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Photo provided by Erdman Anthony
www.erdmananthony.com

PRESIDENT'S MESSAGE:

Greetings, ASCE Palm Beach Branch,

Just like that, we are nearly a quarter through 2022 and it is already looking vastly different than the previous year. As we seemed to emerge from a global health pandemic, a new set of global crises and conflict have replaced the headlines. One certainty we must never lose sight of is the important role of civil engineers, like you and I, in shaping a stable and thriving built society.

During E-Week, ASCE launched Future World Vision: Mega City 2070, a tool that inspires discussion about the future of the built environment. This interactive 3D model looks at a theoretical city of 50 million people in the year 2070. It focuses on six key trends - alternative energy, autonomous vehicles, climate change, smart cities, high-tech construction and policy and funding. I have spent some time flying through the Mega City and am inspired by the challenges that us engineers must prepare for. The desktop app can be downloaded [here](#).

It can be easy to get lost in the details of our daily work as engineers. But, I ask that all of us take a moment to step back from our planning, permits, calculations, and construction, to appreciate the footprint of our work so far, and to think intentionally about the direction we want to lead the built world. As the world continues to develop rapidly, I think it appropriate to remind us of our [Code of Ethics](#), as our guiding principles.

In the upcoming quarter, I invite you all to join us in person for several events. On April 21st we will host our annual Engineers in Government Night. Please consider nominating a qualified engineer for one of our awards by emailing me your recommendation. We continue to offer monthly luncheons for CE credit on the second Tuesday of each month. We will have another joint-society social in May.

As always, it's a great day to be a civil engineer!

Let's celebrate and hold each other high,



Marlena Trier, P.E.

President, ASCE Palm Beach Branch



SWA TOUR

MARCH 1, 2022

The Solid Waste Authority provided a technical tour of their Renewable Energy Facility 2 (REF 2) to ACSE Palm Beach Branch. The tour started at the Environmental Education Center, where participants learned about the Authority's operations. From there, participants visited REF 2, an active power plant where solid waste is combusted for energy generation. This facility provides enough power for roughly 70,000 homes in Palm Beach County. Participants were able to see cranes moving tons of waste, the fire from the incinerator, and the ash collection system.



JOINT SOCIETY WINTER SOCIAL

ASCE and FES got together on February 23rd at Stormhouse Brewing Co. for a Joint Engineering Society Fall Social. A few highlights from the social are included below. Thanks to all who came out!



ENGINEERS WEEK

HAGEN RANCH LIBRARY STEM PROGRAM

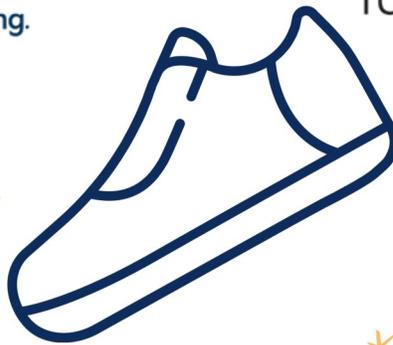
On February 23rd members from the ASCE Palm Beach Branch volunteered and attended the Hagen Ranch Library STEM program teaching kids about articulated grabbers. Kids were able to hear about civil engineering, construct articulated grabbers, and test their constructed projects.



2022 SHOE TOY DRIVE

Baxter & Woodman has partnered up with Funds2Org for a shoe drive during the month of March. The goal is to collect 2500 pounds of shoes during this timeframe and we need all hands on deck!

Depending on the weight of shoes that are collected, our non-profit (B&W Cares) gets funds and we will be donating all the proceeds to Shoes that Fit which is a charity that buys new athletic shoes for kids in need. The shoes themselves will be sent out to developing countries where they will be fixed up and resold by micro-entrepreneurs. This gives people a job and a source of income which will not only grow their own financial success, but also boost the community's economy. There are so many lives we can change through the reuse of shoes and it also avoids the add-on to landfill waste.



SHOE DRIVE

ASCE MARCH LUNCHEON

Donate your gently worn, used, or new shoes to help the environment and developing countries.

ALL TYPES AND SIZES WELCOMED!

Collection Box will be at the Entrance

For more information:
Please contact Kristen Nguyen
Phone: (561) 425-7752
E-Mail: knguyen@baxterwoodman.com

MONTHLY LUNCHEONS: NEW LOCATION!

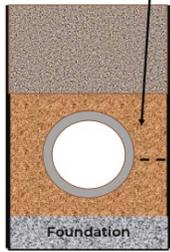
We are holding our monthly luncheon's in person at the SWA Multi-purpose building. Please see below for how to enter from High Ridge Rd. We look forward to seeing you at our next luncheon!



SAFETY AND COST IMPROVEMENTS WHEN USING RCP

The presentation provided a brief overview of the structural fundamentals of concrete pipe and the current national standards to support construction and testing methods that can significantly reduce backfill time, improve safety of workers in the trench, a critical work zone, and also allow for a wide range of lower cost backfill materials.

Current FDOT Sec. 125
w/ Soil Envelope Compacted to 95% Std. Proctor in 6-inch Lifts



Proposed
w/ Soil Envelope Compacted to 95% Std. Proctor with 12-inch Lifts Above Concrete Pipe Springline

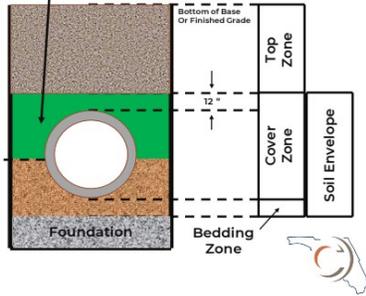
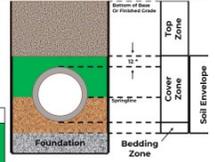


Illustration of Reduced Backfill when Using Concrete Pipe

RCP Diameter (Inch)	Trench Width (ft) ^A	Excess Embedment (ft) ^B	Reduced Select Backfill Above Springline per 100 Feet of Trench ^C	Reduced Select Backfill Costs \$ per 100 ft ^D
15	4	1.625	650 ft ³	\$2,700 / 100 ft
18	4	1.75	700 ft ³	\$2,900 / 100 ft
24	5	2	1,000 ft ³	\$4,150 / 100 ft
30	5	2.25	1,125 ft ³	\$4,670 / 100 ft
36	6	2.5	1,500 ft ³	\$6,230 / 100 ft
42	7	2.75	1,925 ft ³	\$8,000 / 100 ft
48	7	3	2,100 ft ³	\$8,720 / 100 ft

- A. RCP trench width based on AASHTO requirement of D + 24 inches, rounded to the nearest foot.
- B. Excess embedment above springline to one foot above pipe crown.
- C. Excess structural embedment represents select fill material that contributes negligibly to concrete pipe stresses and could be replaced with more efficient materials.
- D. Pay Item Avg. Unit Cost, 04/01/2021 - 09/30/2021, Pay Item 125 3 Select Backfill, \$112.57 per CY, Florida Department of Transportation Program Management Office.

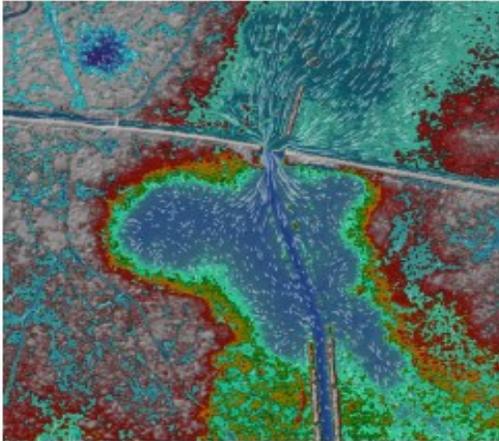


Doug J. Holdener, P.E.

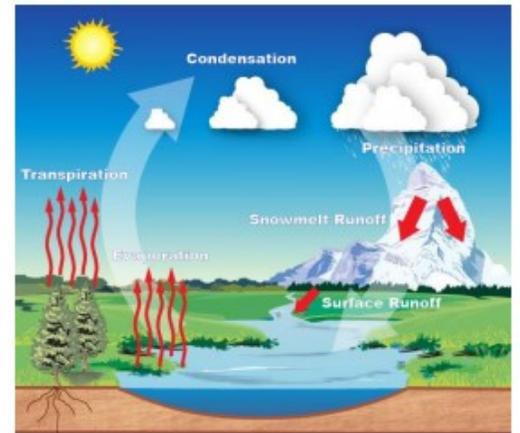
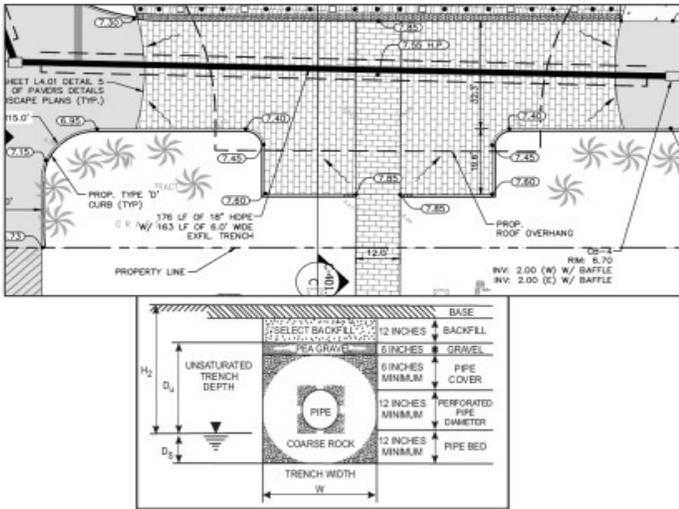
Doug Holdener has been the Director of the Florida Concrete Pipe Association since 2017. He has 25 years of professional civil engineering experience. Prior to the FCPA, Doug worked for two transportation consulting firms, followed by Rinker Materials, then with Florida Power & Light. Doug lives in Jupiter Farms with his family.

H&H MODELING & SURFACE WATER PRACTICE

This presentation provided an overview of how hydrologic and hydraulic models are built, and share how these tools are used to identify capital improvement projects, design stormwater infrastructure, and better understand flood risk in our communities.



“How does water move through our environment?”



“How does water enter and leave our environment?”

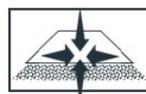
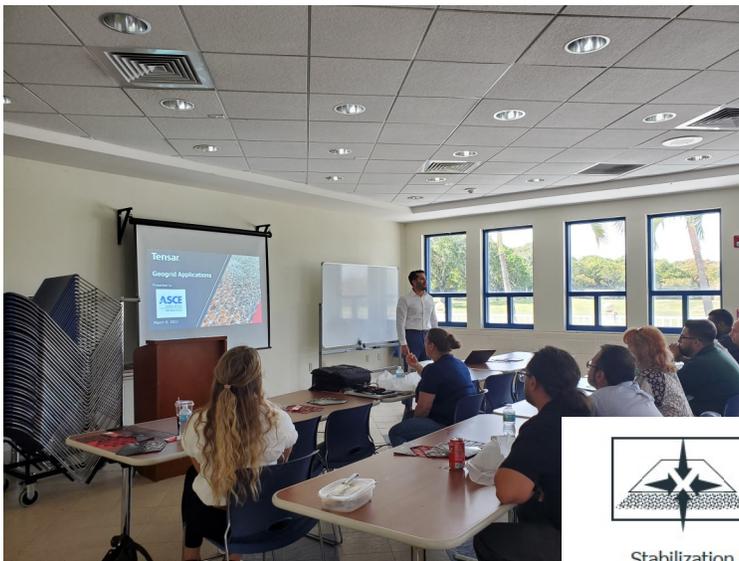
Matt Brosman, P.E.

Matt is a professional engineer at Kimley-Horn with 8 years of experience in hydrologic and hydraulic (H&H) modeling, stormwater design, and floodplain management. He has served as project manager or project engineer on numerous watershed management plans and stormwater master plans, and has extensive experience developing H&H models in GIS-based environments using ICPR, SWMM, and HEC-RAS. Matt is also a Certified Floodplain Manager (CFM) and has led efforts on over 30 FEMA Letters of Map Change.

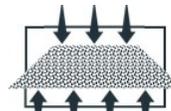


Tensor Geogrid Applications

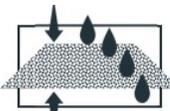
With the present-day issues associated with infrastructure and private development funding, there exists a need to explore innovative methods for designing civil engineering applications including paved and unpaved roads, subgrade stabilization, and working platforms. Geogrid stabilization is a well-established solution for challenges associated with the construction of roads and working platforms, particularly over soft soils. However, their consideration as a conventional means to design a flexible pavement has been somewhat limited due to lack of full-scale evidence and relatively simplistic empirical design approaches. Tensor has focused and devoted significant resources to understanding how their engineered solutions perform in full-scale such that design theory could be validated and translated into usable tools for the civil engineering community. The main goal of this presentation is to provide practicing civil engineers a better understanding of the design of paved and unpaved roadways using Tensor Geogrids and to equip them with the appropriate design tools.



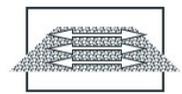
Stabilization



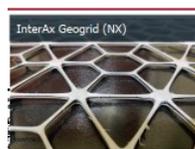
Separation



Filtration



Reinforcement



Andres Peralta, P.E.

Associate Regional Sales Manager, South FL

Andres is a Florida-registered professional engineer who has seven years of experience designing with geosynthetics, mainly Mechanically Stabilized Earth (MSE) structures and paved and unpaved geogrid stabilized roadways. Andres graduated from the Georgia Institute of Technology with a B.S. and an M.S. in Civil Engineering and with an MBA. Andres has been with Tensor since 2012, and he has held multiple roles within the company, both commercial and technical, such as the design and development of new products for soil reinforcement and stabilization. Andres resides in Miami, FL and currently manages the sales and marketing efforts of Tensor's engineered solutions for roadway and grade separation applications in South Florida.



2022 ASCE Palm Beach Branch Bridge Competition

The Palm Beach Branch ASCE is hosting a Bridge Competition for local Palm Beach County high school and middle school students from March 18th through May 18th. The bridge that safely carries the design load with the lowest final cost wins.

2022 ASCE Palm Beach Branch Bridge Competition



What: Design the lowest cost bridge to win
Who: All Palm Beach County High School and Middle School students
When: March 18, 2022 to May 18, 2022

FOR BRIDGE COMPETITION RULES AND INSTRUCTIONS GO TO:

<http://branches.asce.org/palmbeach/resources>

YOUNG MEMBER LEADERS PRESENTATIONS

**We are looking for presenters for our future
Young Member Leaders Presentation Series!
Interested in presenting?**

Contact Cristina Caceres at
Cristina.Caceres@kimley-horn.com

or Nick Bragaia at
Nick.Bragaia@ghd.com

COUNTY WATER RESOURCES MANAGER

Position: **COUNTY WATER RESOURCES MANAGER**

Salary: \$117,898 Annually, negotiable depending on qualifications

Department: County Administration

Location: 301 N. Olive Avenue, West Palm Beach

Hours: 8:00 A.M. to 5:00 P.M., Monday - Friday

Other: Valid Florida Driver's License and PBC Risk Management Department driving history approval prior to appointment.

THIS IS AN AT-WILL POSITION.

Palm Beach County, Florida, seeks qualified applicants for the position of County Water Resources Manager. This position performs specialized technical and administrative work providing broad water resource expertise for the County, and is responsible for initiating, developing, coordinating, and commenting on water resource projects, reports, and plans prepared by the County and other entities, such as the South Florida Water Management District (SFWMD), Lake Worth Drainage District (LWDD), and Federal Emergency Management Agency (FEMA). Advises the Board of County Commissioners on the impact of land development activities, the Everglades, drainage, water supply, and environmental issues. Meets with County Administration, Legislators, State and Federal agency representatives to discuss or give presentations related to water resources, planning and technical studies and programs, and keeps local officials informed of funding and implementation of water resource plans and programs. Establishes and maintains communications through contacts with other agencies and local governments involved in planning and regulatory activities. Work is performed with considerable independence and the supervision is received from the County Administrator by consultations and review of completed work.

QUALIFICATIONS:

Bachelor's Degree in Civil Engineering or related field; minimum of 10 years of experience in water resource design, planning, or management, with a minimum of five (5) years of experience in South Florida.

Necessary Special Requirement: Licensed as a Professional Engineer in the State of Florida OR licensed as a Professional Engineer in another state and must obtain State of Florida Professional Engineer licensure within six (6) months of appointment.

PREFERENCE FOR ONE (1) YEAR OF PROFESSIONAL EXPERIENCE: Working as a P.E. for/on behalf of a governmental entity (must specify on application). Also desirable: Knowledge of local (Palm Beach County) drainage systems and hydrology/other water resource functions.

BENEFITS: The PBC BCC provides an excellent executive benefits package, including a salary competitive for the South Florida marketplace, medical, dental and life insurance, as well as vacation, paid parental, and sick leave, tuition reimbursement and participation in the Florida Retirement System. This is an at-will position. Employment applications/resumes are subject to Florida Public Records Law.

Deadline for application: 5:00 p.m. on 3/25/2022. Please apply online at www.pbcgov.job (no email-resumes accepted).

Visit <https://discover.pbcgov.org/administration> for information on PBC BCC and County Administration.

All employees of Palm Beach County may be required to work before, during and/or after a natural or man-made disaster or hurricane. EO/AA M/F/D/Veterans Preference Employer; E-Verify Employer; Drug Free Work Place (DFWP)

Forbes Magazine ranks Palm Beach County BCC 10th in the nation in Government Services in their list of America's Best Employers 2018.

IS YOUR COMPANY HIRING?

**Post your open positions on the
ASCE website and newsletter!**

**Cost: \$50 per job posting, free for
municipalities. Please make checks
payable to 'ASCE Palm Beach Branch'**

**Contact Marly Trier at
Marlena.Trier@jacobs.com for more information**

2021 PALM BEACH BRANCH BOARD



Pictured left to right: Kaitlin Townsend (Secretary), Justin Tagle (Treasurer), Marly Trier (President), Phoebe Cuevas Molina (Vice President), and Teresa Chapman (Past President).

2021-2022 Branch Officers

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Palm Beach Branch

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Please verify/update your
mailing/email
information with

**ASCE National
Headquarters**

at

1-800-548-2723 (ASCE)

or

[http://www.asce.org/
membership](http://www.asce.org/membership)

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Open

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CHAMPION

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Nmusick@chenmoore.com

FAU ASCE STUDENT CHAPTER PRESIDENT

Zach Farmer

FAU STUDENT

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Florida Section at:
www.fla-asce.org

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