

PLANNING MAKES PERFECT

By Charles S. Vaciliou

One access road, one parking area, several operating buildings crowded together in limited space, and thousands of animals makes for a challenging construction environment. When Burlington, Massachusetts based Erland Construction was awarded the contract to build a new animal hospital and adoption center for the Massachusetts Society for the Prevention of Cruelty to Animals' (MSPCA) facility at Nevins Farm, the project team knew for certain that the Construction Management Plan would require attention from some very special considerations.



The MSPCA at Nevins Farm

Erland Construction's relationship with the MSPCA spans almost thirty years and ten different collaborations. Established in 1868, the MSPCA is the nation's second oldest humane society and provides hands-on care to more than 250,000 animals a year at seven facilities across Massachusetts. The MSPCA is not a government-funded establishment, and relies on generous donations from the community

to construct needed improvements and remain functional.

Nevins Farm, located in the rural suburb of Methuen, Massachusetts, north of Boston, is one of the MSPCA's busiest branches—serving more than 7,000 animals a year—and not just dogs and cats, but rabbits, guinea pigs, domestic rats, reptiles, and barn animals like horses, cows, goats, and sheep. The MSPCA at Nevins Farm offers many programs, but its primary focus is the adoption of its many sheltered animals. Although some of these animals are strays or have been neglected, many of them are surrendered animals whose previous owners could no longer care for them.

Since it was donated to the MSPCA in 1917, the Nevins Farm property has continually housed and cared for animals in its collection of small, run-down buildings on the grounds, originally constructed in 1913. The MSPCA wanted to replace the old 300-square foot main building it had outgrown with a facility six times that size. Plans called for an 18,500 square foot, state-of-the-art animal hospital and adoption center designed to accommodate a surgical suite and kennel/adoption facilities for small animals—cats, dogs, birds, and reptiles—and also feature a training room for dogs and a classroom for educational lectures.



Nevins Farm provides kindness and care for animals

Charles S. Vaciliou

Over the course of one building project, several competing buildings revealed a wealth of colorful history in a final building construction milestone. When Burlington, Mass.-based Erland Construction was awarded the contract to build a new animal hospital and adoption center for the Massachusetts Society for the Prevention of Cruelty to Animals' (MSPCA) facility at Nevins Farm, the project team knew that the Construction Management Plan would require attention from some very special considerations.

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It was important to the MSPCA to maintain the original look and feel of the property that had been part of the community for almost a century. The MSPCA's vision was to incorporate the most current technology for fostering the health and welfare of the approximate 7,000 animals in their care each year, while respecting the historical significance of the site. In 2002 they began fundraising for the construction of a new \$4.8 million animal care center. They commissioned Erland Construction, a 28-year old Construction Management company, and Blue Sky Collaborative Architecture, a firm committed to excellence in design of animal facilities, to bring their vision to life.

Preconstruction Planning was Key

Because of its long history working with the MSPCA, Erland approached this project with a great deal of experience and understanding of the technical aspects of working on an animal facility. This project was different from the others that preceded it, however, because Erland was hired to construct a new building from the ground up on an

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occupied, active site. And, although the entire campus spanned 55 acres, the existing care, education, and administration buildings were clustered close together, abutting the construction site.

Planning the construction on any project requires thoughtful consideration but, factor in live animals and a stream of visitors on a fully operational farm, and planning becomes much more challenging. Crafting the Construction Management Plan for Nevins Farm began with learning exactly how the staff, the animals, and the general public used the site – peak times, most frequent destination, regular animal maintenance requirements.

The most critical issue facing the project team was ensuring the safety and comfort of all those involved in the daily operations of Nevins Farm. The employees and vendors that regularly came on site could be kept informed of changes, restrictions, and special construction activities through Erland's User Notification Program and clear signage. The staff could easily communicate to Erland the special needs of the resident animals. But, the facility would remain open to the public six days a week throughout construction and many of these visitors were distracted as they sought to park their vehicles and make their way to the existing animal center. Many were simply unfamiliar with the layout of the property, some were herding small children, still others were in highly

emotional states as they readied to adopt or surrender a beloved pet.

Construction Management

In the development of Erland's Construction Management plan, all foreseen issues were carefully considered. Logistically, the biggest problem was the site access and traffic control was a major concern to be resolved. Nevins Farm has only one, narrow driveway that serves as both entrance and exit. The property is located off of a two-lane road, offering very little room to maneuver large equipment or delivery trucks in and out of the grounds. We needed to ensure that the staff was able to enter and exit the premises with ease, that the visiting public was not intimidated by the construction and remained aware that the facility was open for business, and that all construction vehicles could quickly get off the street and onto the site with minimal disruption to the flow of traffic.

Informational signage was erected at the entrance to properly direct the incoming and outgoing traffic. Erland also constructed a temporary parking lot of crushed stone, located away from the actual construction site, as a safe haven for vehicles and pedestrians. Erland's site superintendent Ken Tessitore said, *"We played traffic cop a lot of the time. We had to block off part of the entrance to allow our trucks in, but still leave room for people coming to visit the shelter. The place is open six days a week and we needed*

to make sure we were accommodating them. It wasn't easy, but because we planned ahead, it worked out fine."

The success of this project, as with most projects, hinged on our collaboration, our ability to



work well together, and our clear lines of open communication. Keeping the safety of the animals as a top priority, Erland was in constant communication with the Nevins Farm staff and Steve Jensen, the architect. Regularly scheduled project team meetings provided a forum for reporting on progress, identifying unresolved issues, and presenting the Two Week Look Ahead Schedule– a most valuable field management tool. The Client's representatives brought news of special events or conditions to the project team's attention and left those meetings armed with full and current information, which could be shared with all staff members. As a result, Erland was always aware of changes in the surroundings and had the

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opportunity to ready solutions to unique problems that arose.

Most of the major construction for the animal hospital and adoption center was directly next to the horse barns. Based on the day's planned activities, Erland would coordinate with the staff so they could move the horses to a safer location for the day. Oftentimes work was started earlier in the day to avoid the need to change the daily routine of the animals and ensure their safety.

The MSPCA was adamant about keeping the existing shelter, which was located only a few hundred feet from the construction site, open to the public and operating as usual throughout construction, so a phased demolition and construction plan was developed. Steps were taken to mitigate noise, dust, and vibration as much as possible to maintain the comfort of the animals. Deliveries were scheduled to avoid public hours. The building site was carefully fenced and all subcontractors were trained in the specifics of the project's safety plan before starting work. As a result, construction of the new hospital and shelter was free from safety incidents.

Design for Ease and Comfort

A building design that promotes the health and well-being of animals requires many special elements; ordinary materials just will not suffice. Steve Jensen, of Blue Sky Collaboration Architecture, had experience working with the

MSPCA prior to starting the Nevins Farm project and knew the kind of unique materials that would be needed. Jensen said, *"The materials used in this job were critical. Because this was a facility that housed live animals, we needed to be cognizant of hygiene. The floors and ceilings needed to be seamless so there was no chance germs could seep through and infect the animals."*

He chose a polymer floor system made of urethane slate for the adoption and surgical wings of the building, specified for ease of daily maintenance. The polymer floors can handle the water of constant washing and are durable under the high temperatures needed to disinfect the surface. Also, the slate remains slip resistant, without becoming gritty and abrasive like epoxy an important feature because a rough floor would tear at the paws of the animals. For the Dog Training Center, Jensen selected a rubberized, fire-resistant material with lots of texture to help the dogs grip the surface better. Lastly, the public areas all had rubber floors with a matte finish, which is softer on feet and absorbs sound well. The floors are connected to the walls by heat-welded seams to minimize moisture and avoid mold.

The HVAC system was built so there was no re-circulated air flowing through the building. All



the forced air coming in is 100% fresh. In the animal rooms, the system facilitates fourteen air changes per hour. The fresh air helps to maintain the health of the animals, while also helping sick animals to heal faster.

There is also a special air ventilation system in the cat area—direct exhaust ventilation pipes in the cages that pull the return air through so the air does not become stale. Jensen said, *"The MSPCA should be commended for breaking the mold of what a conventional, stereotypical animal shelter looks like. This facility is not a dark jail for unwanted animals; it's a positive, retail-like environment that promotes a healthy, happy life for the animals in their care."*

Unforeseen Circumstances

After all the careful consideration of materials, design, preconstruction planning, and construction management, the shelter, aptly named the Noble Family Animal Care and Adoption Center after George and Connie Noble who donated \$1.5 million to the MSPCA, was finished in the fall of 2004. The project had been a complete success and the MSPCA was thrilled with their new facility. Then, after

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they had been operating in the new building for approximately three weeks, disaster struck.

Over the long Thanksgiving holiday weekend, temperatures in the Boston area plummeted unexpectedly and a frozen pipe burst in the attic space over the main lobby of the shelter. Hundreds of gallons of water poured through the new ceilings and a quarter of the building was destroyed. Although the project team had disbanded and the Superintendent had moved on to another job, once word spread that the facility had been damaged, Erland quickly reconvened to repair the building.

Erland promised the MSPCA their building would be repaired and back in operation in just two weeks and they were determined to keep their promise. Steve McDonald, Erland's President said, *"We got this job because we're a solutions-oriented general contractor. We had to have the ability to respond to adverse conditions. Thankfully we were able to do so, and the project was ultimately a success."* After many long nights, and working weekends, Erland finished the job and met their deadline. Happily, no animals were hurt during the construction, flood, or re-construction of this project. Michael J. Kieley, shelter manager, remembers,

"It was a disaster. We had just gotten settled in and the pipe burst. We were completely

panicked. Thankfully the insurance company came in to assess the damage and there were no arguments about who would take responsibility. Erland came in and promised us our building back in two weeks. We never dreamed they'd actually be able to do it. But low and behold, two weeks later we were back in. It was amazing. Plus, even moving to a makeshift area in the new building was a hundred times better than it ever was in our old building! Erland was very accommodating to us and worked around our schedules after the pipe burst. They made what seemed to be a hopeless situation into a manageable one."



Charles S. Vaciliou, Vice President and Director of Operations, has been with Erland Construction since its founding in 1977. He has been involved with all of the company's MSPCA collaborations.