



# Structural and MEP Design

## Featured Project

Blue Whale



*The Blue Whale retail store in Surfside Beach, SC is a 15,000 SF building constructed from concrete masonry walls, steel columns and roof joists, and custom built structural steel trusses for the three main towers. The foundation was a mixture of driven timber piles and large concrete pile caps and footings due to the relatively soft soils present at the sites and the large column loads from the roof. The wall systems were designed to be structurally independent from the roof due to fire rating concerns.*

*The MEP systems featured 7 electrical sub-panels for lighting circuits and environmental systems, 9 separate HVAC package systems (7.5 ton units each) to keep the building cooled, and over 80 high-intensity discharge lights in the ceiling to illuminate the inside of the store. The building was designed to meet the 2003 International Building Code Requirements.*

*This project was completed in July 2008 and is the largest, best looking retail store in the Town of Surfside Beach. The clients were extremely satisfied with the level of detail on the plans, which made the construction process much simpler to track.*

## planning and design

### Structural & MEP Design Services

The EARTHWORKS Group can provide building system engineering design services that you need to construct your project. EARTHWORKS provides a full range of structural, mechanical, electrical and plumbing design services under one roof, making us your one-stop-shop to complete your project at an affordable price. Our Building Design Team takes your ideas and translates them into detailed construction documents, showing the specifics of the buildings, such as the foundation, wall sections, mechanical and electrical systems, and finish schedules. EARTHWORKS uses the latest CAD technology to find and eliminate conflicts in the construction documents and ensure accurate designs.

EARTHWORKS' team members have the knowledge and skills to meet the increasing regulatory requirements and provide quality plans in a timely manner to ensure the customer meets pre-set construction deadlines. We utilize the latest modeling software to provide quick, accurate analysis of engineered systems.

Typical Engineering services include:

- Conceptual Design
- Foundation Plans
- Floor Framing Plans
- Roof Framing Plans
- Building Structural Assessments
- Shop Drawings Review
- Deck/Dock/Walkway Design and Assessments
- 3 Dimensional Modeling (Building Information Modeling)
- HVAC System Design
- Electrical System Plans
- Lighting Layout & Design
- Plumbing System Plans
- Building MEP Assessments
- Marine Structures, Retaining Walls and Bulkheads



We are guided by strong ethical principles and a cooperative spirit with our client, design team, construction partners and the regulatory community. Careful monitoring during the construction process allows us to provide outstanding quality assurance.



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