

HARWICH PORT COMMONS

Harwich Port, MA

Located along Route 28 in beautiful downtown Harwichport, this new three-story hip roof structure is mixed use, providing residential living above prime mercantile space. The desired architectural features for the building - transitioning ceiling heights, pocketed balconies, large windows, and handicap accessibility — called for a complex structural system keyed to otherwise rather symmetrical floor plan.

This complexity was resolved with the help of finite element analysis modeling software. In order to accommodate wide open spaces and multiple windows, the main wind force resisting system had to be limited to the confines of short wall segments lengths and within wall cavities. Therefore, steel braces and moment frames were modeled and implemented.

The overall structural system for the building consists of a concrete foundation with a slab on grade, structural steel primary members, and a combination of light-gauge steel, steel bar joists, and timber secondary members. The second floor is a “podium” style construction with a concrete slab on deck supported by steel bar joists. While giving the residential units on the second floor a sturdy floor system, the structural components are open to the mercantile space below, creating an industrial feel that marries architectural expression and structural needs. An elevator encased within a masonry shaft services the second floor residential units.

SERVICES

- Land use planning
- Civil engineering design, including sewage disposal system, stormwater drainage, parking, and grading
- Structural engineering design
- Environmental permitting
- Construction contract administration

