

LISD Video Transcript – Robon Edwards – CAD Testimonial

[0:00 – Engineering, Design, and CAD – Robon Edwards Testimonial]

[0:05 – Robon Edwards – LISD TECH Center Alumnus] Hi, everyone. My name is Robon Edwards. I graduated from Adrian High School and attended the LISD TECH Center, Lenawee Intermediate School District. I am super, super excited to share a little bit with you guys today on my story and my journey.

[0:24] Like I said, I graduated from Adrian High School. When I was in high school, you know, the number one question was, well, what do you want to be when you grow up? Right? And that was that was like asking, what is a black hole? I had no idea, you know. So for me to choose at such a young age what kind of career I wanted to do was nearly impossible, right. And then to invest all that time going to school or going to the trades and things like that. So what I did, I realized that the LISD offered something that was really, really unique and something that's special, right? They offered an opportunity for you to learn about a career field while still in high school. And I took advantage of that right away and through mentorship, through teachers in high school, you know, I found out that civil engineering was the route that I wanted to go. And MDOT actually had their track program integrated into the high schools, and that program told or that program showed to me that civil engineering is an option.

[1:29] And so at Adrian High School, I decided to take the Engineering, Design, and CAD class at the LISD TECH Center because, you know, I really wanted to find out more about engineering and specifically more about civil engineering as well. And so I found that civil engineering was one of those things that everyone, everyone needs, right? And so a lot of people at school, they wanted to be a doctor or a lawyer or all those things because they wanted to help people. Well, I wanted to help people, too. But, you know, I don't really have steady hands. And being a doctor, like blood, no thanks! So civil engineering was a route because everyone uses roads, everyone needs water, they need sewer, you know? They need bridges to get to point A to point B. And that is literally what drives America is our infrastructure. All around the world, it's what connects people. It's how you get to point A to point B. Airports, bridges, dams, you name it - civil engineers have to touch it. Including the building that you're in right now.

[2:33 – What is Engineer?] So this big piece of hunk of metal right behind me is called the Ambassador Bridge. It is a huge, huge piece of infrastructure for this area, in fact, for the country. Hundreds of semi-trucks travel across it daily carrying cargo that we all need. Now, how does something like this come about? Is it is it a doctor that built this or a lawyer? No, not even a race car driver, although I'm sure they would love to drive across it. It's actually engineers, right? And not just civil engineering, but mechanical engineers, electrical engineers, transportation engineers, environmental engineers. All of these people work together to create this one piece. And so the reason why I bring that up is because the Engineering, Design, and CAD class at the TECH Center touches all of those points. And so as someone who was really young in high school, you know, not knowing what type of engineering I wanted to do, this class helped me focus and narrow that down by learning a little bit about each one of those degrees of engineering. And that's what helped me out a lot, because through that process, that's where I fell in love with what engineering is. And so, you know, I knew that I wanted to help people. And so that's the first thing, is identifying that problem. Well, people need help in every way. Right. And so specifically, in civil engineering, people got to get to point A to point B, the fastest and the most efficient. Right. And then with that, how does that infrastructure last for more than just one day? Right. And then how can you maintain that traffic that currently use that piece while working right alongside of it? Sometimes – most of the time it is very, very dangerous and very complicated. However, the things that I learned in this class really helped me when I came out here into the field. For example, it helped me network because networking is probably one of the most important tools that anyone can have, especially an engineer. Taught me how to network, taught me how to communicate. Notice couple of these things have nothing to do with math. Very bad at math. Taught me how to network, communicate. Taught me how to lead and organize a team, right? To accomplish a goal. And so an example of that is, you know, this this class is so, so complex that it's really competitive. And so we competed, not just, you know, students in the class, but we competed against students in the state as well as the nation. And so this competition was called the Bridge competition. And so this is where students get to take their skills that they've learned from class and design and model and build and test a model bridge made out of balsa wood. And so I was really, really lucky to compete

in this two years, the first year we competed and it was a lot of a lot of growing pains. It was something that I wasn't really familiar with. However, I just stuck to the process that Ms. Benson taught, right, the engineering design process. And through that process, we were able to compete and actually get second place at states our first year.

[5:48] Second year came around. And this was the opportunity I got to have to lead a group of my peers to not only compete competitively at state, but make it to nationals and place second at nationals. Now, if you remember, I mentioned something about networking, and this is where it's really important. At Nationals, you got to meet the creator of the Bentley MicroStation who, you know, is very, very high touch, right? He's very hard to reach, so to be able to network with him because, you know, we used his software to design our bridge was really, really cool. And here's the other thing. You know, civil engineering has to do a lot with transportation, right? So you might have heard something called Department of Transportation as well. Each state was represented there by their by their head department. And so we got to network with those people and pick their brains on some of the big projects that were coming, not just to Michigan, but all across the state.

[6:47] The other thing is learning how to sell yourself, right? Well, what do you mean, sell yourself? You know, I'm an engineer. What do I have to sell? I'm not going to sell, you know, a piece of brick to you. But really, you have to sell yourself. And so really, everyone has to do that. Not just engineers, but doctors, lawyers, athletes, politicians, everyone. Because everyone, in order to get the job, is going to have to get through an interview. And so in this class, we also competed in the BPA, which is Business Professionals of America, something that is very, very competitive. And so I was able to practice many, many times in the classroom how to how to conduct an interview. How to create a portfolio. In high school, you know, you're doing art classes and gym classes, this and that. But this is when we really got to dive into, you know, practicing those skills are going to take you to the next level, to college and beyond. And so I was able to develop a portfolio, right? What's a portfolio? I have no idea. Right. A portfolio is something that you can only develop once you when you have a bunch of experience in a certain field. And so that can come from, you know, different projects that you've created, maybe teams that you've led, characteristics that you've developed, networking skills. Right? So all of these things go into this binder and it's a portfolio of you, of your professionalism, of the things that you can do. And so this is something that you'll take and you'll and you go to a possible employer and you conduct an interview. Right. And again, mind you, this is all in high school, right? We're going two levels above. All right, and so taking this portfolio is just only going to take you three steps higher than everyone else, right? You're going to be able to, one, not be nervous in that interview. You're going to be able to speak fluently. You're going to be able to present like I am to you guys right now. All of these things aren't necessarily taught in high school to the degree of detail that Engineering, Design, and CAD does.

[8:49] And so Engineering, Design, and CAD had many, many modules to it. And it didn't just touch base on civil engineering and mechanical engineering. It touched base on all of those skills that all engineers use. Like manual drafting, like measurements, like design. Being able to design your own electric boat motor. Being able to design your own item, and then being able to 3D print that right in the classroom. And so that sounds really cool, but it's actually really complex, right? First, you have to learn how to use the right terminology because you have to communicate with your peers and to the instructor what your end goal is because you don't just take a fishing pole and reel it out there and hope to catch something, everything's planned. Right? And so, again, we're following that design process.

[9:39] Sometimes you're going to have to think outside of the box. And so when we when we were able to project design our own item, it was really, really cool because we're able to take all those things that we learned in class like manual drafting and blueprints. We were able to take that and apply it to something that we find personal. It could be anything. For example, it could be a car, right? A little model car. Okay. This is something that seems pretty simple. Everyone knows it has four wheels and has two doors, four doors, right? And windows all around. Well, what if my design is different from what you're thinking about? Right. And how do I communicate that? Well, that's where the blueprints come in. I had no idea what blueprints were or even how to create them, nor how to read them. Right. But this class teaches you the industry standard that every professional uses. MDOT, everyone. Right? And so being able to take that knowledge and then apply that to where I am here today, standing right here next to the to the Ambassador Bridge, has been very, very helpful.

[10:44 – How did the Engineering, Design, and CAD class help you get where you are now?] Engineering, Design, and CAD really, really put me just that next level above everyone else to where my networking skills were noticeable among my peers. Right? And so being able to network with people from MDOT and determining like, okay, where do I, where can I take my career? Where do I want to go? Where do I want to end up? Looking at the end and then working backwards. And so I learned that, you know, you're going to choose a really good school. And so I learned about Michigan Tech, Michigan Technological University. And so what's really, really cool about that school is it's a competitive engineering school, very difficult to get in and it's very highly sought after by employers. And so because I was going to Michigan Tech, the career fair there was so awesome that I was able to just knock out that first impression because, you know, from Engineering, Design, and CAD, when you had to sell your portfolio, I was able to take those skills and apply it to real life outside of the classroom. And so with really good mentorship from Ms. Benson, instructor of Engineering, Design, and CAD, I was able to just keep on practicing. Okay, how can this interview go right? And so once I was able to nail that interview, I was able to obtain a job with HNTB here in Detroit as a highway design engineer. And so when I was in my first two years in college, I was actually working all year round and by my choice, working on projects that are some of the biggest in the state, like I-94 modernization project, 375 Reconfiguration, all these huge projects. And so I was able to learn a lot of a lot of those highway design skills inside there. And then a few years later, I was like, well, you know, how can I take this career even further? Like, what kind of knowledge do I need again? And so again, I went to Ms. Benson and she was like, "Well, you know, you're really good with like the manual drafting and all that thing, but what is it like being out in the field, your boots on the ground?" And so I was like, oh, you're right. Like those are two totally different things. And so that's where I was able to, to work with HNTB, and I was able to compete for a position working on the largest infrastructure project in North America, the Gordie Howe International Bridge right here in Detroit, right behind me, currently in construction. It is it is a huge, huge project, like I said. But what's really cool is that many people will retire on this project because it's their dream project, right? And I'm able to start here, right? Not even graduated from college yet, working on a project of that caliber, which is really, really awesome. And that's all because of Engineering, Design, and CAD. That is the foundation of where I became who I am today.

[13:38 – How did your LISD instructor help you move forward?] Everyone needs engineering, engineering touches everyone in some way. And so that's how I ended up here today. But I wouldn't be here if it wasn't for all the mentors that I've had along the way and are really one of the best is Ms. Benson, the instructor of Engineering, Design, and CAD. She's someone that I still stay in contact with to this day. She's helped me every step of the way from deciding what that next step should be, figuring out, you know, who should I get in contact with and really, you know, focusing on what's that end goal? What's my dream? And how can we work backwards from there to accomplish it? Ms. Benson in the classroom was really hands-on with each student ensuring that the knowledge that they needed fit with their goals at the end of the day. So the classroom was filled with civil engineers, electrical engineers, mechanical engineers. Right? And so we all have basically the same design process. However, each one can focus on something just a little bit different. Right? And so she was really awesome with that, learning when to push and when not to push, and when to let our creativity flow but then also restricting that because in reality, out here in the field, you know, we can't just build a rainbow bridge. There's limitations and restrictions and everything. So she was really, really awesome with that.

[15:10 – What advice would you give to high schoolers?] You know, high school is a great time to have fun and to really just slow down and enjoy your youth. But here's the thing – people are always going to ask you, what do you want to be when you grow up? You know, take advantage of all those resources that you have now and don't take those for granted. Get out of your comfort zone. Step out of the box and step up for yourself. Don't be afraid to communicate and share what it is that you're looking for. There's always someone there right around the corner willing to help you. Find those people and accomplish those dreams. I just want to take the time to thank Ms. Benson, to thank James Jackson, to thank MDOT, to thank HNTB, and more importantly, to thank the Lenawee Intermediate School District.