GERVASIO & ASSOC., INC.

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CURRICULUM VITAE:	Dennis L. Wipf, P.E.
EDUCATION:	Bachelor of Science, Civil Engineering Utah State University, 1985
REGISTRATION:	Arizona - Structural Engineer #24054
MEMBERSHIP:	American Concrete Institute (ACI) American Consulting Engineers Council City of Phoenix Fire Dept./FEMA Urban Search & Rescue Task Force (Structural Specialist) International Concrete Repair Institute (ICRI) ICRI Building Evaluation Committee Co-Chair Arizona Chapter ICRI - Past President & Board of Directors
CERTIFICATIONS:	ICRI Concrete Slab Moisture Testing Technician - Grade 1
AWARDS:	 2003 Award of Excellence, International Concrete Repair Institute, for an "Arizona Dam Spillway Repair Project". 2007 Award of Merit, International Concrete Repair Institute, for Arizona State University "Sun Devil Stadium Repairs". 2009 Award of Merit, International Concrete Repair Institute, for "Arizona Veterans Memorial Coliseum Roof Repairs" 2010 Award of Merit, International Concrete Repair Institute, for "Palo Verde Nuclear Generating Station" 2015 Award of Excellence & Sustainability Award, for "Regency House Condominium Plaza Parking Garage Repairs"
PUBLICATIONS:	 <u>Arizona Dam Spillway Repair Project</u>, Concrete Repair Bulletin, Nov/Dec 2003 <u>Arizona State University Sun Devil Stadium Repairs</u>, Concrete Repair Bulletin, Nov/Dec 2007 <u>Arizona Veterans Memorial Coliseum Roof Repairs</u>, Concrete Repair Bulletin, Nov/Dec 2009 <u>Palo Verde Nuclear Generating Station</u>, Concrete Repair Bulletin, Nov/Dec 2010 <u>Regency House Condominium Plaza Parking Garage Repairs</u>, Concrete Repair Bulletin, Nov/Dec 2015 <u>Introduction to the Updated Guide for Verifying Field Performance of Epoxy Injection of Concrete Cracks</u>, Concrete Repair Bulletin, March/April 2016
EXPERIENCE:	
1985 - Present	Gervasio & Assoc., Inc., Project Forensic Engineer. Prepare comprehensive investigations and reports on the cause of Structural failures, construction disputes and engineering disputes. Design repairs and rehabilitations associated with the reports and other problems. Consults with design engineers in the firm on projects that he has special experience.

Mr. Wipf also has been in charge of complete structural design and detailing for numerous projects. He has extensive experience utilizing steel, concrete, wood and masonry materials. Areas of special experience and expertise include: concrete patching & repairs; concrete pavements; parking structures; adobe; glass; historic building renovation; and rigging of suspended concert equipment for the America West Arena, Bank One Ballpark & the Arizona Veterans Memorial Coliseum. These often include: direct supervision and review of other engineers, draftsmen & other consultants to insure accuracy, quality and scheduling of their work for a timely completion; special structural inspections to verify construction is in accordance with approved plans and specifications.

Recent project experience Mr. Wipf has been involved in include: Investigation and design of repairs to at least forty (40) parking structures, five (5) cooling tower structures, and numerous other concrete structures with distressed conditions, and several historic buildings. Some of these projects include:

- An Arizona Dam Spillway Repair Project. Investigation and design of repairs to concrete spillway structures which were severely damaged by corrosion. Involved repelling and specialty rope access to perform the investigation, and the use of state-of-the art patching materials for the repairs. This project won an international award for concrete repair excellence.
- Arizona State University Sun Devil Stadium Repairs, Tempe. Investigation and design of major repairs to portions of the stadium structure due to corrosion of reinforcing steel and structural steel beams. This project involved four concrete repair subcontractors and three steel subcontractors, all working concurrently to complete the repairs prior to the upcoming season. This project won an international award for concrete repair excellence.
- Arizona Veterans Memorial Coliseum, Phoenix. Investigation and design of major repairs to the roof structure of this arena. The roof is supported by post-tensioned cables which had failed due to corrosion and hydrogen embrittlement. Repairs involve replacement of cables and re-tensioning to over 400,000 lbs. each. This project won an international award for concrete repair excellence.
- Palo Verde Nuclear Generating Station, Tonopah. Investigation and design of repairs to an underground sump that water flows through for a pumping station. Implementation of the repairs was done on a 24-hour a day basis for 10 consecutive days. Severe corrosion of reinforcing steel had occurred from previous additions of acid to the water, original construction defects, and normal concrete deterioration at splash zones. In-depth evaluation of the repair materials was performed to select repair mortars which could provide the best impervious properties. These attributes were critical within a few days after completion of the repairs because the sump would be put back into service and subjected to harmful chemicals. Sacrificial galvanic anodes and specialized concrete coatings were utilized to protect the repairs against future damages. This project won an international award for concrete repair excellence.

EXPERIENCE: (Cont.)

- Regency House, Phoenix. Investigation and design of repairs for existing 50-year old underground parking structure which experienced severe corrosion, spalling & water infiltration due to leaking planters and deteriorated waterproofing. These repairs include concrete patching, complete replacement of elements, re-waterproofing of all of the exposed exterior portions, and a complete mechanical system upgrade and renovation of all of the plaza areas. This project won an international award for concrete repair excellence.
- Chase Field, Phoenix. A forensic facilities assessment of the entire major-league baseball stadium was performed which identified a variety of deterioration issues within the facility. Due to moisture intrusion, the structure was experiencing corrosion deterioration of reinforcing encased in concrete and structural steel members. These repairs are ongoing, renovating different areas of the stadium during the off-season each year since 2011.
- Cantex, Kingman. Evaluation of exterior concrete pavement at a very large manufacturing facility. After 2-1/2 years in service, the pavement was severely cracked and deteriorating. Extensive evaluation of the concrete properties, non-destructive testing of the pavement thickness, and soil testing was performed. Over 480,000 sq. ft. of pavement was evaluated, most of which has subsequently required replacement due to deterioration from improper construction.
- Arizona State Capital, Arizona Supreme Court, & 1510 West Adams Cooling Tower Renovations, Phoenix. Major repair of numerous concrete and steel structural elements of three existing cooling tower structures damaged by a corrosive environment. Involved the use of distinctive concrete patching and repair materials and procedures; and specialized concrete materials to prevent future corrosion problems.
- Arizona Supreme Court Parking Structure, Phoenix. Investigation of existing posttensioned underground concrete parking structure experiencing severe deterioration to the post-tensioned tendon. A large concrete beam, supporting over 250,000 pounds, required emergency shoring and repairs. Repairs were designed to chip out and replace the end of the beam with specialized concrete repair materials.
- Uptown Plaza, Phoenix. Major structural rehabilitation of an existing shopping center built in the 1950's. Significant deterioration occurring at brick bearing walls under truss and beam bearings due to thermal expansion and contraction of the roof members.
- Pep Boys, Santa Monica, California. Emergency shoring after the Northridge earthquake and complete seismic upgrade and reconstruction of severely damaged 70-year old building.
- America West Arena & Bank One Ballpark, Phoenix. Administrated their Annual Facilities Permit Agreement with the City of Phoenix as the registered engineer responsible for any modifications to either building. This program has included more than 75 separate projects for the two facilities and numerous other design consultants.