



Simply put, there is no limit to what CDE can do—except where the laws of physics say otherwise.

Experience:

Cape Design Engineering Co., established in 1997 on the Space Coast, is a comprehensive design engineering firm specializing in full-service MEP and structural engineering. With 27 years of experience, we support a diverse range of clients and facilities, from space flight operations to educational institutions. We tackle projects ranging from simple AC systems to complex campus utility plants, including low/medium/high voltage distribution, lighting, fire alarms, and automated building control networks, while ensuring structural integrity. Our construction delivery services are provided through our parent company, 8-koi, Inc., ensuring seamless project execution from start to finish.

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Mechanical Engineering

- HVAC & Thermal Energy Storage
Plumbing & Fire Protection Design
Systems & Chiller Plant Design

Electrical Engineering

- Lighting & Voltage Systems
Power Generation & Grounding
Lightning Protection & Fire Detection
PV Systems Integration

Structural Engineering

- Steel (Heavy/Industrial/Light)
Aluminum
Concrete (Pre-Cast, Cast-In-Place)
Masonry

Energy Conservation

- Energy Audits & Upgrades
Sustainable & Conservation Design

Studies and Analyses

- Wind, Seismic, Failure Analysis
Forensic Engineering

Specialized Services

- Launch Structures & Platforms
Explosive & Blast Design
3-D Modeling & Ground Support Equipment
Investigative Studies



Key Differentiators

- Experienced Team: Qualified professional engineers, structural designers, and project managers delivering energy-efficient, high-quality projects.
Comprehensive Support: Full CAD/BIM support staff and a dedicated cost estimator.
Certified Quality Control: USACE CQM certified QC reviewer.
Established History: Founded in 1997, with a deep-rooted history in space programs and extensive experience across commercial, industrial, and government sectors.
Diverse Expertise: Specialize in designing critical launch systems, commercial, educational, medical, and military facilities.

CONTACT US

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OUR CLIENTS





NASA Space Station Processing Facility | Design/Build Science Annex

CDE performed the Design/Build of a biological science laboratory facility at the SSPF, encompassing site civil, architectural, structural, electrical, mechanical, plumbing, process piping, controls, fire detection and protection, and data systems. The building and systems were modeled using BIM. LEED Silver® certification was achieved through the use of high-efficiency roofing, energy-efficient equipment, variable frequency drive motors, LED lighting, occupancy sensors, and a building control and automation system. The facility is actively supporting scientific research for the International Space Station (ISS).



Eastern Florida State College | CHW System Upgrades for Melbourne Campus

CDE evaluated the impact of adding approximately 120,000 square feet of new buildings on the chiller and hot water systems. CDE designed modifications and additions to the chiller plant, including a new parallel loop on the campus's south side, a separate pumping system for future buildings, and a new cooling tower to enhance capacity. Challenges with the condenser water system were addressed by creating an outdoor pumping system and designing an open enclosure with a roof to prevent tower spray and corrosion.



Cape Canaveral Air Force Station | Design SLC-46 Lightning Protection System

CDE provided comprehensive electrical design for the Lightning Protection System (LPS) and beacon lights at Cape Canaveral Air Force Station. This included power, grounding, and bonding in compliance with code requirements. The project involved transient load analysis for the catenary LPS and designing a structural steel tower with a fiber-reinforced plastic (FRP) mast. CDE also handled submittal reviews, RFIs, field observations, verification of test results, and inspection of FRP mast manufacturing.



Daytona State College | Design of the Mori Hosseini Center

CDE designed the 66,000 square foot Mori Hosseini Center at Daytona State College, which includes large presentation galleries, exhibit areas, commercial kitchens, a dining lab, a 500-person banquet facility, hotel rooms, and classrooms for Culinary & Hospitality Management programs. CDE provided structural, mechanical, electrical, plumbing, and fire protection design. The firm offered construction administration and support services during the construction phase, ensuring adherence to high-quality standards.



Daytona State College | Thermal Energy Storage System

CDE studied and implemented a thermal energy storage (TES) system for Daytona State College. After evaluating options for ice and chilled water storage, CDE recommended a 2.5-million-gallon chilled water tank for its superior energy cost savings and lifecycle benefits. CDE oversaw the design, commissioning, and integration of the system, which now saves the college over \$200,000 annually and has secured more than \$1.1 million in incentives from FPL.



Kennedy Space Center | NASA kA Band Antenna Array

CDE managed the Design/Build of the kA Band Antenna Array at Kennedy Space Center. The project involved constructing three concrete mat foundations in a 60-meter triangle, a central concrete pad for antenna monitoring equipment, and a command center. CDE provided full civil, structural, and electrical design, including utility installations (potable water, sewer, power, communications, fiber optics), fire alarm systems, lightning protection, grounding, and HVAC for the antennas. The design adhered to Florida Building Code requirements with concrete footings supported by augercast piles.