Virgil
What is your role in [the] relationship between LEED (Leadership in Energy and Environmental Design) projects and the NIH?

Pete
I'm the LEED AP (Accredited Professional) representing NIH on all the FPAA (Facility Project Approval Agreement) -level projects. FPAA-level projects are your major, large construction projects, renovations, new construction, that sort of thing. Originally, when I first started, you [earned] one point if you've got a LEED AP assigned to the project.

Virgil
Oh!

Pete
But nowadays, all your AEs (architects and engineers) are LEED APs as well, so you don't really have to do that. I still sit in on the larger projects to make sure that the LEED projects are moving forward on the LEED third-party certification side.

Virgil
Got it. That still seems pretty important and it also doesn't really sound like it's a very easy thing to do. How difficult is it to attain the role that you have and what sort of things do you have to do to get that role?

Pete
Well, first off, you've got to be a LEED AP. I'm also the LEED Coordinator for NIH, so if you go into the USGBC (U.S. Green Building Council) site for NIH, I am the LEED Coordinator. DEP pays for our USGBC membership every year, so I'm the point of contact there. Anybody who wants to be listed as a LEED AP under NIH, that works at the NIH; I get a notification and I accept them. Then they pop up on the list.

Virgil
Got you. So, how hard is it to get a role?

Pete
You've got to achieve accreditation and then you have to maintain it.

Virgil
Mmm, I see. Is that every two years?

Pete
You've got to have 30 credit hours over two years.

Virgil
One more question on that point: how long have you been in this role?

Pete
I've been the NIH Coordinator for five or six years. But I've been the NIH LEED AP on projects since 2008.

Virgil
You've definitely got some experience on working with these projects. As you've been going through

your time working with green buildings [at] the NIH, what have you seen as its major importance? Why is it important to have green buildings on an NIH campus?

Pete
As time rolled on, we've always had green requirements pushed down from the various administrations. "You have to meet the guiding principles. You have to do this. You have to do that." Then there was the requirement that you have to be third party certified – that can be LEED, that can be Green Globes, different things. GSA requires their buildings to be LEED Gold. So the requirements become more and more stringent over the years as well as the sustainability requirements.

The sustainability requirements, the guiding principles, follow the outline of LEED; same categories, same [layouts]. The biggest change I've seen is: as these requirements become more and more stringent, the way we approach some of our buildings [intensifies]. We incorporate more energy [and] water conservation measures into our buildings to meet these requirements, which makes our buildings more sustainable. Normally it would [also] mean cheaper to operate, but sometimes that's the case, sometimes not so much. A lot of our buildings are older, so as we do this, you see an initial rate of return on some of our buildings.

Virgil
Yeah.

Pete
Some of our buildings are partially renovated, so that mitigates the rate of return you see on a building overall. If you only do the E Wing in Building 10, a lot of times the rest of the building can absorb the costs that you save. We don't get any additional funds allocated for this; we have to make do with our normal operating budget. All these are unfunded mandates: they are requirements, they're not goals. So, what we do is: when we renovate a building or build a new building, we try to double dip in as many areas as we can to meet the requirements with the same amount of money.

Virgil
Hmm, I see. [That's] interesting, it's almost like a carrot and a stick. In a perfect world, all these green buildings would mean more sustainability and cheaper operations. But at the same time, it's also a mandate that's pretty rigid and not too forgiving in the funding area.

Pete
Sometimes it's like carrying a snake by the tail: yes, you can carry it, but you may get bit!

Virgil
Absolutely! *(laughter)*

Pete
You can go into things with the best of intentions and run out of money, so you look at what you can accomplish with what you've got. NIH has accomplished quite a lot in a lot of different areas when it comes to sustainability.

Virgil
Absolutely. These next two questions will dip more into that. The first one of these two: the challenges that you see working in this field, would you say the biggest challenges would be that intersection

between mandates and funding restrictions, or are there other challenges that you think are [significant]?

Pete
Well, there's that. Then, to some extent, you have people that wanted to continue to do business the way they had always done. They come back and they say: “Well, we don't have the funding for that. We just barely have enough to build our building.” In many instances, these energy-saving conservation measures [and other] attributes we built into these buildings for sustainability, they may or may not cost any additional money.

There's no reason for there to be a big cost differential. A green design is really just a good design. So if you [put little effort into] a design, that's what you're going to get. If you do a good design, you're going to pay for the good design, but that's what we're after anyway.

[For instance], you can put in LED lights. Well, you have to put in lights anyway, so the difference in the cost is not that great. Water-saving fixtures in your toilets, urinals, sinks, showers, etc.; you've got to put those in anyway, so why would you go with a standard flow fixture when you can just add the WaterSense-rated fixture? There's very little difference in cost and there's no reason for [us] not to do that.

Virgil
Right.

Pete
One of the biggest challenges is: NIH has been very proactive in this from the beginning, they were doing a lot of the stuff before they become a requirement. What happens then is: they give you a requirement and they say “based off of 2008 baseline” or whatever. What if you've upgraded all your fixtures in the majority of your buildings in 2006? So, your baseline is artificially lower than what it was. You lose the progress. You still gain the fact that you're saving water, which is the driving interest, but when they say “you've got to reduce water reduction by 20%”, if you've already reduced it by 20% and then they set a baseline, now you've actually had to reduce it by 40%.

Virgil
Exactly.

Pete
The fact that NIH has been proactive in many, many areas [means that] while we've made a lot of gains, some of it we didn't get all of the credit for [as] we should. Actually[, we’ve] made some of these areas more difficult for us than they would have been. It's easy to show a 20% improvement if everything is a full-flow fixture. You change the fixtures out, very easy to show that 20%. But if you change all those fixtures out and then they come back say “by the way, you got to reduce it 20%”. “Well, I already have!” They don't accept that.

Virgil
Yeah.

Pete
So now you're starting 20% better than what everybody else did but you don't get credit for that.

Virgil
True, I could see how that could be pretty frustrating!

Pete
It took me a long time to explain that to some of the folks up at HHS.

Virgil
In terms of credit, it's not too fair, but I could see how it would be helpful in terms of knowledge and experience. We've already made some of those changes, so we can look back on the progress and see some lessons from our green installations from earlier.

Pete
But every time they change the target, they reset the baseline, so it becomes more and more difficult to show progress, much less meet the new requirements. Up until 2015, you had to have a 30% energy reduction by 2015 across the board of your portfolio. Then they said another energy requirement that you reduced it by whatever percentage by 2018. Now there's another one that you've got to meet by 2026.

At some point, if you add up all these percentages from the very beginning to this date, it's not a 30% reduction, it's not the 20% reduction they're saying here… it's the 30, plus the 15, plus the 30… you're talking about a huge energy reduction. Our buildings will not function based off our mission. You can only take it down so far. If you keep trying to go lower and lower and lower, either you have to ask for the building to be exempted, or we can just chain the gates shut, go home, and shut NIH down.

Virgil
(laughter) Well then, with all these hard cases from every angle, what do you think the future of the NIH campus is going to look like? Because these are mandates instead of [suggestions]…

Pete
We're in the process now of evaluating our campuses for climate resilience. We're still working on sustainability, making everything more energy and water efficient, using more local materials in our construction projects, reducing greenhouse gases. We're going to get better and better at that. You're going to see progress made in all those areas with climate resilience. We just spent a bundle of money to have a third-party contractor come in and evaluate these things. This climate resilience report and plan that we're coming up with will be given to the Division of Facilities Planning and that will be rolled up into future efforts of our campus renovations.

Virgil
That's pretty good. So do you think as we continue to make these renovations [and] improvements, we could use like what we've already done to help guide us? I did some research on the Net Zero Energy Warehouse and the PNRC 2 before this for another article and it looks like at least the way LEED works it builds off of each other. LEED Gold has a bunch of the LEED Silver, LEED Platinum has a bunch of LEED Gold…

Pete
Well, what you have is a LEED Reference Manual – LEED Version 4, LEED Version 4.1, whichever one you're using. It went from 2009 to Version 4. There's a whole list of attainable credits, and you get to pick and choose which credit you want to go after. You have to meet all prerequisites. If you don't meet

the prerequisites, you cannot be LEED Certified. But once you meet the prerequisites in the energy, water, [and] various [other] categories, then you can pick and choose which credits you go for. For energy reduction it's kind of a scaled credit. If you reduce your energy by this percent, you get this many points, all the way up to as many as [about] 15 [or] 19 points.

You're talking about a really high energy reduction if you get the majority of the points. So realistically, some of those points are not going to be attainable, but you will get some of them. The same thing with water. You pick and choose, and if you get a certain number of credits, you will be able to be LEED Certified. If you get more credits, you can LEED Silver. [It goes] Certified, Silver, Gold, and Platinum now. Depending on how many points you get, it's a scalable deal.

Of course, you pick the easy ones first. Then you pick the one that's more easily done than some of the others and see how many points you get. The requirement now is LEED Silver, we generally shoot for Gold. But then you can miss Gold by one or two points [and] end up in the Silver. Sometimes on the Gold you can go one or two points over. But the higher the certification, the more difficult it becomes to obtain these other points because your big ones [are] in energy. Based off our mission here at NIH and the type of buildings, we have when you're running things like cage washers and large, energy-[intensive] equipment, it's hard to get that reduction at the higher levels.

Virgil
Well, thank you for sharing. Always at the end of these interviews, I like to come back around and just ask a general question. I go into these interviews with certain research, certain backgrounds, but I'm not an expert. I don't know everything, so there might be questions that I should ask that I haven't. Is there anything else at all on this topic that you'd like to share?

Pete
One key thing to remember is: when it comes to HHS, these requirements come down from the federal government and HHS has several operating divisions, of which NIH is by far the largest. As far as large, energy-using buildings, we have the vast majority of those. We are the biggest user of energy and water in HHS. We're not held to a different standard, but it's more important. HHS succeeds or fails based on how NIH does, because we have such a large percentage of the large, energy-using buildings.

Do we get more scrutiny? Yes, we do. That's just the nature of the thing. But for them to succeed, we have to succeed. If we fail, they fail because they don't have enough buildings in the other OpDivs to offset what happens here at the NIH. We have to be very careful that we do our part and that we embrace these requirements and move toward meeting these requirements as best we can. We may not get to fully meet the requirement, but there's always room for improvement. When you're the size of the NIH, that improvement impacts the entire HHS Department.

Virgil
Thank you for sharing!