking and signing all load calculations for critical crane lifts across the project and creating lift plans for flying equipment worth up to \$4 million into the facility
- In 2016, appointed as the System Completion Lead Field Engineer for the Breathing Service Air, Container Finishing Handling, Domestic Water, and Glass Forming Reagent systems to facilitate the completion of construction and successful turnover to startup. This entailed tracking the progress on all installation records for these systems and leading bi-weekly meetings to resolve any issues preventing their closure

Bechtel Corporation | Mechanical Engineering Intern

Washington, D.C. Metrorail Silver Line Extension | Vienna, VA | June – August 2013

- Generated all design changes on the project across mechanical & fire protection systems
- Assisted during 8 week turnover walkdowns with the superintendents and the client

University of Maryland | Physical Oceanography Research Technician

Horn Point Laboratory | Cambridge, MD | May - August 2011

- Used Matlab to analyze the effect of wave movement, salinity, and wind on oyster hatcheries

CERTIFICATIONS & TECHNICAL SKILLS

- Licensed Engineer in Training in Washington state since October 2014, NCEES ID: 15-397-78. Currently studying to take the HVAC and Refrigeration Mechanical PE exam
- Experienced in AutoCAD, Autodesk Revit and Inventor, SolidWorks, ANSYS CFD and Maxwell, MATLAB, Labview, Bentley Navigator, and Abaqus Unified FEA
- Member of the American Society of Mechanical Engineers since 2012 & ASHRAE since 2017