1. Designed utilities and HVAC systems for high technology facilities, including cleanrooms, general manufacturing and process and institutional facilities.
2. Applied technical troubleshooting ability to create quality HVAC and air control solutions.
3. Prepared sheet metal fabrication drawings, modifications and commercial specification drawings using Revit and AutoCAD.
4. Devised overall strategy for documentation and identified design sets planned for each stage of work including as-built designs and final building information models (BIM).
5. Supervised preparation of technical drawings by architectural technicians, CAD technicians and drafters.
6. Analyzed and verified all energy savings calculations to promote environmental sustainability and energy conservation in order to meet aggressive project LEED requirements.
7. Coordinated technicians to verify form, fit and function of pneumatic gas flow designs.
8. Completed mechanical designs for HVAC, air control, fire protection and elevators while providing SME input to client and design teams.
9. Developed internal processes and plans for mechanical verification, product development and factory processes.
10. Liaised between [Type] facility and [Type] department, facilitating communications and keeping appropriate parties updated on project developments.
11. Assisted drafters with detailed machinery plans using drafting tools, computer-assisted design and drafting equipment and software.
12. Secured capital equipment for facility by developing quotations and purchase requisitions.
13. Provided mechanical design analysis and prototype development for servos and electro-mechanical components of [Type] systems.
14. Conducted research to test and analyze feasibility, design, operation and performance of [Type] equipment, components and systems.
15. Designed and built process tooling including insert molds, arbor press tooling, soldering and welding.
16. Supported [Type] engineering design through analysis and simulation of prototypes and [Type] computer models.
17. Reviewed project goals and objectives on monthly basis with project manager and design team.
18. Assisted in preparation of production cost quotations by aiding with estimates of equipment, material and labor costs.
19. Planned and evaluated results of [Type] analysis, modeling and experiments.
20. Documented products and processes using SolidWorks, [Software] and [Software] to document release notes and designs.
21. Performed quality mechanical drawing checks to confirm safe, compliant and cost-effective design criteria.
22. Identified mechanical problems and determined best solutions for correction.
23. Incorporated solutions that met various project challenges and adhered to environmental, packaging and vibration requirements.
24. Contributed to [Type] project by [Action] and [Action] which increased company revenue by [Number]% and improved [Result].
25. Applied engineering principles to develop and operate electrical, mechanical and data processing systems.
26. Designed and oversaw installation of conveyors, overhead cranes and robotic systems.
27. Performed thermal, electromagnetic, dynamic and structural engineering analyses on [Type] projects.
28. Analyzed [Type] mechanical designs and prototypes in development life cycle.