

MEETING INFORMATION

Program:

Retaining Wall Solutions on Shallow Foundations in Poor Soils

When:

April 22, 2026
11:30 am - 1:00 pm

Where:

*Filippi's Pizza Grotto Kearny Mesa
5353 Kearny Villa Rd*

Cost:

Student: \$30
Public Agency: \$30
ASCE Member: \$50
ASCE Non-Member: \$60

IN THIS ISSUE

Speaker Biography	1
Message from the Chair	2
Thanks to Our Sponsors	3

A Little Bit of Settlement Won't Ruin Your Day: Retaining Wall Solutions on Shallow Foundations in Poor Soils

PROJECT OVERVIEW

San Diego International Airport Terminal I Replacement is a Progressive Design-Build project involving construction of a new 30-gate terminal facility, a new parking garage structure, and a newly dedicated on-airport roadway network which includes multiple grade separation structures including eight new bridges and 23 new retaining walls. This presentation will provide a brief overview of the project's retaining walls, followed by detailed discussions on the settlement, global stability, and utility issues with the walls, and the geotechnical/structural solutions that were utilized to economically support the walls on poor soils. These solutions included settlement monitoring, geosynthetic embankment reinforcement, deep soil mixing (DSM), jet grout, and a load transfer slab. Some unique challenges encountered during construction will also be shared. The retaining walls include 22 mechanically stabilized embankment (MSE) walls and one cast-in-place concrete U-wall, all supported on shallow foundations. Geotechnical design for the project site was very challenging, as the subsurface soils were compressible and liquefiable. MSE walls were generally selected for settlement reasons, but additional strategies were needed to satisfy seismic global stability, including geosynthetic reinforcement of the non-MSE portions of the embankments or jet grout ground improvements. Additionally, one wall was too tall and narrow for MSE to be feasible, so a concrete wall was selected and founded on DSM ground improvements to satisfy global stability and settlement. That same wall location also utilized a load transfer slab supported on the DSM columns to span over shallow utilities conflicting with the ground improvements.

SPEAKER BIOGRAPHY

Colby Cushing

Kleinfelder, Senior Bridge Engineer



Colby Cushing has 17 years of experience in both design and construction for a variety of transportation projects, including highway bridge structures, bridges over water, heavy and light rail bridge structures, retaining structures, bus transit facilities, and water facilities. He currently serves as a Senior Bridge Engineer with Kleinfelder having worked on several high-profile transportation projects in Southern California, focusing on well planned, technically sound and constructible designs. Mr. Cushing previously spent over 7 years working primarily as a Structure Representative with Kleinfelder's Construction Services team, providing field engineering and quality assurance inspection, performing submittal reviews and constructability reviews, providing independent cost estimating, chairing project construction meetings, and coordinating with project staff and stakeholders. This combined background in both design and construction gives him a distinct insight in civil engineering and the ability to identify key issues and effective solutions for successful project deliveries. For the project of his presentation, Mr. Cushing was the engineer-of-record for all the retaining wall structures and led several coordination meetings with the geotechnical engineering team to develop the selected solutions.

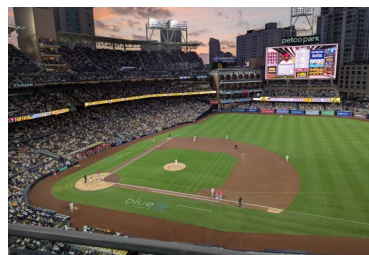
Hello Transportation Community!

It's hard to believe that we are already halfway through 2026. We are continuing our speaker series in April with an exciting presentation from Colby Cushing, Senior Bridge Engineer at Kleinfelder. Please join us on Wednesday, April 22nd, at Filippi's Pizza Grotto Kearny Mesa, 5353 Kearny Villa Rd.

In February, we were fortunate to have Eleanor Gonzalez, Caltrans District 11 Project Engineer, present on the I-805 Palm Avenue Interchange Improvements.



I encourage you all to register for our annual Joint Summer Social with the APWA Transportation Committee — Transportation Night at Petco Park on July 28. This is always a wonderful event and a great way to network with colleagues while enjoying a Padres game. Please contact Ross with any questions. Registration link is below:



<https://sandiego.apwa.org/event/transportation-night-petco-park/>

We are also pleased to announce that, thanks to your continued support and event registrations, we will be able to provide two scholarships in 2026. We will keep everyone posted once the recipients are selected.

As always, I also want to extend a big "THANK YOU" to our newsletter sponsors showcased on the last page. Your generous contributions make the Transportation Group's work possible. These sponsorships directly fund our scholarship program and help subsidize our summer social event. If you would like to help support our cause, please contact our Treasurer, Marie Santos, directly. We hope you'll consider supporting us this year!



Sincerely,
Brad Wilton, PE
ASCE Transportation Group Chair

ASCE
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TRANSPORTATION GROUP

SPONSORSHIP OPPORTUNITIES

Newsletter Sponsorship **\$300**

- 1/2 page company sponsorship published with our newsletters 6 times per year

Lunch Program Sponsorship **\$200**

- Company logo printed on program advertising materials
- One company slide at the meeting
- 5-minute company introduction
- Only 3 more available!

Scholarship Donation **\$**

- Donate any amount to the ASCE Scholarship Fund for SDSU & UCSD Engineering Students

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