# Ralph Bicknese, AIA, LEED AP BD+C, LEED Fellow | Transcript

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Introduction: Welcome to Green Building Matters, the original and most popular podcast focused on the Green Building Movement. Your host is Charlie Cichetti, one of the most credentialed experts in the green building industry and one of the few to be honored as a LEED Fellow . Each week, Charlie welcomes a green building professional from around the globe to share their war stories, career advice and unique insight into how sustainability is shaping the built environment. Settle in. Grab a fresh cup of coffee and get ready to find out why green building matters.

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*Charlie:* Everybody. Welcome to the next episode of the Green Building Matters podcast, where every week I get to interview a green building professional somewhere in the world. Today from St Louis, I've got Ralph business with us and he has a lot of credentials aa leed ap pussy. He's also a LEED Fellow and I can't wait to learn more about his journey and buildings and architecture. Ralph, how are you doing today?

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Ralph: I'm doing great, Charlie. Thanks for having me on. I appreciate it.

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*Charlie:* We've been wanting to get this interview for a little while now, and I can't wait to peel back a little more of this 40 year career you've put together. Take us back, where did you grow up and go to school?

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*Ralph:* I grew up in northern Indiana, near Lake Michigan. I was born in Gary, and we moved a little bit east to an area called Miller Beach and the region. It's called in northern Indiana near Valparaiso, Laporte, Michigan City. My parents had a campground when I was in high school. They also

had a sign business. I was exposed to a lot of urban environments throughout that Highway 30 I-94 kind of corridor area and also exposed to a lot of nature. I'm an Eagle Scout, so I went through scouts all the way from Cubs through Eagle. I think that's a little exposure to nature and the urban environment. Kind of a good combination for an architect today.

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*Charlie:* Let's connect those dots. I actually really enjoyed the Boy Scouts. I did not make it all the way to Eagle. I definitely commend you on that. I got to Life Level Scout so I've always appreciated getting to know an Eagle Scout. I know that probably sets you up with some leadership and of course that connection to nature. Tell us about the rest of your schooling and then eventually architecture. How did you get on your way to study that?

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*Ralph:* I was in high school in the 1970s, 72 -76, and we had an oil crisis in 1973 that certainly got my attention. We were turning down thermostat stats to extreme levels. There was another energy crisis, oil crisis in 1979 when I was in college at Iowa State University in Ames, Iowa, and that also had an influence on me. By then, I was already on a path to doing what I was learning to do, to incorporate daylighting, earth sheltering, passive solar design principles to building natural ventilation. I saw those as very necessary steps to take in. Having buildings were much more responsive to people's needs, and they're going to be healthier and more comfortable.

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*Charlie:* Due to different energy crises that are from high school to college put it top of mind. Did you have anyone open some doors, giving you more influence or any mentors along the way as you're making those decisions?

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*Ralph:* Lots and lots of mentors. I was fortunate in Ames, Iowa, at Iowa State, they held several paths of solar conferences, national parks and

solar conferences. I was a student facilitator and attended a lot of sessions. I met folks like Doug Balcomb, who was at Los Alamos National Labs, doing a lot of early pioneering work on Passive Solar Design and rules of thumb that could be applied to simplify the design that David Wright, an architect there who wrote the national book Natural Solar Architecture and Nazaroff, was an early hero and is continues to be a hero today. Vivian Loftus, who was a recent graduate from college and went on to do lots of marvelous things with the air and her early career and then at Carnegie Mellon. Bob Burkebile, groups like Building Green and all the good people at Building Green are big influences. Ray Anderson and some foundations like the Candida Foundation, the Ray Anderson Foundation, that are doing a lot to sponsor sustainability and also equity and design are really big. The AIA, the USGBC, the ILFI all been the people that work for those groups have been dedicated. The AI has been doing so much in recent years they've really picked up the ball to really move sustainable design along in the profession and make that integrated throughout the practice.

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*Charlie:* Vivian Loftus was on the podcast. Many call her a friend and mentor. You mentioned Bob Burkebile and so many others. It's so cool you were right there on their kind of come up. But trade organizations, the USGBC, I know you've been involved with your Missouri chapter for 20 years and then National. Tell us about trade organizations and what that's meant to you in your career.

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*Ralph:* I'll back up just a little bit. I think volunteering and helping out moves sustainability along. It's very important for professionals. If we have something to share, something we're passionate about, something we feel is important. It's our duty to try and move that along, to be an advocate. When I was in college, back in 1979, 1980, I went to the mayor in Ames, lowa, and said, we really need to work as a community to address this energy issue. So guess what? He made me the chair of a committee, the

mayor's Red Alert Energy Committee and that grew and became something called the Energy and Water Policy Steering Committee. We developed a plan that was kind of LEED like in a sense, this was June 1982. It got issued. It addresses transportation, buildings, the solid waste, the municipal power plant which Ames had a first in the nation public utility to waste energy power plant that was pretty interesting. Ames had already taken that big step rolling forward a bunch of years to do some of these other organizational work. I'm very active with the AIA. I chaired the AIA, Materials Knowledge Working Group, working on sustainable materials information to the profession. It has translated into an Architect and Designers Materials Pledge, which was adopted by the Board of AIA and has been picked up by a group called Mindful Materials and for structuring its common materials framework, which it's developing. So that's something that the AIA and folks from Mindful Materials and myself will be presenting June 21st at the AIA conference in Chicago.

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*Charlie:* That's very helpful. Trade organizations have been helpful to me. Let's connect those dots. You've got your degree, you're going to architecture with an energy crisis right behind you. Tell us about the handful of architects you were working with in the eighties and nineties. What kind of projects were you working on?

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*Ralph:* Early in my career, I worked in AIMS for Design Build Company, and we designed energy efficient houses, Passive Solar Houses. They actually manufactured some solar systems, solar panels themselves. I get to work on that and occasionally I get to go out in the field and build some of the houses I designed that were pretty fascinating. I moved from Ames, Iowa, to St Louis in spring of 1982 and started my career here. It was all about getting used to a new town. The big city career is working downtown and getting used to the practice. It took a while for me to get engaged with a firm where I could feel comfortable with promoting sustainability. I was with

a firm called Christner Incorporated for a while and got to do quite a bit there. But to advance sustainability, they were just starting to really adopt it much more. I had met Daniel Hellmuth at a conference in St Louis. Dan became my business partner. We went to Chattanooga for a sustainability conference, and Doug Denny and Dennis presented biomimicry. There was also Bill McDonough and that was fascinating. Dan and I struck it off and decided we need to start our own business so we can focus solely on sustainable design. So that was January 1st, 2003, so almost 20 years now.

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*Charlie:* Almost 20 years. How are you going to celebrate 20 years? That's a huge milestone.

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*Ralph:* I'd like to celebrate it by doing greener and greener projects. So that's the goal to keep influencing more people positively through the power of design.

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*Charlie:* Amazing that you two came together. Like minded and said, 'hey, we're going to start our own firm and we're going to focus on this.' I love entrepreneurship. What have you done with your practice? in 2003, you wrote the first LEED projects, round four certified in the year 2000. Early LEED where you're fortunate in the 2000 that supplied and said 'Let's do LEED certification." How did that discussion go?

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*Ralph:* We became members of the US Green Building Council even before we started our firm. We jumped the gun and joined the council. We did have two very early LEED projects, right away. We had a fire station which became LEED certified. We had an office building, the big eye building for Intelligent Office Building. We got to explore a lot of neat opportunities on a major renovation of a building with daylighting and under for air distribution

and some things like that. A really good case study in daylighting and that kind of started back in 2008. We did a living building so it's called the Living Learning Center for Washington University at their Tyson Research Center. It actually became certified as the first certified living building along with the Omega Center. They both get certified on the same day. So that was pretty amazing. Our friend Bob Burkebile from Kansas City, the other side of the state and his firm did that Omega Center building. We did another first building so that was pretty neat. We still take people on tours there all the time and it's got composting toilets and rainwater collection that it uses for drinking.

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*Charlie:* All these early pioneers. I'm excited to have you on the podcast because I really didn't get into green buildings and LEED until about 2005, 2006. I love hearing the stories in the nineties and early 2000s when all this was really ramping up. Thanks for taking us there. Let's look back one more time. What are some of your proudest achievements?

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*Ralph:* Think that Ames sustainability plan I mentioned is a very proud achievement because Ames became one of the first cities to after I left town, they developed their planning department and city government developed a whole strategy based on the work that our committee had done and across transportation, land use, energy, that there was a big also a big water crisis when I was there. Addressing water and a lot of things that happened in Ames, but they were one of the first cities to really take that on, certainly in the Midwest and develop a policy so they're stronger today on sustainability and have been a landmark for others to follow. Another achievement I'm really proud of is when I was president or chair of the board of the USGBC chapter here in St Louis, Hurricane Katrina hit in August 2005, in New Orleans. As chair, I was able to help advance the notion of some charrette to take place at Green Build in 2005. In November 2005, in Atlanta, there were a series of Gulf Coast design shreds. People from the Gulf were actually sponsored by the USGBC to come to the Charrette and participate in shreds. Those resulted in several documents, one of which was the New Orleans principles, which I was able to help co-author. I'm really proud of that. The work became some of the patterns that got established in New Orleans and elsewhere in the Gulf Coast because of that kind of work. Another thing is the number of people that our small firm has been able to affect positively both through volunteer activities as well as the projects we've done. As a small firm, we kind of range in size from 4 to 6 people and we get a little busy in the summer when we have some summer interns available, which is nice. We have an intern starting with us actually this afternoon on his first call. We've been able to work for some of St Louis major institutions. We were a LEED consultant on the St Louis Arch Visitor Center. It's a very busy national park that impacts a lot of people. Gold Missouri Botanical Gardens. We're working on the Jack Trice Visitor Center right now again, which is a major cultural institution. We're doing work for the Saint Louis Zoo. They're developing a new park called WildCare Park in the Spanish Lake north northern area of our urban environment. We are a sustainability consultant that helps guide the Sustainability Plan for that and working on the institutional sustainability goals with the institution wide to really get some consensus and leverage to move forward. We're hopeful that they adopt a net positive carbon strategy. We hope that comes out. So that's a work in progress, but that could influence a tremendous amount of people with that as well as all the other things we'd be doing in Washington University. We have two platinum buildings for them and I mentioned the Living Learning Center that we did for them, the Living Building. Challenge Project Saint Louis University is another one. Lots of schools in Illinois. We're working on a couple school projects now for Saint Louis Community College getting going that are going to go LEED.

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*Charlie:* Let's talk about the present day. What else is keeping you busy at this point of your awesome career? What do you like to spend your time on?

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Ralph: I mentioned a lot of the projects we're working on beyond those volunteer activities, I serve on the Maplewood city of Maplewood Sustainability Commission. Maplewood is a small community that borders on Saint Louis. Saint Louis is unusual in that it has a city within the county, but it's its own city. The county, Saint Louis County, is separate, but there are something like 90 municipalities in Saint Louis County. All of them are kind of separate governance and with some commonality. I serve on the Maplewood Sustainability Commission. Saint Louis County has a sustainability plan. I hope to get engaged in helping forward that sustainability plan. St Louis has a very good, strong sustainability plan in place. Other things I mentioned, I'm engaged with the AIA on the Committee for Climate Action and Design Excellence. It's a board level committee that advises the board of the AIA. We're really working with all the different volunteer committees and professional staff in the air to see that sustainability is integrated throughout and really trying specific focus right now to focus on climate action and equity and design as part of design. Excellence is a necessary component of design excellence and to move that along so that the vast majority of practitioners are doing this sustainability work at a meaningful level.

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*Charlie:* Is the committee about getting more and more architects to really bake in sustainability? Is it more of the best practice? Do you talk about rating systems like LEED or living buildings is more about raising all the boats? What's the mission there?

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*Ralph:* It is to raise all the boats. You're absolutely right. Another term is to propel the bell. So there's kind of a bell curve of people that aren't adopting sustainability. There are practitioners that are, which would be at the peak of the curve. There's the kind of mainstream general practitioners practicing sustainability. I shouldn't say general practitioners, the practice in general, those practitioners that are doing that. There's those that are very on the cutting edge, which is a small percentage. What we're trying to do is move that bell forward so that peak is happening with more and more architects. It includes more and more designers and architects. So that's the goal. Raise the boats, all the boats, as you say. For some very specific things that the AIA has been doing is a lot of work on materials lately, a lot of work on equity, a lot of work on climate action atv AIA.org website actually has lots of resources, lots of information. You mentioned frameworks. AIA has developed the framework for design excellence and there are ten principles that have helped guide the THERE Code Awards. Committee on the Environment Awards, it's been a program for many years recognizing some of the best performers in sustainability that are also extremely attractive and serving people very well. There's a movement to make that more widespread in the awards at the AIA. It's not just just for the code awards that all the design awards have some modicum of sustainability involved. That's one of the qualifying factors. The question is, can it be good design if it's not addressing the sustainability needs of society? Is it worthy of a design award? The judgment is no, it's not if it's not addressing those kinds of issues of sustainability.

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*Charlie:* Get your hand on a lot of things and they're big. I love that you're volunteering back to this industry that's been good to you. Let's talk about what's next. If you had a crystal ball, Ralph, what should we be reading up on now in this green building movement and climate action?

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Ralph: It's so important today. It's a huge driving factor that we really need to be addressing climate action through design. It has to do with operational energy and embodied energy and equity. We have to do a better job of making designs more equitable, and that includes product selection and things like that. We've all heard the term fenceline communities. Those are communities most impacted by industrial pollution that typically border on some of the worst polluters. You've heard of Chemical Ali running down through Baton Rouge, down through New Orleans. But every major city has areas like that that are close to landfills, close to polluting industries and so on and so forth. The products we choose, we need to be choosing products that have less harmful chemicals, not only to protect those folks, the fenceline or the communities surrounding those plants and downstream from those plants, but also within our building. Climate stress affects those without as much means as some of us more because they have less ability to to deal with some of those stresses. Climate Action Equity is definitely related. The materials aspect. I think we're going to see a more holistic approach to material selection coming in part through mindful materials, the pledge the kind of commonality that's happening there. Agreeing on what's important, what's important to ask manufacturers, what should manufacturers be addressing in their products and beyond just transparency. There's been a huge movement for transparency in the past. That's pretty good. We're able to get chemical compositions. Most of the materials that we're selecting, there's health product declarations and environmental product declarations that help make that transparency. Materials is going much further in terms of social equity and health and forced labor and slave labor issues, fenceline, community issues, or some of the ways I see things shifting to better those situations. Health and wellbeing, I think, is going to remain a hot topic for a long time. I would say the two things today Climate action and equity are probably the two biggest shifts that we're seeing right now.

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*Charlie:* We've got healthy buildings and then getting back to the material side. Let's talk about that a little bit more about materials, because we've still got work to do on operating carbon. How efficient are buildings? A lot of the climate work still to do. What about embodied carbon in materials? Can you speak to that a little bit more? Are you seeing change happening or are we on the ten yard line and we have a long way to go? What do you think with materials and especially on the embodied carbon side of materials, where do you think?

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*Ralph:* I think most architects know how to design buildings that really reduce the operational energy. We're not as far along on reducing the embodied carbon in the building. Tools looking at what's the carbon content of the products for selecting. Tools like EC3 are really helping with that. So that's a free tool that's available that lets you look at the lifecycle analysis, the updates that come, you know, that include life cycle analysis to help us look at embodied energy. We're still in the early stages of that. Have a long way to go. Definitely looking at not just low carbon materials, but carbon materials that actually sequester carbon or withdraw carbon. I think that's somewhere we're going to see a lot of movement in the future and a lot of growth. It is interesting with a common materials framework that manufacturers now are going to know what architects need to know. Architects have been asking them lots of questions. So this framework is going to establish a clear path to here are the kind of things we all need to know about that that we need you to report on. It also helps the architects find materials with those. It's going to be a real move that moves that forward a lot, I think would be where I'd like to see things go in the future and may not get there in my lifetime very much. Buildings that heal themselves is a fascinating thing. We've all been talking about how nature is the model. Nature's the model for so much design work that we do. It's an exceptional, exceptional model. Others equate it to a tree. What does a tree do or what does a flower do? How do they behave? Its nature as a model. So buildings that can grow themselves and heal themselves for

building components that can grow or heal, that would be an amazing expression of life in nature. I think it's in the future we get to see some sci-fi movies. But there are people that are doing some things with mycelium and other things that are growing. So there's some concrete that actually grows stronger through different crystalline processes that are happening.

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*Charlie:* It's probably going to happen and some things need to happen first. Sometimes we are a little more energy efficient? Are we net zero? Are we net positive regenerative design? And now what I'm hearing from you is even past that. I love seeing your vision of where our buildings will go. I think they will.

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*Ralph:* I kind of skip over the notion of regenerative design. But that's all embodied in a lot of the things we've been talking about. It really is the notion of buildings that give back more than they take. It's pretty easy to do with energy right now because we can design buildings that are very efficient and then the energy that they do need can be supplemented through passive design as well as through active solar systems or renewable or other renewable energy systems. It's actually quite possible to have buildings and institutions that create more energy or and purify more water than they use. Those are really buildings that are going to enrich a lot of people.

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*Charlie:* That's fantastic. Some rapid fire questions here, Ralph. What's your specialty, your gift?

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*Ralph:* Really understanding how buildings work holistically and being able to see buildings three dimensionally and so forth. I think that's a unique gift. As an architect, all architects don't have that. My passion for sustainability, I consider that a gift because it really drives me to do a lot of things. I think in

more recent years, what I realized about sustainability and just design in general is the importance of getting to understand other people. Put yourself in the shoes of other people. The hardest thing I think to do is something you didn't learn in school was learning how to understand other people. I've been working on a lot in terms of what I consider a gift. I do consider it a gift to be able to help others to realize higher levels of sustainability. As an influencer, as an architect, as an advocate to raise that bar is something I'm very glad I've been able to take part in having.

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*Charlie:* I can tell you, you've had a lot of influence on some you don't even realize. How about good habits? Have any routines or rituals?

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Ralph: I really try to stay informed. So that's a routine that's embedded and throughout daily life. A lot of times on the weekend, I get up, get a cup of coffee, sit down with that coffee and do some study. National Geographic is one of the things I study. I like to read that it's very related to nature and what's going on in the world and with both the environment and with people. I like to read books, you know, staying positive. That's kind of an embedded ritual that I try to try to practice all the time, get up and stretch, get exposure to nature. Those are all part of rituals. I live in a house, in a house, in the woods that I designed well over 30 years ago. It's a passive solar home and it's beautiful with trees and nature and the deer like to pull up the plants I plant, but get it out. Get out and just take a little walk outside for a bit during the workday. That helps maybe first thing in the morning to compost the coffee grounds or to go get the mail or to take the recycling out. I have kind of a long driveway, so that helps. Sometimes at lunch time I get out a little bit. Whether I'm working from home or in the office, I try to get out and take a little walk. So get exposed.

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*Charlie:* To vitamin D that sun. But you're right, that connection to nature. My youngest son had a big soccer tournament this past weekend, got lots of sun for me and I definitely slept much better. It shows you've got to. And I love how you put another sustainability habit there, the composting while you're taking that break. I can't avoid it, man. You're doing it.

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*Ralph:* Yeah. The coffee grounds help a little bit. Keep the deer away too. yeah, you know.

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*Charlie:* How about a bucket list, Ralph? As you and I get to know each other even more, I'm a fan of Bucket List. What are one or two things maybe on your bucket list?

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*Ralph:* Well, I want to keep increasing my effectiveness on sustainability to try to make that a bucket list, an ongoing thing I'm working on, just trying to increase effectiveness and the number of people I like to travel with. A bucket list is to travel. My wife and I are going to go to Italy this fall. If everything is health wise with the world. We had that canceled a few years ago due to COVID. We like to visit Hawaii and we're avid snorkelers and again, getting out in nature. We just love to get in the water and get our face in the water and get down with the fish and the eels and sometimes see some manta rays and lots of neat stuff and continue to work at being a good friend too. To support family and friends and reach out. Stay in contact with friends. It's sometimes hard to do that. That's a bucket list thing. It's always every New Year's. I try to say you've got to keep working at being a good friend.

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*Charlie:* Be intentional and life throws a lot at you, but I love all of those experiences. Thanks for sharing. Let's talk about books and learning and you like to stay informed, so give us a peek into that. Is that it the trade

# journals? Are there certain websites? How do you stay informed and book recommendations?

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*Ralph:* I mentioned National Geographic, so I'm a fan of Scientific American . The New Yorker, new sources, new sources online. There's a lot of good stuff online, much more than any of us can absorb. I like history. I study history a lot. I've studied the Civil War, the Revolutionary War, the migration of people worldwide and throughout our country. Those are things that fascinate me. I like to visit historical sites Jamestown, Charleston, Washington, D.C., New Orleans, San Francisco, Hawaii. There's a lot of history there, so I like to do that. I've been reading several books by Michener, so `` Centennial is a book by Michener that has a lot of history in it. Hawaii is a great Michener book. It taught me a lot about Hawaii and then more. Another book about Hawaii called Shoals of Time, which is a little more documentary, a little more factual about the events that happened in Hawaii. I plan to start reading Chesapeake as soon as I complete Centennial. My problem is I usually get three or four books going at the same time, and it takes me a while to get them finished because of that. I'm a little bogged down with Centennial right now. Team of Rivals was a book that was really popular several years ago. It's about Lincoln and how he selected people for his cabinet and other advisors, which included people that disagreed with him on things. A fascinating lesson that he brought in some people from previous administrations or from rival political viewpoints that he learned from and worked at balancing as he worked on lots of serious issues for our country. So that was interesting.

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*Charlie:* We're going to put a link to those books. Thank you all for giving us some good recommendations. How to stay informed from some trustworthy sources to questions as we start to come to a close. One is career advice if you look back on your career or anything you wish you had known earlier?

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Ralph: I wish I would have known how to understand people earlier, and do a better job at understanding people, which is kind of a lifelong thing. It's still a lot I don't understand about people, but there are some very different viewpoints worldwide and in our country. Try to look as crazy as some other people's viewpoints might seem. Sometimes try to look at them a little bit and understand where they're coming from. Even if you disagree vehemently with some of their positions, still try to try to understand where that's coming from. Follow passion. That's a big one is when you get that passion, you get that fire in your belly or your heart, you got to run with it. Sometimes you have to set it aside for a while to work on family or career or other things, but make sure it comes back and you get to interject. Part of that is to stand up for what you believe in. Don't be afraid to speak out. If you see something that's important, speak out. Step forward. SSilence is much more harmful than stepping forward and taking a misstep. But you have to at least try. Be involved and get involved with things as part of taking a step forward.

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*Charlie:* Man, I love it. There's a lot of good nuggets in there, a lot of good wisdom. Lastly, someone's listening to this podcast. Maybe they are new to the green building movement. They're jumping in now. They're here in your incredible journey through your career, especially in sustainability. Do you have any words of encouragement for them?

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*Ralph:* There are a lot of problems in the world, but they can get better with people working together to change that. So. Been able to see the power of design as an architect. And there's power. There's a lot of power in individual actions. There's more power when you can join together with other people and take group actions. But that's my advice, have that passion, get involved. Step forward work. Work for positive change, keeping in mind that it's about people. I love the environment. I love the

world. I love plants and animals, water and fresh air. And those things are vital. But selfishly, it's so that we human beings can thrive, but just recognise that in order for humans and humanity to thrive, we have to take care of all those other things as well. We have to rely on them and the healthier they are, the healthier and better off we are.

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*Charlie:* That's great. Let's end on that note, Ralph. Thanks for spending time with us on the Green Building Matters podcast. Everyone is listening. Check out those book recommendations in the show notes and connect with Ralph and let him know what you thought here of the interview. Thanks so much, Ralph. Really appreciate it.

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Ralph: Thank you, Charlie. I enjoyed it.

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*Charlie:* Thank you to our loyal listeners. We actually are celebrating over one year here on the Green Building Matters podcast. Me and the entire team, we're stoked and just so glad you continue to listen every Wednesday morning to a new interview with a green building professional here in this industry, or just some pro tips that we want to make sure that you are getting straight from us, straight to you. Thank you for listening to this episode of the Green Building Matters podcast at GBES.com. Our mission is to advance the Green Building movement through best in class education and encouragement. Remember, you can go to GBES.com/podcast for any notes and links that we mentioned in today's episode, and you can actually see the other episodes that have already been recorded with our amazing guests. Please tell your friends about this podcast. Tell your colleagues and if you really enjoyed it, leave a positive review on iTunes. Thank you so much and we'll see you on next week's episode.