

■ **Project Data:**
2559 Amber Street
Philadelphia, PA
32 unit,
mixed use development
Roof area: 5,000 sqf
Vegetation: 3,322 sqf
Installed: 2019



Jeffrey Lappin, MSc Sustainable Design, Certified Green Roof Professional.

■ Jeff is part of a team that installs Green Roofs and walls in and around the city of Philadelphia. At one point or another, you can find him making take-offs, estimates, ordering, coordinating delivery, maintaining client relations, and managing installations

Green roof ballasted fall protection devices are coming

What if the miss of the fall protection plans was noticed late in the process first, and no one wanted to penetrate the brand new waterproof membrane and void the warranty...

The heart of Philadelphia's Kensington Neighborhood has seen significant investment in recent years. Along with new breweries and restaurants, new residents are starting to flock to the formerly neglected area south of downtown in search of better real estate and rental values.

Filling the market for affordable luxury apartments is the recently completed four-story, 32 unit, mixed use development at 2559 Amber Street. Conveniently located near public transit station and within walking distance to shops and attractions, the one and two-bedroom apartments boast large rooms and high-end amenities.

Residents can also feel good about their apartment's green roof, but they'll probably never know contractors ran into a problem when the building was under construction. The fall protection railing specified in the plans was missed and had to be included late in the process.

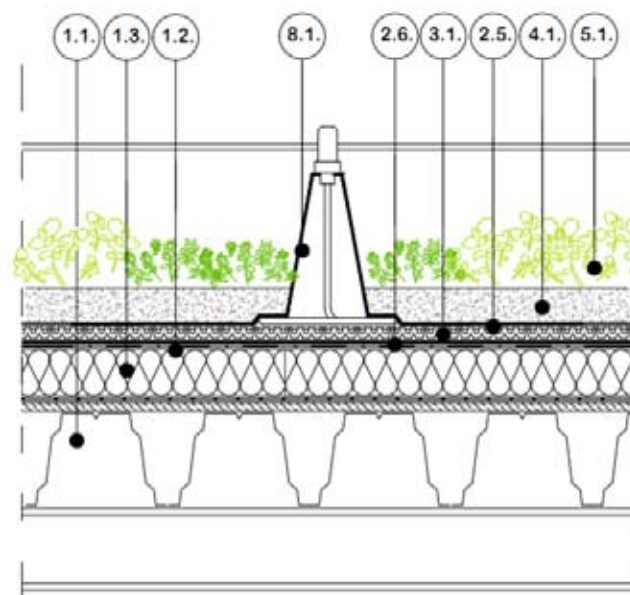
Crews were faced with the possibility of cutting through the in-place roof to attach a rail system to the structure, or shift to a ballasted system that could offer the same fall protection performance without compromising the roof membrane.

Jeff Lappin is a green roof expert with E-Built, a Philadelphia based Construction firm committed to sustainable building practices. He found Diadem while searching online for ballasted systems and said the relationship yielded greater value than just the railing product.

The engineering services provided by Diadem were useful, particularly because our architect and engineer were unfamiliar with the system. The drawings and testing results provided by Diadem allowed efficient sign-off after installation.

Diadem products also come with training and testing required for proper installation.

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DIADEM®'s fall-protection system is the first greenroof-ballasted solution used in North America. The company administers its own program of education and inspector certification. System layouts, specifications, and installation instructions are prepared by DIADEM®'s engineers for each project.

Legend:
1.1 Corrugated sheet metal deck
1.2 Waterproof membrane
1.3 Thermal insulation
2.5 Filter layer
2.6 Protection layer
3.1 Retention board
4.1 Ballast, growing media
5.1 Vegetation
8.1 DiaSAFE fall protection post

"I definitely read the installation instruction more carefully knowing that I was going to be tested," Jeff said.

And that training caught a detail that might have otherwise slipped by. "When I verified the density of the growing medium and found it was too light. We calculated the right amount of stone needed per anchor to achieve proper ballasting weight," he said.

"Although it was a longer and more involved process than anticipated because the system is new to us and it was a late addition to the project, Diadem was very patient and helpful throughout."



■ To learn how to apply DiaSafe in the US, please call 503-894-5187 or send an email to info@diademusa.com or visit: diademusa.com.