

To: **United Engineering Foundation**  
Attn: Patrick J. Natale, Executive Director

From: **American Society of Civil Engineers**  
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Program: **Justice, Equity, Diversity & Inclusion Engineering Workforce Summit**

Please accept this final report summarizing the results of the JEDI Engineering Workforce Summit. We also wish to extend our gratitude to the United Engineering Foundation (UEF) for its support of this project.

### **Project Background**

U.S. Census Bureau projects that the future workforce pool will be increasingly female, non-white and non-U.S. born citizens. For instance, the Bureau of Labor Statistics (BLS) estimates that by 2060, one in three Americans – 32% of the population – will identify with a race other than White. The BLS also reported increases in the percentage of women and underrepresented minorities entering the engineering workforce – collectively rising from 38% in 2016 to 45% in 2020. Moreover, the Pew Research Center reports that the “post-Millennial” generation is already the most racially and ethnically diverse generation.

Yet, the engineering profession faces a major challenge in attracting and retaining diverse talent. For example, 70% of the women who earn a bachelor’s degree in engineering leave the profession within 20 years of entrance; and according to the 2023 National Institute of Building Sciences Survey Report, more than half of the respondents identifying as Black, African American, and/or of African descent reported experiencing discrimination or prejudice during their career in the build environment. The profession has reached a critical juncture that mandates a transformative reimagining of career pathways and workplace culture that attracts and retains broadly diverse talent.

Recognizing the critical need to transform engineering workplace culture, the *Justice, Equity, Diversity, and Inclusion Engineering Workforce Summit (JEDI EWF)* was designed to educate, inform, and guide future engineers, professionals, and employers on best practices in creating and sustaining diversely innovative and inclusive environments – whether at work, learning events, and/or in the community. The ultimate outcome is to empower the engineering industry to form partnerships aimed at leveraging a dynamically diverse workforce where all organizational talent feels fully welcome, valued, respected, and heard – all essential elements to innovation and creativity.

### **Project Review**

The JEDI EWF summit was hosted at the Bechtel Conference Center in Reston, Virginia from Monday, December 2-Tuesday, December 3, 2024. Attendance exceeded the anticipated 30 with a final attendance of 53 participants. Representing a diverse range of professional leaders operating across the engineering landscape (e.g., private industry, professional society, non-profit, government), the summit attendees appeared fully engaged and eager to learn. The following project overview provides a detailed review of the outcomes and the extent to which the agenda met those outcomes. representing a diverse range of professional leaders operating across the engineering landscape (e.g., private industry, professional society, non-profit, government).

True to the original vision, The JEDI EWF summit aimed to empower the engineering workforce industry to accomplish the following outcomes:

- Build organizational capacity to create and sustain working environments where all talent feels fully welcome, valued, respected, and heard – all essential elements to innovation and creativity.
- Build a network of partners that work collaboratively to strengthen pathways to the engineering profession.
- Form partnerships that leverage resources aimed at recruiting and retaining a dynamically diverse engineering workforce.

The agenda (see Appendix, Item 1) was designed to offer participants the opportunity to engage in robust discussions and to build partnerships regarding ways the engineering industry can optimize relationships with professional engineering organizations and retain the unique talents of practicing engineers that represent a diverse demographic, social, economic, and cultural workforce. Opening with a networking reception scheduled from 4:00-6:00 p.m. on Monday, December 2, 2024, the event began with a welcome and an icebreaker activity to provide time for participants to meet and greet each other. Participants were fully engaged in discussion as evidenced by remaining at the conference site beyond the allotted event time – departing by 7:30 p.m.

The second and final day, Tuesday, December 3, the event started at 8:00 a.m. and ended at 4:30 p.m. After welcoming remarks, the first speaker, Jennifer Todd (ASCE Industry Leaders Council) presented a video, [Breaking Barriers](#), that illuminated the experience of a woman engineer who is leading efforts at her company to create an inclusive workplace. The video is the first in a series to be produced in 2024. The presentation received resounding applause followed by several questions from the audience. Addressing the first outcome, participants heard firsthand the policies and procedures that this leader employed to create an inclusive culture at her construction firm. Capacity building begins with learning what can be done.

Next, the first panel discussion, *Engineering Industry Strategies & Lessons Learned*,<sup>1</sup> moderated by Dr. Michael D. Smith, included panelists representing private industry who lead diversity and inclusion efforts within their companies. Directly aligned with each outcome, this panel discussion was designed to raise awareness and highlight the role that STEM industry play in developing an engineering workforce. The panelists shared what their companies are doing to cultivate and nurture a diverse engineering workforce. They also provided insights about the importance of measuring the impacts of their efforts. The audience asked several questions of the panelists which indicated full engagement and interest in the information presented.

Before lunch, the [REVIIS Project](#): Setting Organizational D&I Standards of Practice, was presented for an hour. The NSF-funded project team provided an overview of the Raising Equity Values with the Inclusive Professional Framework project and the ISO 30415:2021 standard. The key takeaway for participants was the critical importance of not only conceptualizing standard practices, but leading implementation of standard practices that optimize systems – leading to engineering excellence. There was robust discussion about the need to get certified in the ISO 30415 standard and how the organizations represented at the summit can partner to lead those efforts. The speakers also provided additional links to resources and information on the project as well as the ISO 30415 standard (see Appendix, Item 2).

Participants were then asked to reflect on the following questions during the lunch break. The raw responses are available in the Appendix as Item 3.

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<sup>1</sup> Note that this panel was originally scheduled for the afternoon, but one of the industry panelists requested a schedule change based on an unanticipated schedule conflict. The change is not reflected on the agenda because the request was made after the final printing of the agenda.

- What are you navigating within your organizational environment that you believe: 1) hinders or 2) motivates your personal actions around JEDI relative to your role at your organization?
- What are you navigating in the environment external to your organization that you believe: 1) hinders or 2) motivates your personal actions around JEDI relative to your role at your organization?

The second panel session, Professional Societies' Role in Creating an Inclusive Engineering Workforce, focused discussion highlighted the roles STEM professional societies play in developing an inclusive engineering workforce in addition to hearing the discussants share experiential insights on how to navigate and thrive in engineering careers. The panelists each shared the programs their organizations are leading to address barriers that women and gendered minorities face in the engineering workspace. They also emphasized the importance of partnerships and capacity building across organizations to sustain the many efforts to address the issues.

The last two speakers, Dr. Yvette Pearson and Dr. Frederick Paige, raised awareness of the new DEI ABET criteria and research that affirms the impact of partnerships in achieving retention of future engineers. After their brief presentations, there was less than an hour to effectively facilitate the strategic action discussions. The remaining time was used to discuss the next steps and key takeaways for participants. The following sampling of quotes indicated the level of engagement and impact of their summit experience.

#### Key Takeaways/Next Steps

*"So much great work is happening in professional organizations that is amplified via collaboration."*

*"I pledge to continue supporting [these efforts and] leading this work."*

*"Need to find ISO 30415 training for myself and hopefully for my organization."*

*"WOW! What the [REVIIS Project speakers] spoke about with the insurance industry."*

*"We need to act on the next meeting (summit) with corporate (intersectional) in the room and focus the conversation on what is the strategy."*

#### **JEDI EWF Summit Panelists and Speakers**

Aligned with the original project vision, the speakers and panel discussants are leading experts and industry leaders actively advancing JEDI within the engineering profession. These leaders shared practices that are being employed within the engineering industry as well as within their communities of practice. Speakers and panelists were also selected to include diverse identities represented in academia, private industry, government, and professional background.

<b>Session 1</b>	<b>Panelists</b>	<b>Title/Position</b>	<b>Organization</b>
<i>Engineering Industry Strategies &amp; Lessons Learned</i>	Michele Heyward	Founder & CEO	Positive Hire
	Jody D. Moore	Senior Director, Inclusion & Culture	Amtrak
	Jennifer Todd	Founder & CEO	LMS General Contractors
	Ron Williams	Senior Vice President & General Manager, Americas at Jacobs	Jacobs
<b>Session 2</b>	<b>Panelists</b>	<b>Title/Position</b>	<b>Organization</b>
<i>Professional Societies' Role in Creating an Inclusive Engineering</i>	Racquel Jemison, Ph.D.	Assistant Director, Office of Diversity, Equity, Inclusion & Respect	American Chemical Society

<i>Workforce</i>	Dayna Martinez, Ph.D.	Senior Director Research & Impact	Society of Hispanic Professional Engineers
	Ershela Sims, Ph.D.	Executive Director & CEO	Women in Engineering ProActive Network
	Roberta Rincon, Ph.D.	Director Research & Impact	Society of Women Engineers
	Rochelle L. Williams, Ph.D.	Executive Director	Graduate Fellowships for STEM Diversity
<b>Presentation Title</b>	<b>Speakers</b>	<b>Title/Position</b>	<b>Organization</b>
<i>Welcoming remarks</i>	Marsia Geldert-Murphy	ASCE Past President	ASCE/Loch Group
<i>Why an Engineering Workforce?</i>	Jennifer Todd	Founder & CEO	LMS General Contractors
<i>REVIIS Project: Setting Organizational D&amp;I Standards of Practice</i>	Gretalyn Leibnitz, Ph.D.	Executive Director	ProActualize Consulting
	James Felton Keith	CEO	Inclusion Score
	Jan Peters, Ph.D.	Director (presented virtually)	KATALYTIK, Ltd.
<i>ABET BELONG and a Voice from the Field</i>	Yvette E. Pearson, Ph.D.	Founder & CEO	PEER Group Consulting
<i>Partnerships to Advance Pathways to Retention</i>	Frederick Paige, Ph.D.	Assistant Professor	Vecellio Construction Engineering & Management Program, Virginia Technical University
<i>Master of Ceremony</i>	Michael D. Smith, D.Eng.	Executive Director	National Association of Multicultural Engineering

### Final Deliverables

The JEDI EWF summit presentations and panel discussions were all video-recorded and the videographer are currently being edited by the professional videography team. Digital copies will be made available to the United Engineering Foundation and the Founder Societies, for distribution as they deem appropriate. Also included in this final report is an appendix that includes additional resources and information shared by the presenters.

Last, a survey was created by the Project REVIIS NSF evaluator to collect feedback regarding participant experience at the JEDI EWF summit. To provide sufficient time for participants to respond, the survey is open until December 13, 2024. Thus far, 37% of the participants have responded. Although a more detailed analysis of the survey results will be shared in early 2025, included in the Appendix, Item 4 are preliminary results of the survey. The results will also inform any future endeavors related to hosting another JEDI EWF Summit.

## APPENDIX

### ITEM 1: JEDI EWF Summit Agenda



#### JEDI ENGINEERING WORKFORCE SUMMIT AGENDA

The agenda is designed to offer participants the opportunity to engage in robust discussions and build partnerships regarding ways the engineering industry can optimize and retain the unique talents of practicing engineers that represent a diverse demographic, social, economic, and cultural workforce.

##### Monday, December 2, 2024

- 4:00 p.m. **Networking Reception with Ice Breaker (Bechtel Conference Center)**  
*Serving heavy hors d'oeuvres*
- 4:30 p.m. **Welcoming Remarks**  
*Remarks provided by Thomas W. Smith III, ENV SP, CAE, F.ASCE, ASCE Executive Director*
- 4:45 p.m. **Icebreaker Activity**  
*Activity Lead: Dr. Lisa Black, ASCE Director Cultural Belonging & Social Ethos*
- 6:00 p.m. **Dinner on your own**

##### Tuesday, December 3, 2024

- 8:00 a.m. **Networking Breakfast (Bechtel Conference Center)**
- 8:30 a.m. **Welcome and Opening Remarks**  
*Guest Speaker: ASCE Past President Marsia Geldert-Murphy, P.E., F.ASCE*
- 8:45 a.m. **Master of Ceremony Introductions & Remarks**  
*Master of Ceremony: Michael D. Smith, D.Eng., Executive Director, National Association of Multicultural Engineering Program Advocates (NAMEPA)*
- 8:55 a.m. **Why an Engineering Workforce Summit?**  
*Guest Speaker: Jennifer Todd, President & Founder of LMS General Contractors*
- 9:15 a.m. **Session 1: Professional Societies' Role in Creating an Inclusive Engineering Workforce**  
*Moderator: Dr. Stephani Page, Managing Director of Programs, Strategic Initiatives and Community Engagement, WEPAN*  
*Panelists: Dr. Racquel Jemison, Assistant Director Office of Diversity, Equity, Inclusion & Respect, American Chemical Society; Dr. Dayna Martinez, Senior Director Research & Impact, Society of Hispanic Professional Engineers; Dr. Ershela Sims, Executive Director/CEO, Women in Engineering ProActive Network; Dr. Roberta Rincon, Director of Research and Impact, Society of Women Engineers; Dr. Rochelle L. Williams, Executive Director, Graduate Fellowships for STEM Diversity*
- 10:45 a.m. **Break**

- 11:00 a.m. **REVIIS Project: Setting Organizational D&I Standards of Practice**  
 Guest Speakers: Dr. Gretalyn Leibnitz, Executive Director, Proactualize Consulting; James Felton Keith, CEO, Inclusion Score; Dr. Jan Peters, Director, KATALYTIK Ltd. (Dr. Peters appearing virtually)
- 12:30 p.m. **Working Lunch: Self-Reflection**
- 1:30 p.m. **Session 2: Engineering Industry Strategies & Lessons Learned**  
 Moderator: Dr. Michael D. Smith, Executive Director NAMEPA  
 Panelists: Michele Heyward, CEO & Founder, PositiveHire; Jody D. Moore, Senior Director, Inclusion & Culture, Amtrak; Jennifer Todd, President & Founder of LMS General Contractors; Ron Williams, Senior Vice President and General Manager, Americas at Jacobs
- 2:30 p.m. **ABET BELONG and a Voice from the Field**  
 Guest Speaker: Dr. Yvette E. Pearson, Founder & Principal Consultant, The PEER Group, Inc.
- 14:45 p.m. **Partnerships to Advance Pathways to Retention**  
 Guest Speaker: Dr. Frederick Paige, Assistant Professor, Vecellio Construction Engineering & Management Program, Virginia Technical University
- 15:00 p.m. **Roundtable Discussions: Strategic Action Planning & Report Out**  
 Facilitators: Dr. Stephani Page, Dr. Roberta Rincon, Dr. Ershela Sims, Dr. Rochelle Williams
- 16:15 p.m. **Closing Remarks**
- 16:30 p.m. **Adjourn**



## ITEM 2: Project REVIIS & ISO 30415 Resources & Information

1. [REVIIS Business Case for ISO 30415 Certification \(Brief Version\)](#)
2. (Perry, 2024) [“A Business Case for the “Everyday Engineering Professional Society CEO” Regarding Diversity & Inclusion \(D&I\) and the Role of the D&I Standard \(ISO 30415: 2021\)”](#)
3. [ISO 30415:2021 “Briefer”--ADVANCE Implementation Mentors \(AIM\) Network \(8-27-24\)](#)
4. Managing DEI Backlash. [What DEI gets wrong—And How to Do it Right.](#) Paolo Gaudiano TED Talk
5. Leibnitz, G. M., Gillian-Daniel, D. L., Greenler, R. M. C. C., Campbell-Montalvo, R., Metcalf, H., Segarra, V. A., Peters, J. W., Patton, S., Lucy-Putwen, A., & Sims, E. L. (2022a). [The Inclusive Professional Framework for Societies \(IPF:Societies\): Changing Mental Models to Promote Diverse, Equitable, and Inclusive STEM Systems Change.](#) *Frontiers in Sociology*, 6. 784399.
6. Leibnitz, G., Peters, J. W., Campbell-Montalvo, R., Metcalf, H., Lucy-Putwen, A., Gillian-Daniel, D. L., Sims, E. L. & Segarra, V. A. (2022b) [Refining a DEI Assessment Tool for Use in Optimizing Professional STEM Societies for Gender Equity.](#) *Frontiers in Sociology*, 7:755372.

### ITEM 3: Hindrances & Motivations

12/3/2024

#### Lunch Reflection Activity

- What are you navigating within your organizational environment that you believe: 1) hinders or 2) motivates your personal actions around JEDI relative to your role at your organization?
- What are you navigating in the environment external to your organization that you believe: 1) hinders or 2) motivates your personal actions around JEDI relative to your role at your organization?

#### Hinderances (Barrier)

- Gender expectationist biases
- Armored Defensiveness
- Unconscious Bias
- CEO (not sure which side this is on)
- 2027
- So many Competing Priorities
- Resistance to change (External)
- Fear due to politics (External)
- Not Prioritizing JEDI Budget (External)
- Culture (external)
- Governmental decoupling from deliberate inclusion (external)
- Currently navigating the “anti-DEI” landscape and its potential impact on federal funding as executive director org that depends on federal agents, I am having to determine new funding models to keep the org moving forward.
- Sometimes it feels as if JEDI is a money-grab for some resulting in competitiveness, continued marginalization, and moral understanding
- Anti DEI legislation
- Time for ERG leaders (internal)
- Constraints such as limited sustained funding and misaligned values (internal)
- Folks who don't see how this work applies to what they do
- Managing moving around legislative decisions impacting org members (internal)
- What hinders my actions around JEDI externally is political barriers that prevent positive policies related to JEDI from passing
- Systems inequity in our systems i.e. – education
- Executive order on federal contractors
- \$
- Everyone is willing to have others be the change they want to see, but everyone also doesn't see how they need to change. (internal)
- I promote and hire a nicely diverse group of staff, and others come in and recruit from it. We keep most because were a great place to work. But everyone can get a payday by leaving if they choose. (external)

#### Motivation

- The future

- Dr. Lisa Black
- Dr. Mike Smith
- Kathy R
- Dr. Yvette Pearson
- Dr. Freddy Paige & So Many Others
- Support (internal)
- Navigating the pricing of exclusion using JEDI Standards as motivation (internal)
- ISO 30415 Standard to promote systemic change
- Pivots to be agile and adapt to changing legislative landscape
- More & better for future generations (external)
- In my communications work, I am always aware of the importance of viewpoints and actions i.e. inclusiveness in sources and imagery
- MOSAIC
- Improved societal outcomes
- Employee engagement (internal)
- Within my teams, I work with people who have lived out marginalization as engineers who are much better for those coming after us (internal)
- We have the capacity we just need to get together & coordinated & oriented around justice
- I get excited about partnerships requests that come out of and develop from current project
- Org is leaning into DEI as the work of everyone
- Seeing large multi-national companies leaning more into DEI and PPP's
- Active networks (communities of practice) to learn or for support & resources
- What motivates me in my organization is its commitment to uplifting a wide range of voices in the civil engineering field
- Short Story club @ ASCE (internal staff activity)

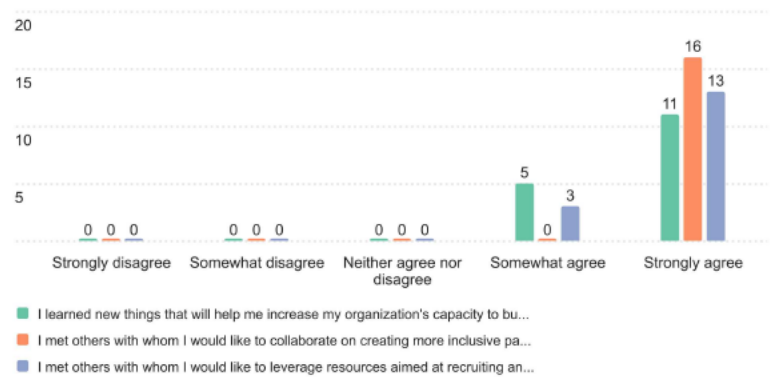
#### ITEM 4: JEDI EWF Summit Preliminary Survey Responses

v1\_satisfaction - Please rate your level of agreement with each of the following statements.

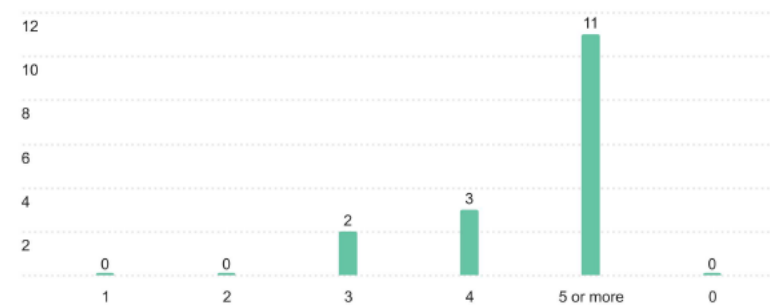




v2\_objectives - Please rate your level of agreement with each of the following statements.



q3\_network - How many people did you meet at the Summit that you see yourself working with on D&I efforts in the future?



v4\_qual\_positive - Do any Summit activities stand out as particularly positive? Which activities and why?

- Do any Summit activities stand out as particularly positive? Which activities and why?
- The ice breaker was great, it allowed everyone to share their commonalities and comfortably get to know people.
  - I liked the activity on what we all have in common during the reception. It gave attendees the opportunity to see how much we are alike yet different.
  - The panel of speakers from associations was really valuable. I also was very happy to have the introduction to REVIIS
  - Loved the ice breaker - got a deep dive with those at our table in a short amount of time.
  - Freddie's presentation on the understanding engineering professionals feedback.
  - The activity using the blocks. It was a great way to demonstrate how things we see as barriers can be moved
  - Panels, REVIIS presentation, ABET BELONG
  - Action-focused talks - ISO certification, ABET criteria, partnerships
  - Reflection activities
  - ISO 30415, establish a standard that can be used to elevate company profiles
  - The panels brought together a great mix of perspectives that were critical to the conversation.