



CURRICULUM VITAE

RONALD L. LACHER, P.E., C.B.P.

Expert in Trade Practice & Structural Engineering in Swimming Pool Construction

Experience Highlights

- **Bachelor of Science Degree in Civil Engineering - California State Polytechnic University**
- **Registered Professional Civil Engineer in the State of California (Certificate #20949) since 1971**
- **Over eight years as manager of design & construction for several So. Calif. Government entities, responsible for millions of dollars of construction projects**
- **Licensed general contractor in California since 1975**
- **Licensed swimming pool contractor in California since 1978**
- **Prior owner of a swimming pool construction company; personally constructed 100s of swimming pools**
- **In 1992 founded Pool Engineering, Inc., that has provided the structural design of over 125,000 pools**
- **Authored numerous articles in national trade publications on proper trade practices and structural engineering in swimming pool construction**
- **Frequent national conference speaker and educator on proper trade practices and structural engineering in swimming pool construction**
- **Developed & taught education courses in almost every sub trade in pool construction**
- **Completed over 1,000 forensic investigations regarding proper trade practices and structural engineering in swimming pool construction**

Professional Affiliations

- **Association of Pools and Spa Professionals (APSP) Corporate member**
 - A 9 year member of the APSP National Builders Council
 - APSP Certified Building Professional (C.B.P.)
 - Primary author in the updated 3rd Edition APSP Builders Manual, wrote Chapter 8 on Vanishing Edge & Perimeter Overflow Pools
 - Member technical review committee for APSP Workmanship Standards
 - Named an APSP "Fellow" the industry's top recognition for leadership contributions including development of educational programs, authorship of technical and business publications, and industry related research.
- **The American Shotcrete Association (ASA) Corporate member**
 - Approved Shotcrete Examiner (via ACI) for both Wet and Dry shotcrete
 - Member of the Pool & Spa and Education Committees
 - Developed the ASA Training Module for shotcrete application in Pools & Spas
 - Member of the Shotcrete Inspector Training Module Task Group
- **American Concrete Institute (ACI) – Member**
 - Approved ACI Shotcrete Examiner for both Wet and Dry shotcrete
 - Regular attendance at ACI shotcrete related committee meetings
- **National Pool Industry Research Center (NPIRC) at California State Polytechnic University, San Luis Obispo, CA, conducts formal research into swimming pool plaster surfaces**
 - Member of the NPIRC Advisory Board
- **International Code Council (ICC)**
 - Vice Chair of the Drafting Committee for the recently adopted ICC "International Swimming Pool & Spa Code" (ISPSC).
 - Appointed to the ICC Hearing Panel considering proposed changes to the ISPSC for the 2015 code cycle.
- **International Association of Plumbing & Mechanical Officials (IAPMO)**
 - Served on the Technical Committee for the most recent code cycle for the "Uniform Swimming Pool, Spa & Hot Tub Code"
- **The Ceramic Tile Institute of America (CTIOA)**
 - Member of the Technical Sub-committee for the preparation of CTIOA installation Standards for tile and glass tile in swimming pools

Mr. Lacher graduated from California State Polytechnic University with a Bachelor of Science Degree in Civil Engineering and is a Professional Civil Engineer in the State of California (Certificate #20949). After graduation from college, Mr. Lacher was employed for over 10 years by various Southern California Governmental Entities where he was responsible for the design and construction of millions of dollars worth of construction projects every year. Prior to entering private enterprise, Mr. Lacher was the City Engineer for a major Southern California City.

Mr. Lacher has been involved in the construction of swimming pools for almost 35 years and has been a Licensed Swimming Pool Contractor and a Licensed General Contractor for over 30 years. The Swimming Pool Construction Company founded by Mr. Lacher proved to be a very successful enterprise, which yearly constructed close to 100 swimming pools.

POOL ENGINEERING, INC.

Based on his extensive engineering background and considerable knowledge of both the structural and construction aspects of swimming pools, Mr. Lacher founded Pool Engineering, Inc. Pool Engineering, Inc. specializes in providing the structural designs needed for the construction of swimming pools. Pool Engineering, Inc. swimming pool structural plans are used throughout California and many other states and have been adopted as a Master Plan by many of the major public entities throughout California and Arizona. Currently, the majority of swimming pool contractors in California utilize Pool Engineering, Inc. structural plans to construct their pools. Pool Engineering, Inc. has provided the structural engineering designs for over 125,000 swimming pools.

In addition to providing structural engineering for swimming pools, Mr. Lacher also serves as an Expert in the field of swimming pool construction and has completed over 1,000 investigations regarding various issues involved with swimming pools. Clients have included the Contractors State License Board, Insurance Companies, Attorneys, Homeowners and Swimming Pool Construction Companies.

Mr. Lacher has contributed to and authored numerous articles in national trade publications and is a well-known lecturer at both the national and regional level on proper trade practices and structural engineering in swimming pool construction. Mr. Lacher was a major contributor to the APSP Builders Manual (3rd Edition) that documents standards of practice in the construction of swimming pool and spas throughout the United States. Mr. Lacher was the sole author of Chapter 8 on Vanishing Edge & Perimeter Overflow Pools in the 3rd Edition Builders Manual. Based on that assignment, APSP considers Mr. Lacher as one of the most knowledgeable on that topic.

Mr. Lacher is an APSP Certified Building Professional, one of only approximately 300 pool builders in the US to have attained that certification.

Education courses in swimming pool construction developed & taught by Mr. Lacher include:

- 1. Soil & Geotechnical Issues in Swimming Pool Construction**
- 2. Grading, Drainage, and Excavation in Swimming Pool Construction**
- 3. Concrete, Reinforcement and Engineering in Swimming Pool Construction**
- 4. Gunite & Shotcrete in Swimming Pool Construction**
- 5. Design, Engineering & Construction of Vanishing Edge & Perimeter Overflow Pools**
- 6. Advanced Hydraulics of Vanishing Edge and Perimeter Overflow Pools**
- 7. All About Concrete Decking in Swimming Pool Construction**
- 8. Swimming Pool Remodeling & Repair**
- 9. All About Tile, Coping & Masonry in Swimming Pool Construction**
- 10. What the Swimming Pool Construction Supervisor Really Need to Know**

A list of the many published articles authored by Mr. Lacher can be provided if desired.