

April 2019 Vol. 5 Issue 13

# civil + structural ENGINEER

CELEBRATING THE DESIGNERS OF THE WORLD AROUND US



**INNOVATIVE COLUMNS SUPPORT NEW ORLEANS AIRPORT**

A Lonely Coast  
Putting it Back Together  
Battery Park Buildout  
Q&A with Tom Hendrick,  
President & CEO of Wallace Engineering



May 2019 Vol. 5 Issue 14

# civil + structural ENGINEER

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**A COOL(ING) COMPANY**

SCALEMATRIX IS READY FOR AI.  
MACHINE LEARNING  
IS THE AEC INDUSTRY?

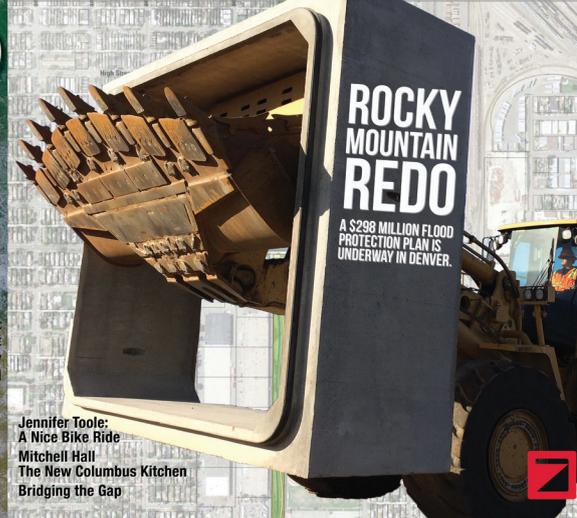
Creating Opportunity:  
Andrew Hoff  
Dalton Highway  
Manning the Unmanned



June 2019 Vol. 5 Issue 15

# civil + structural ENGINEER

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**ROCKY MOUNTAIN REDO**

A \$298 MILLION FLOOD PROTECTION PLAN IS UNDERWAY IN DENVER.

Jennifer Toole:  
A Nice Bike Ride  
Mitchell Hall  
The New Columbus Kitchen  
Bridging the Gap



January 2020 Vol. 6 Issue 1

# civil + structural ENGINEER

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July 2019 Vol. 5 Issue 16

# civil + structural ENGINEER

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**A CINEMATIC MINDSET**

MELSON AERIAL PRODUCTIONS WINS SECOND ANNUAL ENGINEERING DRONE VIDEO OF THE YEAR

Matt Cummings  
A Global Journey with Milestones  
Lisa Nisenson  
An Emerging World



August 2019 Vol. 5 Issue 17

# civil + structural ENGINEER

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**2019 RISING STARS**

10-DIMENSIONAL: MIKE DEBACKER  
WHAT'S NEW IN ACI 318-19  
A MARINA IN NEW YORK HARBOR

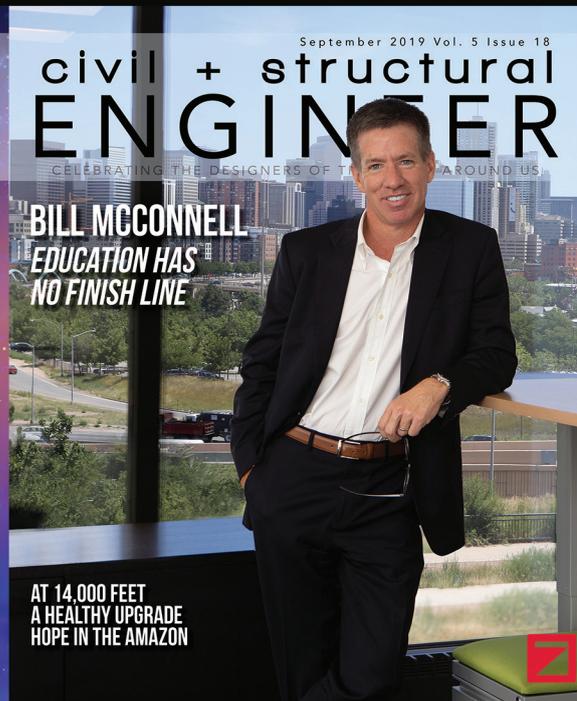
2019 Rising Stars  
Civil + Structural Engineer



September 2019 Vol. 5 Issue 18

# civil + structural ENGINEER

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**BILL MCCONNELL**

EDUCATION HAS NO FINISH LINE

AT 14,000 FEET  
A HEALTHY UPGRADE  
HOPE IN THE AMAZON



# THE EARTHQUAKE THAT KILLED 315,000 PEOPLE

H. Kit Miyamoto, Ph.D., S.E.

**TEN YEARS AGO** this month, a great earthquake of magnitude 7 devastated the capital city of Port-au-Prince, Haiti, which is the poorest nation in the Western Hemisphere. Haiti was not prepared and suffered greatly. The earthquake destroyed 220,000 buildings and killed 315,000 people. It is the deadliest earthquake in history. This was my first journal entry on the fateful day. I want to share it with you on this anniversary month so you can see the reality when engineering fails.

## 2 a.m., January 20, 2010

I wake up to the sound of a shotgun blast just outside the room I am sleeping in. It was a close shot in the small backyard. This is the first time I have been awakened by a gunshot. I quickly roll out of bed and slowly crawl up to the window to peer into the backyard and investigate. It is eerie silent. No one is visible.

I decide to go back to sleep. What else I can do? I don't want to go to outside and see what is going on. As I fall asleep, I think about the 4,000 criminal inmates who, according to news reports, have escaped from the earthquake-damaged maximum-security jail in downtown Port-au-Prince. I wonder if the gunshot has something to do with them.

Gentle swings of a magnitude 6.1 aftershock wake me at 6:03 am. It is interesting feeling. I am not afraid; I am almost comforted by the feeling of the motion of being swung. I rationalize that the house I am in withstood a magnitude 7 earthquake a week ago. Field tested. Plus, I am too tired.

Dan, a fellow disaster relief worker, pops into my room and yells, "Kit, it's an aftershock! What should we do?"

I sit up in bed. "Relax," I reply. "Let's get some breakfast." After eating stale raisin flakes with warm milk, we head out to investigate the damages.

In the morning light, as we drive through the town, the destruction is highly visible. I see a refugee's camp with a knee-high pile of waste. Cars pancaked under buildings. In some cases, bodies still sit on seats inside. People digging through piles of concrete for missing people with little or no tools. Twisted metal and concrete everywhere. A distant, hillside shantytown swallowed by landslide. All of these visuals are wrapped with the smell of car exhaust and death. The smell reminds me of magnitude 7.9 earthquake in Sichuan, China in 2008 that killed thousands of school children. It is a strange, tangy smell mixed with dust. Once you smell it, it stays with you forever. I look around and wonder if hell has materialized in this bright, Caribbean morning.

We reach the Pan American Development Foundation (PADF) office, who is our partner. I am here to assist them. I meet with a World Bank officer, Gary. "I am looking for an engineer to investigate collapsed government buildings," he says. "PADF tells me you are the one. I don't know who you are, but need your help. Come with me." I hop into his truck with our team. I learn that Guilaine, a human rights attorney who has volunteered as a translator, is a quick thinking and witty Haitian lady. Eric, a former Haitian cabinet member, is a PADF engineer who is well respected and connected with the community. Our driver, Canes, maneuvers through the debris-filled city. This guy is good – a fantastic off-road driver in this urban disaster setting. He must backtrack many times to avoid the debris-blocked and traffic-jammed roads. We enter the devastated downtown..... *To be continued*



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