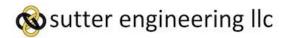
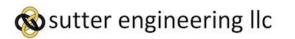
# **Travels With Doug**

#### Larry Sutter Ph.D., P.E., F.ACI, F.ASTM

Principal Sutter Engineering LLC Houghton MI 49931 Professor Emeritus and Professor of Research Materials Science & Engineering Michigan Technological University, Houghton MI

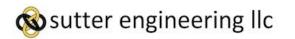






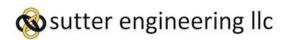


Networking...



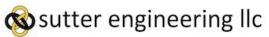


# For me, the journey (meaning concrete) started in 1994...





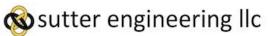








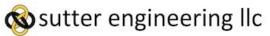


















### **NEWS RELEASE**

Michigan unemployment rate advances

Quit a good paying job and decided to go to graduate school... in concrete...









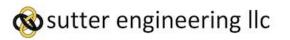
**NOVEMBER 5-10, 1995** Bonaventure Hilton & Radisson Gouverneurs Montréal, Québec



#### **NEWS RELEASE**

Michigan unemployment rate advances













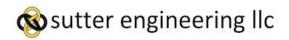














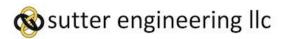
## Paul Lehoux



#### THEME: Innovative Concrete







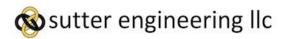
















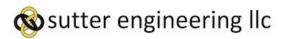


NOVEMBER 5-10, 1995 Bonaventure Hilton & Radisson Gouverneurs Montréal, Québec



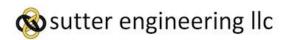


(a) and other which as which we can also be being a which we are taken as in











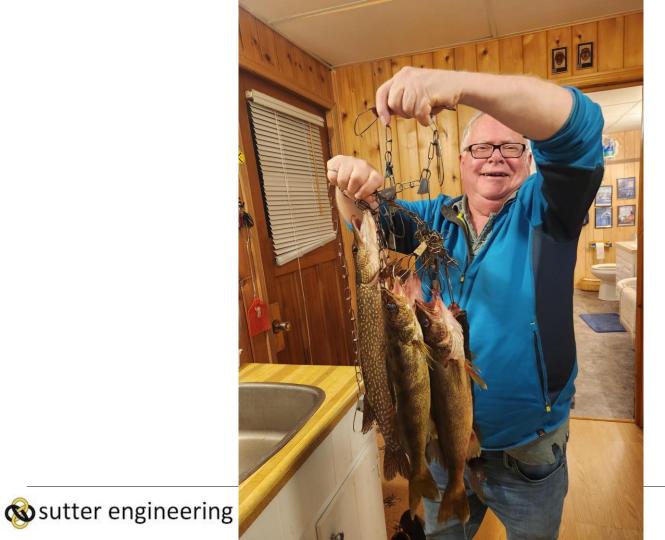








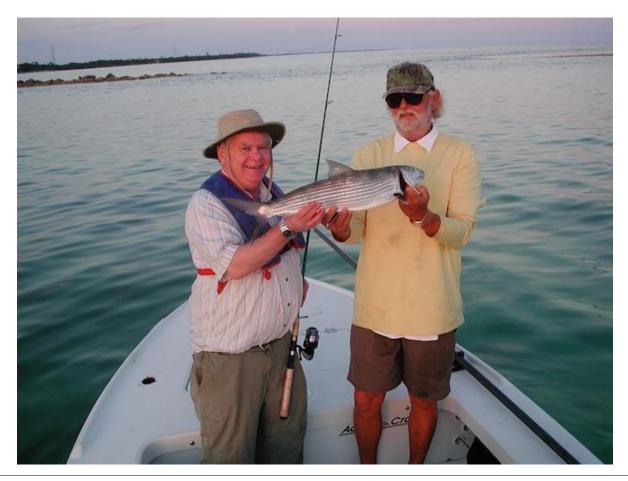


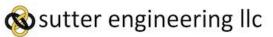




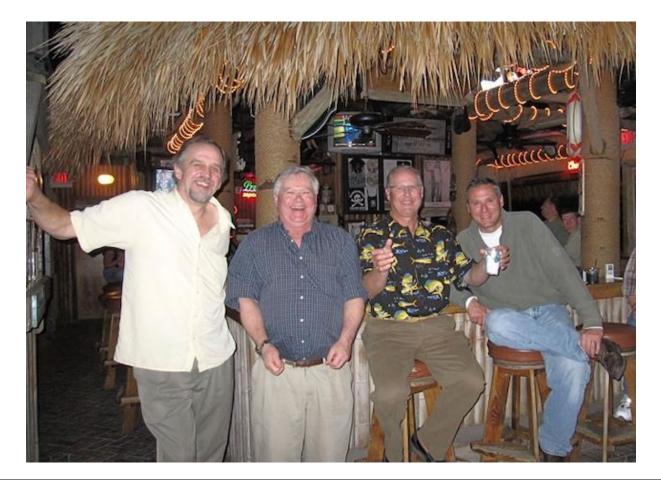


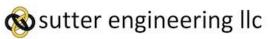














# **First collaboration**

- Pooled Fund led by South Dakota DOT
- Identified the calcium oxychloride mechanism of concrete deterioration
- Identified the role of SCMs in mitigating the distress
- Led to ongoing work by Weiss et al. and others



Office of Research



Federal Highway Administration



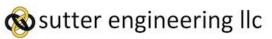
The Deleterious Chemical Effects of Concentrated Deicing Solutions on Portland Cement Concrete



SD2002-01

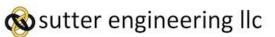
🕸 sutter engineering llc





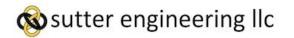






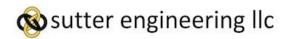


- Networking
- Our industry is small people are approachable
- Relationships last a lifetime
- However, timing is everything... don't make me late for the buffet line...



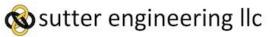


**Enjoy the journey!** 



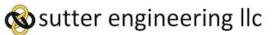






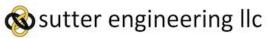








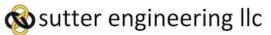






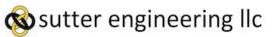








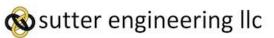






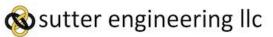






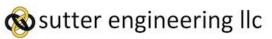






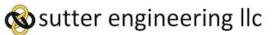






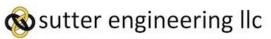






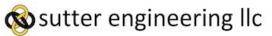






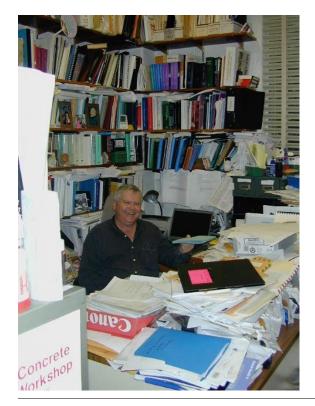




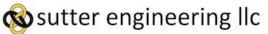




## Lessons learned over 30 years of Doug Time



- Other lessons...
- How things get done
- Particularly at ASTM...
- Anything is possible but nothing happens by accident





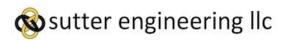


## Lessons learned over 30 years of Doug Time



## And don't think small...









## Lessons learned over 30 years of Doug Time

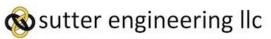
• Biggest lesson...

• Its all about the people you meet along the journey...



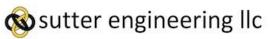














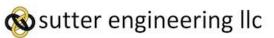






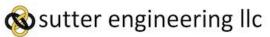






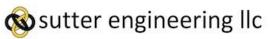






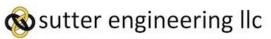






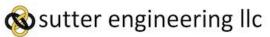






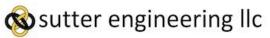






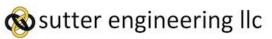














Congratulations on a history of contribution to everyone's journey... and... keep the journey going!



