

## **1. ACADEMIC DEGREES**

Master of Engineering: Civil Engineering, with specialization in Geotechnical and Foundations. Stevens Inst. of Tech., New Jersey, USA. 1994  
Master of Science: Highways and Bridges (Validated in the US). 1993  
Bachelor Degree: Highway Engineer. National University of S.E., Argentina. 1984  
RSA Certification: Certified Road Safety Auditor Team Leader (RSATL), UTN, Argentina, 2011.

## **2. PROFESSIONAL LICENSES**

PE, New Jersey, USA

PE, Argentina

## **3. PROFESSIONAL MEMBERSHIPS**

Member, American Society of Civil Engineers (ASCE), USA. **President; ASCE Panama Section**

Member, American Association of Soil Mechanics and Foundation Engineers (AASMFE), USA.

Member Professional Council of Engineers and Architects, Argentina.

## **4. PROFICIENCY IN LANGUAGES**

English: Fluent. Faculty professor in the US and permanent participation as a speaker in seminars and congresses worldwide. Excellent report writing skills.

Spanish: Native. Same as above

French: Colloquial level

## **5. CURRENT LEGAL STATUS IN DIFFERENT COUNTRIES**

Argentina: Citizen

Italy: Citizen

USA: Permanent Resident (Green Card)

Panama: Permanent Resident (Work Permit)

## **6. CONTACT INFORMATION**

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## **7. WORK EXPERIENCE**

**2020- present** **Geotechnical and Foundations Specialist.** BNA US JV. Michigan, USA  
**2019- 2020** **Independent Consultant.** Transportation/ Geotechnical/ Waste Management  
**2011- 2019** **Louis Berger** Engineering Mgr. for Latin America and The Caribbean (LAC) region.  
**2004 - 2011** **Louis Berger.** Country Manager, Bolivia and Andean Region.  
**2002 - 2004** **Louis Berger.** QA/QC Manager for Landfill Projects. Florham Park, NJ

<b>1998 - 2002</b>	<b>Louis Berger.</b> Director of Engineering Services for Central America and The Caribbean.
<b>1996 - 1998</b>	<b>Louis Berger.</b> Project Manager Central America and The Caribbean.
<b>1990 - 1996</b>	<b>ARCEPC, Consulting Engineers.</b> Project Engineer, Lab. Mgr. and Project Mgr. U.S.A.
<b>1987 - 1990</b>	<b>CABE Construcciones, S.C.</b> Project Engineer, Resident and design Engineer. Argentina.
<b>1986</b>	<b>FACASA – Minaclar.</b> Consulting Engineer, Materials Testing Engineer.
<b>1983 - 1987</b>	<b>Consejo Provincial de Vialidad (CPV).</b> Quality Control Engineer. Bridge Design Engineer.

## **8. KEY QUALIFICATIONS**

Over 30 years, experience in the field of Highway/Transportation/Geotechnical engineering, working in USA, most Latin American countries and The Caribbean, in design and project management positions, providing Technical Assistance and Engineering Services for US federal and state agencies and for IDB, WB, EU, NDF, USAID, CAF and other international financing institutions.

### **EXPERIENCE AS A TEAM LEADER AND DESIGN MANAGER**

- Responsible of Highway design QA/QC and **Road Safety Audits (RSA's)** for Latin America operations of a leading US Engineering firm, attending multidisciplinary design projects and road safety audits for transportation related designs.
- Transportation design team leader for major projects in several countries in Latin America, always developing creative solutions to overcome the limitations in resources, logistics and technology that are normally encountered in the region. Expanded operations of a leading Top 20 US engineering firm to several countries. Opened regional offices and conducted operations in Nicaragua, Honduras, Dominican Republic, Bolivia, Colombia and Mexico.
- Former regional manager in charge of business development for Central America, The Caribbean and the Andean Region. Assisted governments in implementing complex transportation projects. Responsibilities included Program development and management, procurement, contract negotiation, financial performance and conflict resolution, with a proven record of successfully executing major transportation infrastructure programs as planned and within budget.
- Acting as Regional Manager responsible for evaluating market conditions, legal certainty and social stability, and conducting risk assessment to assist in the decision making process to expand operations to new countries in the region.
- Extensive experience in several fields of engineering practice (Geotechnical and foundations design, highway design, pavement specialist, bridge design, waste management and disposal facilities and land titling). Directly involved in technical aspects of the design process, playing a hands-on role to help integrate and motivate design teams. Strong experience in construction oriented to developing “constructible” designs and to solving construction problems for clients.
- Extensive experience in Project Account Management to prepare preliminary project estimates, budget control and estimates to complete. Proven record in managing financially health projects with acceptable gross margins and sound profits.

### **SPECIFIC BACKGROUND AND SKILLS**

#### ***Professional Background***

- Road and pavement design and supervision

- Bridge conceptual and functional design and supervision
- Pavement design
- Road Safety Auditing
- Waste management facilities (Design, Closure and Supervision)
- Geotechnical specialist
- Design and Supervision of coastal structures (jetties, quays, embankments, revetments and breakwaters).
- Stabilization Technologies (Dynamic compaction, vibroflotation, preload, deep grouting, wick drains)
- Geotechnical design, construction and monitoring of soil and rock embankments

### ***Management Background***

- Extensive experience as team leader, mentor for junior engineers to develop their skills for specialization and future managing responsibilities.
- Excellent written and oral communication skills in Spanish and English. Former faculty in two universities in the US. Active participant as speaker in congresses, seminars and other international technical events. Regularly reporting and informing to senior staff in the firm and maintaining discussions with representatives of financial institutions.
- Strong capabilities to establish business partnerships and procure services required to deliver complex highway and other transportation projects. Maintains valuable contacts from former partnerships and subcontractors in several countries in the region. Able to develop, integrate and price proposals for Infrastructure projects, with the participation of technical teams when required. Particularly demanding in not only the technical details of a proposal but also in aspects of quality of presentation and use of language.
- Vast experience in conducting business and aware of the skills needed to attend critical and functional requirements to complete a mission. Clear understanding of how businesses operate in the region, particularly under local cultural influences and conditioning factors.
- Strong reputation for bringing to conclusion very complex projects, not only due to technical and logistical difficulties, but also due to strong social complexities and conflicts encountered in certain regions.
- Budget and resources limitations always present in decentralized operations in developing countries require a high level of organization and resourcefulness. Experienced in carrying out projects that require effective and efficient coordination of scarce and limited resources. This requires working on multiple tasks at once while foreseeing and anticipating problems that could affect the outcome.

### ***Road Safety Audit Team Leader Background***

- Responsible in charge of conducting internal RSA's for all highway design projects executed within the LAC division.
- Participation in Seminars and Congresses as a speaker, presenting topics related with Road Safety Auditing issues.
- Cooperated with the Road Safety Committee of the IRF for implementation of a worldwide program for RSATL certification based on the state of the art procedures and accepted practices.

**RELEVANT EXPERIENCE IN DESIGN MANAGEMENT AND RSA FOR TRANSPORTATION INFRASTRUCTURE PROJECTS**

**Position: Engineering Consultant**

**USA**

Position : Lead Geotechnical Specialist  
Period : 2020 - Present  
Project : "Gordie Howe International Bridge"  
Client : WDBA

Main responsibilities: Responsible in charge for providing technical support to geotechnical and foundations related activities (preload PVD consolidation, stability of deep excavations, TERS, pile foundations), to the Construction JV team executing the main cable stayed bridge, Port of Entry complex and Interstate Highway connection viaducts.

**Panama**

Position : Road Safety Auditor  
Period : 2020  
Project : "Programa de Apoyo al Desarrollo de la Conectividad Territorial de la Región Occidental y Central del Panamá"  
Client : Inter-american Development Bank (IADB)

Main responsibilities: Technical assistance to the Ministry of Public Works (MOP) for implementation of Road Safety Audits (RSA) and Road Safety Inspections (RSI).

**Panama**

Position : Road and Bridges Consultant  
Period : 2020 - Present  
Project : "Programa de Apoyo al Desarrollo de la Conectividad Territorial de la Región Occidental y Central del Panamá"  
Client : Inter-american Development Bank

Main responsibilities: Technical assistance to the IDB and MOP for peer review of designs and evaluation of construction practices.

**Mexico**

Position : Transportation Consultant  
Period : 2020  
Project : "Design and Construction of ICAVE Container Terminal in Veracruz"  
Client : China Communications and Construction Company Ltd. (CCCC)

Main responsibilities: Technical assistance for project closure.

**Position: Chief Engineering Manager for LAC Region**

**Mexico**

Position : Project Manager  
Period : 2018-2019  
Project : "Phase 1 Expansion of Container Terminal for the Port of Veracruz, Mexico"  
Client : Hutchison Ports - ICAVE

Main responsibilities: Supervision superintendent for construction of port facilities, consisting of Quay, Containers Yard and Buildings.

**Panamá**

Position : Project Manager/Geotechnical Design Specialist  
Period : 2017-2018

Project : "Design of Marine Structures for the Cruise Port of Panamá in Amador"  
Client : CHEC  
Main responsibilities: Design Manager/Geotechnical Design Specialist" Design of Revetment for hydraulic fill, breakwater and Mooring Jetty for the cruise port.

**Panamá**

Position : Project Manager/Highway Design Specialist  
Period : 2016  
Project : "Design of Pavements applying Rubblizing Technology for the project Santiago – Viguí. Panamerican Highway"  
Client : Odebrecht, Inc.  
Main responsibilities: Design Manager/Pavement Design Specialist". The technology of rubblized concrete pavements was applied together with micro-cracked cement treated granular bases for 72km roadway.

**Panamá**

Position : Project Manager/Pavement Specialist  
Period : 2016  
Project : "Evaluation of Early Failure of Flexible Pavement for the road Divisa - Chitré"  
Client : Roggio Panamá, Inc.  
Main Responsibilities: Project Manager/Pavement Specialist/Forensic Engineer. Investigation of pavement mix design and construction process for a road section exhibiting early deterioration.

**Colombia**

Position : Project Manager/Pavement and Bridge Design Specialist  
Period : 2015 - 2016  
Project : "PPP for Design of de Cundinamarca Oriental Corridor"  
Client : SBI International, Inc.  
Main Responsibilities: Project Manager/Geotechnical and Pavement specialist for the design of a 154 Km corridor under PPP contract. RSA for the modernization of 65 Km of existing alignments, for 93 Km of a new corridor and for the functional design of 12 bridges.

**Panamá**

Position : Project Manager/Geotechnical and Pavement Specialist  
Period : 2013 – 2014  
Project : "Design of Widening of Amador Causeway"  
Client : ININCO, SA.  
Main Responsibilities: Project Manager/Geotechnical Specialist for design of a marine fill for widening of the Amador Causeway Boulevard on the seashore of Panama City. RSA for the new design involving a touristic boulevard with intense interaction between road traffic and pedestrians.

**Panama**

Position : Project Manager/Sr. Geotechnical and Bridge Engineer  
Period : 2013  
Project : "Design of Five Bridges in Chiriquí"  
Client : ININCO, SA.  
Main responsibilities: Design Manager/Geotechnical Specialist for the design of five single-span (30m to 49m long) bridges. RSA for the design of new approach alignments.

**Panama**

Position : Project Manager/Sr. Geotechnical and Bridge Engineer  
Period : 2013-2014  
Project : "Design of Urban Overpass at Av. Santa Elena - Chanis"

Client : Odebrecht Construction Co.

Main responsibilities: Design Manager/Bridge Specialist for the design of two viaducts at Av. Sta. Elena and Av. Arango. RSA for the design of urban boulevard and overpasses.

**Panama**

Position : Project Manager/Sr. Geotechnical and Bridge Engineer

Period : 2012 - 2013

Project : "Design Peer review of Marine Viaduct around Casco Antiguo, Panamá – Cinta Costera II – Los Poetas Avenue"

Client : Odebrecht Construction Co.

Main responsibilities: Project Manager/Geotechnical & Bridge Specialist. Revision of conceptual and functional design of the bridge structure.

**Panama**

Position : Sr. Geotechnical Engineer

Period : 2011 - 2012

Project : "Engineering Services for the Final Design of Third Bridge across the Canal at the Atlantic Side"

Client : Panama Canal Administration (ACP)

Main responsibilities: Design Manager/Geotechnical Specialist. Geotechnical/geological specialist for establishing the subsurface investigation program, geotechnical and geological studies and design of foundations for the main bridge across the Panama Canal, for access viaducts and connecting roads. Conducted the RSA for road intersections and more than three Km of bridge structure.

**Panama**

Position : Project Manager/Sr. Geotechnical and Highway Engineer

Period : 2011 - 2012

Project : "Design of Via Cincuentenario Ave. at Panama Viejo"

Client : Odebrecht Construction Co.

Main responsibilities: Design Manager/Geotechnical and pavement Specialist. Design of two bridges and design of erosion control structures for Río Abajo. RSA for the new design involving a touristic boulevard with intense interaction between road traffic and pedestrians.

**Company : Louis Berger**

**Position in the Firm : Engineering Manager for Latin America & The Caribbean (LAC)**

**Bolivia**

Position : Country Manager

Period : 2010 - 2011

Project : Program Management "Development of a Risk Management Program for La Paz – Cotapata – Santa Barbara road"

Client : Bolivian Highway Admin. (Funds IDB)

Main responsibilities: Project Manager/Highway Specialist. Road Safety Evaluation and Diagnosis, including evaluation of accident records for identification of "Black Points" or Accident Concentration Sections.

**Bolivia**

Position : Country Manager

Period : 2010 - 2011

Project : Program Management "Implementation of a Road Reference System"

Client : Bolivian Highway Admin. (Funds IDB/ NDF)

Main responsibilities: Project Manager/Highway Specialist. Implementation of a new Road Reference System for the entire Bolivian Road Network.

**Bolivia**

Position : Private Consultant  
Period : 2010  
Project : Road Safety Evaluation and Diagnosis for Caracollo – Vila Vila – Empalme La Angostura – Colomi road. 215 Km.  
Client : Private Contractor  
Main responsibilities: Road Safety Evaluation Team Leader

**Bolivia**

Position : Country Manager  
Period : March, 2009 - 2010  
Projects : Program Management “Road Inventory for the Fundamental Road Network/ Risk Management for Roads”  
Client : Bolivian Highway Admin. (Funds IDB/ NDF)  
Main responsibilities: Project Manager/Highway Specialist. Road and bridge inventory and structural assessment of over 16.000 km of roads and 780 bridges of the Bolivian Road Network.

**Guyana**

New Amsterdam  
Position : Highway and Bridge Specialist  
Project : Road and bridge rehabilitation, New Amsterdam – Moleson Creek coastal road.  
Client : Ministry of Public Works  
Funding : IDB  
Period : July 2008  
Main responsibilities: Highway Specialist in charge of condition survey and structural evaluation of over 40 concrete drainage structures (bridges, sluice gates and culverts) along the road.

**Nicaragua**

Position : Highway and Bridge Specialist  
Project : Road and bridge rehabilitation of “Acoyapa – San Carlos” paved road.  
Client : Ministry of Transportation and Infrastructure (MTI)  
Period : 2006  
Main responsibilities: Pavement Specialist in charge of condition survey of bridges and geotechnical and materials investigation for pavement design.

**Dominican Republic**

Position : Highway and Bridge Specialist  
Project : Pavement and bridge rehabilitation for “Nagua-Sanchez-Samana” coastal road.  
Client : “Autopistas del Nordeste” Concession  
Period : July 2007  
Main responsibilities: Pavement Specialist for pavement design using full depth reclamation technology. RSA for performance evaluation of four corridors of the concession.

**Company** : **The Louis Berger Group, Inc.**  
**Position** : Director of Cadaster and Land Reform Services for Latin America

Project manager for land reform related, multimillion-dollar projects in different countries in the region. Company representative during contract negotiations with government officials and financial institutions.

Representative projects:

**Dominican Republic**

Position : Project Director  
Project : "Cadaster Land Surveying and Titling for Irrigation Zone "YSURA", "NIZAO - VALDESIA" and "PRYN I"  
Client : Instituto Nacional de Recursos Hidráulicos (INDRHI)  
Funds : World Bank  
Period : October 2001 – September 2002  
Amount : US\$ 1,520,000.00  
Main Responsibilities: Project Director; land surveying and data processing for cadaster and titling of over 9,672 parcel units within irrigation areas.

**Nicaragua**

Position : Project Manager  
Project : "Cadaster Land Surveying and Rural Land Titling of 708,000 Mz."  
Client : Oficina de Titulación Rural (OTR)  
Period : October 1997 – June 2000  
Main Responsibilities: Project Director, coordination of land surveying and data processing activities for preparation of cadastral plans.

**Nicaragua**

Position : Project Manager and Geotechnical Specialist.  
Project : Identification and Construction of 380 Monuments for First Order Plani-altimetric GPS Network.  
Period : 1999  
Client : Instituto Nicaragüense de Estudios Territoriales (INETER)  
Amount : US\$ 450,000.00  
Main Responsibilities: Project Director and Geotechnical Specialist for evaluation of soil conditions at each site selected for construction of monuments.

**Company** : **The Louis Berger Group, Inc.**  
**Position** : Director of Engineering Services for Central America and The Caribbean

**Panama**

Position : Geotechnical Specialist  
Project : Design of Centenario Bridge over the Panama Canal at Galliard Cut.  
Client : Administration of the Panama Canal (ACP)  
Period : 2001  
Main Responsibilities: Geotechnical specialist for establishing and implementing the subsurface investigation program, geotechnical studies. Foundation design for bridge main cable stay towers.

**Brazil**

Position : Highway Specialist  
Project : Design evaluation and preparation of a Due Diligence Report for the Autopista Litoral Norte, State of Bahia.  
Client : Interamerican Development Bank  
Period : May 2001  
Main Responsibilities: Highway consultant; evaluation of design documents, characteristics and quality of construction, materials used and compliance with project schedule established for the project. Preparation of Due Diligence Report.

**Jamaica**

Position : Highway Specialist

Project : Preliminary Design and preparation of the Bill of Quantities for bid proposal Concession of "Highway 2000".  
Client : Dragados Cia. Constructora  
Period : December 2000 - March 2001  
Main Responsibilities: Tender documents evaluation, plani-altimetric survey, preliminary pavement design, estimation and preparation of Bill of Quantities and final design methodology for bid proposal.

**El Salvador**

Position : Soils and Pavement Specialist  
Project : Design of Rehabilitation Road " San Ignacio – Río Chiquito – Las Pilas "  
Client : Ministerio de Obras Públicas (MOP)  
Period : 2001  
Main Responsibilities: Geotechnical Specialist in charge of slope stability analysis and recommendation of stabilization technologies to be used in rock cuts. Design of Cobblestone pavement for very steep slopes.

**Bolivia - Chile**

Position : Soils and Pavement Specialist  
Project : "Mina San Cristobal – Ollagüe – Chiu Chiu Road".  
Client : APEX Silver Mines Corp.  
Period : August 2000 - May 2001  
Main Responsibilities: Value Engineering - Highway Specialist for design peer review, at the request of financial institutions funding the project.

**Nicaragua**

Position : Project Manager, Soils and Pavement Specialist  
Project : "Design of Rehabilitation of Pavement for "Las Piedrecitas – Izapa ", "Santa Rita – Izapa ", " Chinandega – Potosí " & " Telica – San Isidro highways". Total length; 260 Km.  
Client : Ministerio de Transporte e Infraestructura (MTI)  
Period : August 2000 - May 2001  
Amount : US\$ 1,500,000.00  
Main Responsibilities: Geotechnical studies for pavement and bridge foundation design.

**Nicaragua**

Position : Director of Supervision and Quality Control  
Project : Rehabilitation of Port of Corinto.  
Client : Empresa Portuaria Nacional (EPN)  
Period : February 2000 – March 2001  
Main Responsibilities: Director and Geotechnical Specialist for sheet pile and marine pile construction.

**Nicaragua**

Position : Director of Supervision and Quality Control  
Project : Dredging of the Port of Corinto and Beach Nourishment.  
Client : Empresa Portuaria Nacional (EPN)  
Period : 1999  
Amount : US\$ 800,000.00  
Main Responsibilities: Project Director and Geotechnical Specialist for supervision and quality control activities at the port. Suitability study of dredged material for beach nourishment.

**Nicaragua**

Position : Highway and Pavements Specialist  
Project : Rehabilitation of roads "San Benito – Sébaco – Estelí – Yalagüina – El Espino" & "Tipitapa – Nandaime".

Client : EDICO Ingenieros Consultores  
Period : 1999  
Amount : US\$ 15,000.00

Main Responsibilities: Highway specialist for pavement design using hot mix asphalt.

**Nicaragua**

Position : Project Manager and Foundations Specialist  
Project : Design of Bridge at Paso Caballos  
Client : Ministerio de Transporte e Infraestructura (MTI)  
Period : 1999  
Amount : US\$ 100,000  
Length : 225 m

Main Responsibilities: Project Director, Geotechnical and Highway Specialist for final design of bridge and construction detour. In charge of subsurface investigation and foundation design using shafts.

**Guatemala**

Position : Highway and Materials Consultant  
Project : Construction of Panamerican Highway CA-1 at “Los Encuentros – Cuatro Caminos”  
Client : P&A Ingenieros Consultores (Supervision).  
Period : 1996

Main Responsibilities: Evaluation of 58 km of pavement structure and preparation of alternative design using hot mix asphalt.

**Panama**

Position : Soils and Highway Specialist.  
Project : Design-Build Rehabilitation of Panamerican Highway “Cañazas - Santa Fé – Canglón”  
Client : José Cartellone C.C.  
Period : 1996

Main Responsibilities: Preliminary Studies for design and material sources recognition for Bid Proposal.

**Panama**

Position : Pavement Specialist.  
Project : Rehabilitation of Panamerican Highway “El David – Concepción”  
Client : José Cartellone C.C.  
Period : 1996

Main Responsibilities: Alternative pavement design for utilization of local materials.

**RELEVANT EXPERIENCE IN MANAGING TRANSPORTATION INFRASTRUCTURE PROGRAMS**

**Bolivia**

Position : Director of Technical Assistance Program  
Period : 2004 - 2009  
Projects : Program Management for the Inter-oceanic Corridor “Santa Cruz-Puerto Suarez”/  
Client : European Commission/Bolivian Highway Admin. (Funds: EU)

Main responsibilities: Program Manager/Highway Specialist. Design revision, highway design, quality assurance for concrete pavement and precast bridges. Institutional strengthening and transference of technology to the Highway Dept. Implementation of a Road Maintenance System. Risk analysis and assessment of roads.

**Honduras**

Position : Director of Supervision and Quality Control  
Project : Technical Assistance for Rehabilitation of Rural Roads for the Departments Yoro & Atlántida.  
Client : USAID/RECAP/FHIS  
Period : February 2000 – December 2001  
Main Responsibilities: Design, supervision and quality control of Rehabilitation of rural roads and bridge structures.

**Guatemala**

Position : Director of Technical Assistance (1<sup>st</sup> Stage)/Geotechnical and Highway Consultant  
Project : Technical Assistance for Road Rehabilitation Program  
Client : Dirección Nacional de Caminos (IADB Program)  
Period : 1996  
Main Responsibilities: Geotechnical and Highway Specialist for road rehabilitation program. Revision of pavement designs for the program.

**Nicaragua**

Position : Director of Technical Assistance/Geotechnical and Highway Specialist  
Project : Technical Assistance for Rehabilitation of Rural Roads. Programa “REMECAR”  
Client : Ministerio de Construcción y Transporte (IADB Program)  
Amount : US\$ 3,800,000.00  
Period : 1996-1998  
Main Responsibilities: Program Manager and Geotechnical and Highway Specialist for revision of road and bridge design, evaluation of geotechnical studies and assistance for solving construction problems of over 20 projects financed by IDB and NDF.

**1. Other Positions Held**

**Company** : **ARCEPC, Consulting Engineers**

**U.S.A.**

**Position** : Project Geotechnical Engineer  
**Period** : 1990 - 1996

**Main Responsibilities:** In charge of Geotechnical studies and Quality Control, including preparation of boring programs, monitoring of drilling and sampling work and evaluation of results, for diverse engineering projects (buildings, bridges, landfills, dams, machine foundations). A description of the main projects follows:

- Design of earth supporting structures. Bridge over Deepaval River. Township of Fairfield, New Jersey. Design of steel sheet pile cofferdam for excavation support during bridge abutment construction. Design of cantilever sheet pile wall for riverbank stabilization. Project Amount: US\$9.0 million.
- Design of access roads and bridge over Morris Canal. Township of Bloomfield, New Jersey. Design of cofferdam for abutment construction. Project Amount: US\$5.0 million.
- Design of sheet pile cofferdams for bridge abutment. Bridge over Libertyville road. Township of Wantage. Sussex County, New Jersey. Project Amount: US\$7.5 million.
- Design of complex foundations. Building No. 200. Veteran Administration Medical Center, Northport, Long Island, NY. Design and construction monitoring of predrilled steel shafts under different load conditions and designed to produce uniform settlement. Project Amount: US\$32.0 million.

- Design of complex foundation. Biological Incinerator, Merck & Co., Rahway, New Jersey. Design of combined foundation over timber piles for a stack and silo. The structure was subjected to extreme torsion due to the different length and weight of both structures, subjected to the effect of hurricanes. Project Amount: US\$ 5.5 million.
- Design of special machine foundation. 4000 Tons forge press, Special Metals Corp., Dunkirk, New York. Geotechnical and structural design of foundation including geophysical studies to determine dynamic response of structure under vibrations. Project Amount: US\$12.0 million.
- Foundation design for Chemical Waste Collection System. Merck & Co. Inc. Rahway, New Jersey. Design and construction quality control of soil-lime mixes for soil stabilization under a concrete "super flat" floor slab.
- Design of rehabilitation of earth embankment dam. Apshawa Dam, Passaic County, New Jersey. Design of dam rehabilitation for embankment and main spillway Embankment elevation using geogrids. Project Amount: US\$1.0 million.
- Director of Material Testing Laboratory and Safety Officer for radioactive equipment. Responsible of supervision of personnel operating nuclear density gauges.
- Pile driving monitoring. Driven and pre-drilled piles load tests. Elevated chemical sewer, Merck & Co. Inc. Rahway, New Jersey. Timber pile driving inspection and vertical and lateral load tests for support foundations. Project Amount: US\$8.0 million.
- Pile driving control. Substations No. 200 y 201A. Merck & Co. Inc. Rahway, New Jersey. Control of timber pile driving and load tests for building foundations.
- Load test on shafts. Building No. 200. Veteran Administration Medical Center (VAMC). Long Island, NY. Load tests using Osterberg cell, with the purpose of design verification of shafts. Project Amount: US\$32.0 million.
- Forensic Engineering for several projects in New York and New Jersey. Evaluation of retaining wall failures, landslides, foundation settlements, early deterioration of concrete structures to determine possible causes of failure under court procedures.

**Company** : **CABE Construcciones, S.C**

**ARGENTINA**

**Position** : Project Engineer

**Period** : 1987 - 1990

**Main Responsibilities:** Resident and design engineer, responsible of construction project management of precast concrete bridges. A description of the main projects follows:

- Resident Engineer. Design-build of a 60 m precast concrete bridge over Rio Salado, Villa Figueroa, Santiago el Estero. Bridge construction included river flow detour using pushed earth embankments, embankment stabilization, and erosion control and gabion construction on both margins. Project Amount: US\$3.5 million.
- Resident Engineer. Design-build of a 30 m Bridge over Río Urueña, Nueva Esperanza - 7 de Abril road. Construction of pre-drilled concrete shafts, precast structure assembling, water stream detour.
- Resident Engineer. Design-build of four Bridges over Río Salado, Route 92. Construction project management and design of concrete sheet piles for abutment. Project Amount: US\$5.0 million.
- Resident Engineer. Design-build for rehabilitation of two 60 m Old Railroad Bridges over Rivers Dulce and Utis, Sumampa – Pinto Road, Santiago del Estero, Argentina. Structural evaluation of old steel truss railroad bridges and further replacement of superstructure using precast concrete beams for use as a road bridge. Project Amount: US\$6.0 million.

**Company** : **FACASA - Minaclar**

**Position** : Consulting Engineer

**Period** : 1986

**Main Responsibilities:** Materials Testing Engineer. Directed an investigation to produce lightweight concrete using expanded perlite as aggregate.

**Company** : **State Highway Department (CPV)**

**Position** : Supervision Engineer

**Period** : 1983 - 1987

**Main Responsibilities:**

- Supervision of Highway and Bridge projects. Materials characterization for roads and highways, structural evaluation of pavements, geometric design of highways.
- Materials Characterization Program. Material evaluation from different quarries and borrowing areas throughout the province to determine suitability as construction materials, based on different specification requirements.
- Highway bypass between Routes N° 9 and 208. Structural evaluation of asphalt pavement and estimation of serviceability index to determine causes of early damage.
- Bridge construction supervision. 70 m Precast Concrete Bridge over Río Salado “El 30”, Santiago del Estero. Route N° 25. The project included construction and operation of a barge to maintain traffic during construction.
- Bridge construction supervision. 35 m bridge over Río Urueña “El Remate”, Santiago del Estero. The project included construction of gabion abutments and riverbank stabilization.
- Highway intersection at Routes N° 9 and N° 6 “Villa San Martín”, Santiago del Estero. Geometric design of an “at grade” intersection for a new alignment of San Martín – Laprida road.
- Pavement design for Route 16, “Los Jurés - El Colorado”, Santiago del Estero. Design of a soil – lime stabilized base to permit the utilization of local high plasticity saline soils. Construction supervision for the project. Project Amount: US\$6.0 million.

## **FACULTY POSITIONS**

- **2012 – 2018**, Guest professor for City of Knowledge Education Program, Panama.
- **2009**, Professor. Conceptual and Functional design of Highway Bridges. Master’s degree program, UNMSA, Bolivia.
- **2007**, Professor. Health and Safety in Highway Construction. Master’s degree program, UMSA, Bolivia.
- **2006**, Professor. Soil Stabilization Technologies. Master’s degree program, National University of Santiago del Estero, Argentina.
- **1996**, Adjunct Professor: Soil Mechanics. Stevens Institute of Technology, New Jersey, USA.

- **1995-96**, Adjunct Professor: Soil Testing. Soil Mechanic. Construction Safety – OSHA 40 Hours Training. New Jersey Institute of Technology, New Jersey, USA.
- **1990**, Adjunct Professor: Bridge Design. Engineering School, National University of Santiago del Estero, Argentina.
- **1983**, Adjunct Professor. Surveying I y II. Engineering School, National University of Santiago del Estero, Argentina.

## **PARTICIPATION IN CONFERENCES**

- Speaker. “Road Safety in Panama and the UN Decade of Action” Road Safety Lectures. Technological University of Panamá. 2017.
- Speaker. “Safety Design in Road Duplication Projects” Road Safety Lectures. Technological University of Panamá. 2017.
- Speaker. “Sustainable Road Safety Management”. XIII National Civil Engineering Congress. Panamá. October 2016.
- Speaker. “The Widening of the Amador Causeway. Road Safety Design Features Applied. XXXV Pan-American Convention of Engineering. Panamá. October 2016.
- Speaker. “Inventory and Auscultation of Roads and Bridges for Infrastructure Management of Road Networks”. 4º Latinamerican Regional Conference. International Road Federation (IRF). Lima, Perú. September 2014.
- Speaker. “Highway and Foundation Design for the 3er Crossing over the Panama Canal. Design Challenges and Conditional Factors”. Technical Conference SPIA-ASCE. National Technological University of Panama. June, 2013.
- Speaker. “Evaluation and Assessment of Road Embankments for Rigid Pavements”. XII National Congress of Civil Engineering. Panamá. October de 2016.
- Instructor for the Road Management Program. “Structural Design of Flexible Pavements”. Management of the National Road Network of Bolivia Program. Bolivian Roads Administration (ABC). Bolivia. 2009.
- Speaker. “Evaluation and Assessment of Road Embankments for Rigid Pavements and Its Effect in Design Criteria – Case Study”. 2da Latinamerican Regional Conference. International Road Federation (IRF). Lima, Perú. August 2008.
- Speaker. “Program Management Teams, Effective Tools for Success in Implementation of Road Infrastructure Programs”. 1<sup>st</sup> Latin-American Regional Conference. International Road Federation (IRF) Fort Lauderdale, Florida, USA. 2007.
- Speaker. “Construction of Sustainable Roads. Use of Materials from Waste Separation in Road Construction”. Landscaping, Ecological and Environmental Society of Architects. Bolivia. 2006.

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