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2020 Young Member Summit Scholarship

*What is your opinion about the public's perception of structural engineers? Provide suggestions for how structural engineers might increase recognition and general public awareness of the profession.*

My opinion about the public's perception of structural engineers is that the profession lacks racial and ethnic diversity and that it is not a career meant for everyone. The recent, very public murders of Black Americans have been a real awakening for the USA, especially since most of us structural engineers have the privilege to be able to work from home and are much more connected to the news or social media than ever before. This waking up has made us reflect on the underrepresentation of Black and African Americans in our workplaces. When one listens to these underrepresented groups and what they think of engineers in general, folks from these underrepresented groups are likely to share that they have very little, if any, knowledge of what engineers do and/or have a belief that to be an engineer, one would need to be White or Asian and/or come from a middle- to upper-class background. I make this observation as a Latina engineer, who grew up in a low-income household, and is also a first-generation college graduate.

I think that, if the structural engineering profession is truly committed to building an inclusive and diverse environment, the profession needs to do more work to achieve this goal. If we want the public, particularly BIPOC folks and children, to know what structural engineers do and to change the narrative that this profession is meant for everyone and anyone, we need to participate in more outreach events. Some ideas on how structural engineers can be active in the community include: bringing awareness to structural engineering as a career at K-12 schools with hands-on activities and speaking to underprivileged children in Black and Brown schools during Career Day or similar events organized by community centers. These kids are unlikely to have engineers attend their career days and introduce them to engineering or do not have role models informing them how structural engineering is present in their everyday lives and what they can do as structural engineers. Other ways to do more outreach would be to mentor high school or college students from underprivileged backgrounds and give them advice and show them the ropes (i.e. mentor a younger person that does not look like you). In the near future, I would like to see some sort of K-12 outreach kit from NCSEA to facilitate these types of programs and make it easier for structural engineers to volunteer and spread the word about how structural engineers make the world a better place.

Another way structural engineers can get involved, if they do not have time to volunteer, is to donate to organizations doing the outreach work. There are minority-serving organizations that comprise the 50K Coalition and have been instrumental in paving the way for engineers from underrepresented groups to pursue an engineering education and completing their undergraduate education. The 50K Coalition has the goal of annually graduating 50,000 engineering students from underrepresented groups and women by

2025. I recommend firms to start a scholarship or paid internship program for BIPOC and/or low-income students interested in structural engineering. Because of the racial wealth gap, it should be no surprise there is an overlap of students that are BIPOC and students that receive the federal Pell Grant, which is awarded to students from low- and middle- income households.

A scholarship program helps students in many ways: they are more likely to complete their degrees, they are less likely to have part-time jobs and can focus more on their academics and possibly participate in engineering organizations, and scholarships help minimize student debt as the costs of tuition keep increasing. A paid internship program is also helpful for students because internships typically consist of a hands-on work experience, a modest salary while doing meaningful work when compared to a minimum wage part-time job, and the opportunity for students to interact with coworkers and others in the AEC industry. Internship experience is typically desired when firms are hiring for full-time employment. However, BIPOC students generally don't have the connections, they don't have family or family friends that work at engineering firms to obtain that very first internship, which can open so many doors; they have to make their way from ground zero. I am hopeful, given the joint statement released by NCSEA, SEI, and CASE, that structural engineers will do their part to building a more just and equitable profession. With NCSEA's leadership and commitment to racial justice, NCSEA can enable its members to speak to all our youth about structural engineering and excite children of all backgrounds about pursuing a structural engineering career. NCSEA can also encourage its member firms to start a scholarship or internship program to close the opportunity gap for BIPOC students so that they may graduate and join us in the near future. I look forward to showing the public how NCSEA is keeping its word to increasing the diversity of our profession and ensuring that this profession is also meant for Black and African Americans, Indigenous, and Latinx and Hispanic folks.