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Hanging Out With Façade Inspectors



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Amy DeLuca has over 10 years of experience in exterior restoration and historic preservation and is currently a Studio Director/Project Manager at Consulting Associates of New York (CANY). She was the first female Rope Access Inspector at her company and she was SPRAT Certified in 2015. Prior to CANY, Amy received her BS and her Master's in architecture from the Catholic University of America, where she focused on Cultural and Sacred Spaces.

Julie Foster is a Project Manager and studio head at CANY. She holds a MS degree in historic preservation from Columbia University and a BA in art history from West Virginia University. Foster has over 10 years of experience in construction project management and building restoration. She was SPRAT certified in 2015.

Among the hazards of cities with tall buildings is the prospect of objects falling to the streets below. After a woman was killed by a piece of falling masonry in 1979, the New York City Council enacted Local Law 10, which mandated that buildings taller than six stories be inspected at least once every five years. In 2018, more than 3,300 building exteriors were inspected. An increasing number of these inspections are being done by rope, with inspectors rappelling down the face of the buildings, and a substantial number of the inspectors are women. At Consulting Associates of New York (CANY), eight of the 15 licensed rope-access technicians are women. CTBUH Editor Daniel Safarik spoke with two of them on a recent visit to New York.

The most obvious question, we'll get out of the way first: how did you get into this line of work?

Amy DeLuca: I have an architecture background. I found CANY by chance at a job fair. Their brochure had a picture of an inspector rappelling on it, so I was like, "I want to do that!" But I still wanted to do architecture. I didn't know that the exterior-inspection niche even existed before I came to CANY, and I have fallen in love with it. It's really interesting. I love historic buildings, restoration and preservation.

Julie Foster: I was an art history major and then did a couple years working in arts development and fundraising. I hated that, went back to school, did a Master's and a certificate in cultural resource management, and through that, found out about exterior renovation. I originally thought I was going to do advocacy for preservation, but I took a lot of classes about structure and waterproofing

and the like. When I graduated, I ended up working for a small contractor who did ornamental metal restoration. I ended up doing construction project management, working for a firm that restored the US Capitol dome in Washington, DC, and a cast-iron building in New York City. I was managing a crew, doing the planning, and really got to understand the exterior façade world. Then I met CANY and wound up on the other side of the table—and conquered my fear of heights.

Counterintuitive! Neither of you were rock-climbers before this?

DeLuca: No, before I worked here, I think I went to a rock-climbing gym once for fun. Once I started rappelling, I started rock-climbing, but only indoors. It's a totally different experience with different equipment.

Foster: If you were to have told me that this was going to be my job 10 years ago, I would have told you that you were out of your mind. I remember visiting New York City when I was in high school and looking up at the window washers and thinking, "those people are crazy." Actually, now though, getting on a ladder to climb up to the first level of a sidewalk bridge, that is still scarier to me. I would rather rappel off an 80-story building than get on one of those ladders.

DeLuca: I feel way more secure in my harness than I do just standing on a roof sometimes. I was just on vacation, and we climbed up a tree and jumped in a river, and it was maybe 10 feet (3 meters) up. I had a freak-out, and I was thinking, "I was literally just on an 80-story building, so why am I freaking out?" It was

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because I didn't have my gear, and I wasn't in my comfort zone.

Let's talk about gear for a minute. What kind of equipment do you need to stay safe?

DeLuca: We have two ropes that are anchored at the roof and go over the side, and then two running on the ground. It's kind of like a pulley, and it runs through our harnesses. And as we let ourselves go, a mechanism lets the rope run through, and when it closes it keeps you where you have stopped (see Figure 1).

Foster: The second rope is for backup only. Once you go past a certain rate of descent, the teeth in the safety catch engage and you stop. It also has a shock absorber spring. It's funny—when you put a scaffolding harness on after having worn your rope harness for a long time, it feels insufficient. It's perfectly safe, of course, but you can't move yourself up and down. If the safety catch engages and the scaffold drops away, you're just hanging.

What equipment do you take up with you to do the inspections?

DeLuca: We take very little in terms of electronics, beyond a camera, on the rope. When we're on scaffolding, we have ultrasound sensors for steel behind the façade. I've taken calipers, a card we use for crack measurements, a hammer, and a tape measure.

This is obviously dangerous but also highly-skilled work. Why can't drones or robots do this?

DeLuca: A drone can take a photo straight on in 2D, but that doesn't tell the whole story. Something that looks like ordinary grouting in a runner course of brick to a drone will be obvious to us as a crack, once we start feeling it and looking from different angles. Maybe they could eventually create haptic sensors for robots that can tell if a brick is loose. Maybe someday in the future we can work with drones, but I don't think it's a question of one versus the other.

Foster: I'd love to have a drone! If we can have perfectly clear 360-degree drone footage before going out, we could



Figure 1. Julie Foster (left) and Amy DeLuca (right) performing a façade inspection. © Henry Marksbury

determine the best spot to start working, and that would save time. As it happens, we use Google Maps and Google Earth all the time. Buildings are rarely truly rectangles, and you have crazy setbacks, and there are things you cannot see from the street. But I don't see a drone being able to deliver the on-site judgment that humans can. We take hammers out and actually physically sound buildings sometimes; but the more you do it, you can put your hand on it, and before you even use a hammer, you know that piece is coming off. I've got pieces of terra cotta in my apartment that I've torn off buildings with my hands.

What are some things you've seen on buildings that you disapprove of, or wish had been done differently?

Foster: My biggest beef is really bad terra-cotta repair. Not necessarily the original architecture itself, but when the repair consists of making a new mold and putting the piece of terra cotta back, they just square off and kind of do a flat patch.

DeLuca: I hate seeing a cornice being replaced by a brick. On older buildings, usually any end point or transition, even if it is located somewhere you can't necessarily see from the street, it is often finished off with a

piece that is decorative on more than one side. On newer buildings, when you get up close you can see the waterproofing that is supposed to be hidden, or the joints don't come together perfectly, or it was a system where things were supposed to lock or snap together and they kind of half-got it, and then just anchored it in place. From far away it looks OK, but the actual edges and seams and everything don't look that great close up. And they don't even bother with underneath!

What about newer buildings with sheer glass façades?

Foster: The newer buildings, from the 1960s and up, I don't love doing those so much, because there's not that much to see.

DeLuca: Inspection gets really repetitive, if you're inspecting a curtain wall that's the same thing on every single floor, you kind of have to kick yourself just to keep paying attention.

Foster: And you can't necessarily tell something is wrong unless it's very wrong. I worked with a team of 14 or 15 people on a building that took up a whole city block, all curtain wall, looking at every single panel, and we found two windows where the glass had slid out from the frame. It was undetectable until you got 5 feet (1.5 meters) away or closer.

What do people generally say when you tell them this is your job?

DeLuca: People are always incredulous, and they don't know what it means. When they see a picture of it they're like, "why would you do that?"

Foster: If I'm at a party and I don't know everyone, and I don't want to talk about work all day, I don't bring it up.

As the construction and related industries tend to be male-dominated, as women, how do you think you're perceived, and how do you perceive yourselves in your roles?

Foster: At this point I work with the same guys all the time. But I have never had an issue with a construction worker whatsoever.

DeLuca: The stereotype of a construction worker cat-calling a woman, I've never

experienced that. If I or anyone has had trouble, it's been from someone higher up in management. The on-site workers have always been super-respectful. If anything, they will try to take care of us, which is in some ways, sexist, I suppose. In every new jobsite I go to, I feel like I have to prove myself, but I just do my job and don't make a big deal out of it. Sometimes it takes 10 minutes, sometimes it takes a week, but eventually they treat you like everyone else. You're out there four to eight hours with the same guys, and you get to chatting and they always want to see photos of the crazy thing you did last week.

Foster: Half the time they just appreciate that you're willing to get dirty and do that one last inspection with them, or climb up on the difficult access spots (see Figure 2).

Do you think women are better at this work?

DeLuca: I think it really just varies from person to person; gender doesn't have anything to do with it. It's definitely easier to do if you're in shape. Body shape and weight make a difference too.

Foster: I had a job with a two-story screen wall, then a ton of steel dunnage at the top, so we had to climb up to the top of the steel dunnage, then we were all sort of at an angle, and we had to squeeze in between, and I was the one that went up.

DeLuca: When my crew was inside and the gear was outside, I was the only one that fit out the window, so it was me that had to go grab it.

What's the weirdest thing that's happened to you on a job?

Foster: Well, we had the cops called on us once. It was the third building either one of us had ever done, and it was 47 stories up. We were both in all black, and there were columns on the side and we were on either side, and it was in the mid-afternoon near Times Square and Bryant Park. There were massive crowds, and somebody had called the cops saying two "peeping toms" were outside their window. The cops showed up, and apparently, they were talking to the head rigger on the ground, and he told them, "hey, those are women." ■



Figure 2. Façade inspectors Amy DeLuca (left) and Julie Foster (right) pause for a moment and recalibrate their equipment during an inspection. © James Marksburry