





**Welcome**

**American Concrete Institute**

**Committee 134  
Concrete Constructability**

**October 16, 2017 Presentation**

The Concrete Convention  
and Exposition



## **Scope Today**

### **Introduce ACI Committee 134 Concrete Constructability**

- **Our recent history of forming this committee**
- **Our Mission**
- **Our current activities and goals**
- **New business**



# 134 Concrete Constructability

## **Committee Mission:**

**Develop and report on best practices  
for constructability of concrete  
structures.**



# 134 Concrete Constructability

- **Formed by TAC in Spring of 2017**
- **Our first committee meeting was Anaheim in Fall of 2017**
- **Fall of '17 and Spring of '18 was developing committee membership**
  - **17 voting members**
  - **10 associate members**
  - **Open membership**



# 134 Concrete Constructability

## Challenges with the Industry

- **Growth and changes in construction industry**
- **Reflected in ACI's growth**
- **Sheer volume of information available is outstanding, overwhelming**
- **Committee lessons learned, our collective experiences**



# 134 Concrete Constructability

## Technology within the Industry

- **Design in Revit leading to BIM Modeling**
- **Laser scanning for Quality Control**
- **Drone flights with 3d models**



# **134 Concrete Constructability**

## **Communicate with the Industry Sessions at ACI Convention**

- **First Session is today at Las Vegas**
- **Session in Quebec City in conjunction with Committee 201**
- **Submit for Session in Cincinnati**



# 134 Concrete Constructability

## Communicate with the Industry Short Articles in Concrete International

A contribution by ACI Committee 134, Concrete Constructability

### Defining Concrete Constructability

A proposal for consideration and action

by Larry G. Karlson, Eamonn F. Connolly, Christopher M. Garcia, and Bruce A. Suprenant

**A**lthough at least 32 ACI committee documents use the word “constructability” or “constructibility,” we are aware of only three that provide an insight as to what constructability means. Also, while Section 9.6.3 of the ACI Technical Committee Manual (ACI TCM-18)<sup>1</sup> instructs committees to avoid using the word “constructability” in documents and instead use the “constructibility” spelling, neither that document nor ACI Concrete Terminology (ACI CT-16)<sup>2</sup> defines the term.

More than 110 years passed and well over 100 other committees were formed before ACI established Committee 134, Concrete Constructability, in 2017. With a mission to “Develop and report on best practices for constructability for concrete structures,” the committee membership comprises a diverse group of contractors, structural engineers, and owner’s representatives.

“Concrete constructability” has sometimes been used as a marketing buzzword. It is a catchy phrase, but we believe that



Detailing columns with mechanical couplers can help reduce congestion and improve constructability (photo courtesy of Tipping Structural Engineers)

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# 134 Concrete Constructability

## Communicate with the Industry Short Articles in Concrete International

A contribution by ACI Committee 134, Concrete Constructability

### Designing for Constructability—ADA Surface Accessibility

Specify slopes at less than ADA maximum

by the American Society of Concrete Contractors (ASCC) Technical Committee

“The simplest way for design professionals to avoid problems with construction tolerances related to surface accessibility and other accessible elements is to design for slopes and dimensions that are slightly less than maximums and slightly more than minimums.” That was the conclusion stated in a 2011 U.S. Access Board report,<sup>1</sup> which was funded due to the substantial number of calls to its technical assistance hotline from architects, contractors, and others seeking clarification of tolerances for specific materials or assemblies.

**Table 1:**  
Maximum slopes required by ADA<sup>2</sup> and maximum specified slopes recommended in ACI 117.1R<sup>3</sup>

Surface description	Maximum constructed slope per ADA	Maximum specified slope per ACI 117.1R
Exterior accessible surfaces other than ramps	1:20 (5.0%)	1:25 (4.0%)
Exterior accessible	1:12	1:12



# **134 Concrete Constructability**

## **Communicate with the Industry Future Venues**

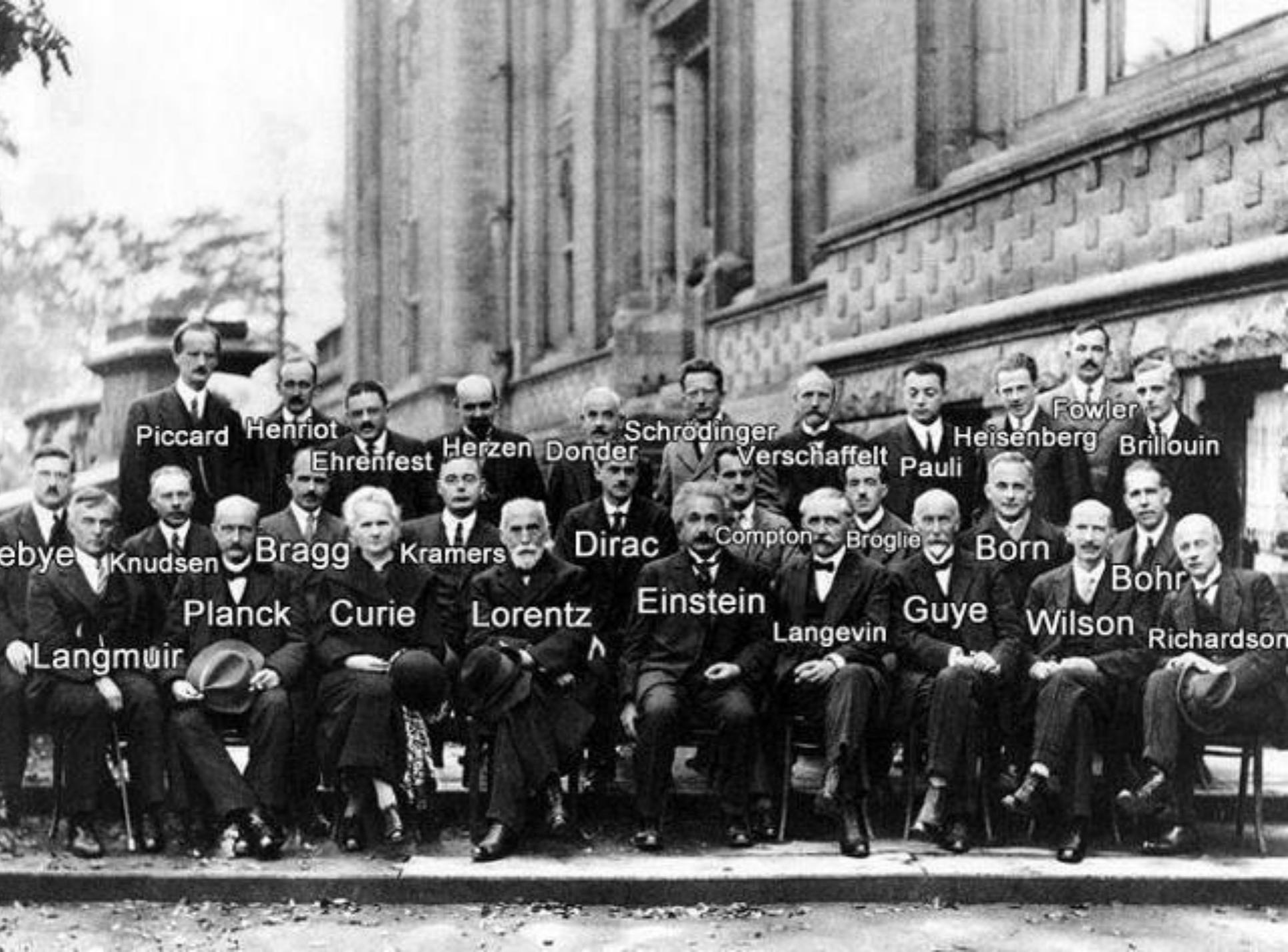
- **Tech Notes – One subject, < 3500 words**
- **Concrete International – Full sized articles**
- **ACI Webinars- three 2019 Webinar sessions are available for speakers.**



# 134 Concrete Constructability

## Communicate with the Industry

- **Do you have a subject that you are passionate about?**
- **Do you know of someone who has some leading edge experiences, or new research related to constructability issues.**
- **We are looking for some really sharp folks .....**



Piccard

Henriot

Ehrenfest

Herzen

Donder

Schrödinger

Verschaaffelt

Heisenberg

Brillouin

Fowler

debye

Knudsen

Bragg

Kramers

Dirac

Compton

Broglie

Born

Bohr

Planck

Curie

Lorentz

Einstein

Langevin

Guye

Wilson

Richardson

Langmuir