Víctor Alejandro Barría

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EXPERIENCE

Solid academic experience based on a distinguished career in teaching and a permanent training through participation in courses with the most prestigious national and international specialists in technical and managerial aspects.
Vast experience in engineering projects of various types, such us:, Petroleum Refineries and Petrochemicals & Chemical, Oil & Gas, Power Plants, Power Transmissions, Infrastructure Facilities (subways, commercial and industrial buildings), Ports, Dams, tunnels.
Experience in conceptual, feasibility studies, basic and Front- End Engineering Design, detail engineering, construction supervision, engineering procurement and construction. Commissioning and start-up assistance.
Knowledge of project management according to Project Management Institute (PMI) philosophy based on its implementation in various projects and companies.

STRENGHTS

Deep *understanding of problems concerning inter-disciplinary projects.*

Experience *in working with international codes, implementation of quality standards and compliance with them; leadership of inter-disciplinary teams.*

Professionalism *to dealing with complex situations.*

Ability *to motivate a positive behavior, to achieve the goals of and organization, to generate projects and to re-plan activities.*

Excellent *communication skills, interpersonal relationships, resolution of problems, understanding of client needs and business orientation.*

Learning *ability to understand new ideas, concepts, methods and techniques.*

Fluency *in oral and written English.*

Expertise *for negotiation, decision making, proposal of specific actions and implementation of corrective measures.*

OTHER DATA

- ***Nationality:*** *Argentinian.*
- ***Date of Birth:*** 30-05-1970.
- ***Marital Status:*** Married
- ***Children :*** 2
- ***Age:*** 43

PROFESSIONAL EXPERIENCE

Company: CICP (Consultores Internacionales Canal de Panamá) Consultores internacionales LLC Panamá. April 2011 up to present

Position: Civil & Structural Coordinator

Project: Third Set of Locks for the Expansion of the Panama Canal. Panama.

The Panama Canal Expansion Program broke ground in September of 2007, after overwhelming approval by a public referendum.

The **Program** involves **two new Post-Panamax lock complexes (Third Set of Locks),** the deepening of the Pacific and Atlantic Canal entrances, the deepening of Culebra Cut, the widening and deepening of the Gatun Lake navigational channel and raising Lake Gatun to its maximum operational level.

The design-build contract for implementation of the Third Set of Locks project was awarded by the Panama Canal Authority (ACP) to international consortium Grupo Unidos Por el Canal (GUPC) in July 2009. Providing support to GUPC for design joint venture, CICP Consultores Internacionales, LLC, in partnership with California-based MWH - TetraTech and Iv-Infra of the Netherlands.

The $5.25 billion Expansion Program is scheduled to be completed in 2014 – coinciding with the 100-year anniversary of the opening of the original Canal.

Main design aspect:

- **Lock walls:** The cost-effective lock wall designs incorporate foundation drains that reduce the hydrostatic and hydrodynamic loads, enabling more efficient structures that achieve the performance goals for strength and durability.
- **Seismic design:** Using state-of-the-art seismic analysis techniques, MWH is developing lock wall configurations that meet stringent seismic criteria at minimum cost.
- **Water consumption:** Water saving basins – the largest in the world – are designed to reuse 60 percent of the fresh water consumed for lockages, with an optimized filling and emptying system that meets aggressive performance criteria for system efficiency and throughput.
- **Integrated operations and controls:** Through optimum design of operational features and control systems, lock operations will be seamless and efficient. Through MWH's innovative designs - lock operating gates for rapid opening and closing, an efficient filling and emptying system based on innovative hydraulic design, and state-of-practice control technologies – system safety, efficiency and throughput are maximized.

Functions:

Planning and coordination of all the design centers (Chicago-Buenos Aires-Rotterdam-Bellevue) for both Atlantic and Pacific Sides. Strict compliance with base budget and schedule. Assistance to the Construction Joint Venture GUPC (Grupo Unidos Por el Canal).

Main Responsibilities:

Lead project decisions regarding technical approaches, project budget cost, scheduling, performance and metrics.
Create and update procedures, guidelines and specifications to incorporate the best design management techniques.
Submit periodic reports to Project Manager and Design Manager on technical aspect performance, projections, costs and schedule updates.
Coordinate design work within the various disciplines (structural, civil, hydraulic, architecture, piping, electrical and mechanical) across the affected work areas.
Coordinate with and among the all CICP design centers (Chicago-Buenos Aires-Rotterdam-Bellevue).
Supervise the engineering and construction office during the As-built Plans phase of the Work.
Coordinate the design within each Design Center with Project Integration Office (PIO) of GUPC and Design Integration Office (DIO) of CICP in Panama.
Coordinate communication and design between Design Centers (Buenos Aires, Chicago, Bellevue and Rotterdam) and PIO.
Responsible of timely completion of Design Center Work and managing budgets.
Support and supervision to Quality Assurance Engineers with making the daily field reports, non-conformance reports, and response to request for information from PIO of GUPC.
Establishment of all policies and particular procedures for Shop Drawing Department from DIO.
Support to GUPC with different construction alternatives or stages and construction sequencing support, construction estimating. Technical/design support, providing field engineering to support issue resolution due to unforeseen site conditions, design irregularities or constructability issues.

Company:. MWH ARGENTINA. S.A. Buenos Aires. September 2009 to March 2011

Position: Civil & Structural Team Leader

Functions:

To plan, establish civil criteria, assign resources, coordinate and monitor the activities of the project specialty.

Project: Third Set of Locks for the Expansion of the Panama Canal. Panama.

Main Responsibilities:

Analysis of the technical and economic initial information of the project offer given by the Project Manager and notification of inconsistencies and/or design changes with respect to the offer.

Planning of specialty activities according to the WBS (Work Breakdown Structure), coordination with the rest of the specialties. Development of histograms of preliminary resources. Management and coordination of suppliers.

Project: Extension of Spillway Brazo Aña Cuá. Yaciretá. Binational Entity of Yacyreta.

Añá Cuá project is a new development on one of the two Yacyretá spillways on the Añá Cuá branch of Paraná River. It is located in South America, on the border between Argentina and Paraguay. The focus of this project is to recapture an additional 273 MW of energy from the ecological flow currently spilled by

the dam, which will produce 1,700 GWh/year of energy production, and to add a fish passage upstream. Five 54.6 MW bulb units, housed in a powerhouse inside of the spillway stilling basin, have a maximum design flow of 1,850 m^3/s and a net head of 18.2 m. The Project will require 54,000 m^3 of rock excavation, construction of a 155,000 m^3 concrete structure, and 7,000 tons of steel rebar.

The dual-purposed-design of the structure is unique; it will fulfill the requirement of minimizing the spilling capacity of the modified gate bays and the turbine water passages will add to the power generating capacity. The location of the powerhouse imposes the need for it to be built inside the spillway-stilling basin, within a cofferdam, protected from the reservoir by Tainter gates and protected from the tail water by a combination of loose materials and cellular cofferdams. The placement of the five units block into the existing structure of the spillway and a minimum intervention on the wing walls will require that the access to the powerhouse and the electrical tie to both countries interconnected systems, be accomplished by means of bridges spanning across the spillway piers.

In late 2009, the Owner retained MWH and two National Argentine Universities to perform concept studies and develop alternatives for new hydro development options. The project team analyzed three variants of the hydroelectric powerhouse; because of the studies, an innovative, compact, and economical feasible solution was proposed and has been further developed jointly by MWH and the Universities, with MWH as the lead designer.

The design services to be provided by MWH include conceptual design, bid design and specifications, and civil, mechanical and electrical detailed drawings. MWH also prepared project cost estimates for civil, electrical and mechanical works.

Main Responsibilities:

Establishment of premises, considerations and design criteria for the use of the existing spillway of Yaciretá Dam.

Design and analysis of alternatives for the use of the existing spillway.

Company :. INELECTRA ARGENTINA. S.A. Buenos Aires. 2007 to August 2009.

Position – Deputy Civil Manager of the Engineering Civil Department

Overall management responsibility for the engineering, technical direction and management of the Civil, Structural and Architectural Departments; by allocating, supervising, coordinating, manpower resource, directing preparation of project deliverables by engineers and draughtsmen and mentoring the structural engineering activities.

Delivering fully integrated Oil & Gas solutions, with a broad range of skills encompassing engineering, design, construction, operations, management and resourcing.

Projects

Project: Refinery Ricardo Elicabe – Client Petrobras – Location Bahia Blanca, Argentina.

The scope of the project between PETROBRAS and the Joint Venture (INELECTRA and Andrade Gutierrez) consists in the following technical requirements:

a) Provision of the Basic Engineering Design (BED) Extended (FEL 3) that includes the Basic Engineering of the –

- Unit of Diesel Hydro-Treatment (HDT), with approximate capacity of 2600 m3/day to reduce the sulphur content to 50 ppm.
- Unit of Naphtha Hydro-Treatment (NHT), with capacity of 966 m3/day to reduce the sulphur content to 50 ppm.
- Unit of Sour Water Striper (SWS)

b) Provision of the Basic Engineering Design (BED) extended (FEL 3) of the Revamp of the Unit of Fluid Catalytic Cracking (FCC) of 1500 to 1600 m3/day (KBR technology).

c) Development of the Basic Engineering Design (BED) extended (FEL 3) of all the services included in the Outside the Battery Limits (OSBL) of the Units.

Project: Jose de San Martin – Combined Cycle Power Plant. – Client Siemens and Construcciones Termicas – Location Santa Fe, Argentina.

Engineering, design, manufacturing, procurement, construction, assembly, startup and operation authorization of 800 MW combined cycle, together with works and services.

Project executed by Siemens and the Construcciones Térmicas S.A consortium formed by Electroingeniería and INELECTRA, which subcontracted Sener for the execution of basic and detail engineering, and Duro Felguera for the international procurement.

Project: POWER PLANT based in GAS TURBINES (3x100MW) Client O.N.E. (Office National d'Electricité). Location Mohammedia, Morocco.

Project executed by General Electric and the Tecnicas Reunidas S.A. consortium formed by INELECTRA which subcontracted execution of basic and detail engineering.

The scope of civil works included the design of footings, steel structures, roads, storm drainage system and industrial waste water.

Position – Civil Team Leader

Function:

Coordination, direction and supervision of the activities of the project specialty, ensuring their timely and adequate fulfillment according to the resources foreseen in the budget.

Main Tasks:

Analysis of the initial project data submitted by the Project Manager and notification of inconsistencies or lacking elements.

Scheduling of specialty activities and submission to the Engineering Manager of the list of documents for the development of the project together with the foreseen submission deadlines.

Follow-up of the technical progress and the use of hours, according to the original estimations of terms and resources, in order to apply corrective actions on a timely basis (baseline). Detection of deviations with respect to the scope of the work and whether these deviations are within the scope of the original Project.

Generation of early alarms in case of deviations with respect to terms and budget. Coordination of the relationships of the specialty with the Client, providers and other sectors, with the acknowledgement of the Engineering Manager. Registration of all the comments which require analysis to ensure the implementation of corrective measures on a timely basis.

Coordination with the Project Manager and the Managers of other involved sectors (Building, Purchases, etc.) of the program of engineering activities that better fulfills the objectives of the project.

Report to the chiefs of other specialties of the initial data of the project and any information that may emerge throughout the project and may affect their respective designs.

Definition of critical areas (technical and commercial) and submission of guidelines for their development.

Development of technical specifications, bid analysis and follow-up of providers.

Supervision of the original estimations, the technical progress and the economic results of the project, and timely implementation of corrective measures. Detection of additional requirements of the project and implementation of the same.

Submission of the corresponding monthly report of the specialty to the Project Manager.

Drafting of the final report of the specialty Project, including all significant parameters.

Company Techint International Technical Company. S.A.C.I. Location Buenos Aires. 2006 ï 2007 and 2000 ï 2001.

Position: Civil Team Leader

Project: Hydropower project "Los Caracoles". Client Energía Provincial Sociedad del Estado (EPSE). Dam located in the province of San Juan. Argentina.

On September 3, 2004, the TECHINT-Panedile Joint Venture (JV) (75% and 25% stake, respectively) signed an agreement with Energía Provincial Sociedad del Estado in the province of San Juan that allows for the continuity of the construction of the Caracoles Hydrostation, made up by a hydroelectric power plant and a dam.

The purpose of the project, the contractual amount of which, at fiscal year-end, was USD 253.9 million, is to generate power and improve the stream-flow regulation of the San Juan River, main water resource of the province of the same name. With a power of 132 MW, Los Caracoles will provide a mean power capability of 715 GWh a year to be contributed to the wholesale power market so that it can pave the way towards San Juan's power self-sufficiency.

With a maximum volume of 565 Hm3, the dam will, in turn, increase the irrigation area by 17,000 hectares. If compared to the previous fiscal year, there was an increase in the contract amount due mainly to the changes in the scope of the works and to price variations. This project consists in the construction of a dam of loose materials with a concrete face and a volume of compacted filling of about 10 million cubic meters, with a height of 136 meters and 620 meters in length at the crest, and an area of 1,200 hectares.

The work will have a spillway in two tunnels with an average length of 420 meters, and a disposal capacity of 3,200 cubic meters/second. The hydroelectric power station has two Francis turbines of 62.5 Megawatt rated power each of Russian origin. The station will be fed from the reservoir through a 1,426-m long

adduction gallery hollowed out in the rock block and will be connected with the turbines through a forced steel pipeline with a balance shaft. The useful head of the hydrostation between the maximum reservoir regular level and the height of river tailrace at the turbines outlet is 150 meters. The project will also have a sluiceway with regulating gate chambers and an evacuation capacity of 301.2 cubic meters/second.

The power provided by the generators of the hydroelectric power station will increase its voltage at a substation, located at outlet of the power station, from where a high-voltage 132-Kilowatt and 47-Km power line will transport the power to the city of San Juan.

As of June 30, 2008, the direct headcount allocated included 1,400 people and reached a peak of 1,600 direct workers plus 400 subcontracted workers.

The main figures of the project are as follows: 910,000 cubic meters of open-cut through rocks, 180,000 cubic meters of underground drilling through rocks, 5,300,000 cubic meters of excavation through soils, 200,000 cubic meters of concrete, and 12,000 tons of steel.

The Project is located one of the zones with more seismic hazard of the Argentine Republic. According to the Specific Seismic Hazard Reports has defined a Maximum Design Earthquake (MDE) with Mw = 7.7, at a distance of 5 km from the site, with a Peak Ground Acceleration (PGA) of 1.02 g..

Project: Rabigh Refinery Expansion Project. Rabigh. Client Saudi Aramco-Sumitomo. Loacation Rabigh, Arabia Saudita.

The utilities and offsites package for the Rabigh Development Project, which consists of the upgrading to an integrated petrochemical complex of the Rabigh Refinery, located over the Red Sea coast, 160 km north of Jeddah city. The scope included a seawater intake of 90,000 m3/h, cooling water system of 300,000 m3/hour, compressed air system, sulphur pelletization unit and port facilities for petrochemical liquids, as well as Roll-on/Roll-off port facilities for the entire complex construction period.

Project: Extension of Line B of Buenos Aires City Subways. Client Gobierno de la Ciudad de Buenos Aires. Buenos Aires, Argentina.

Expansion of the Buenos Aires subway system's Line "B" , with a total length of 1,811 m. The project includes civil works in stations (Los Incas and Tronador) and tunnels. Project Value U$S 38,000,000.

Main responsibilities:

Revision of the main structural design and calculation of the projects. Development and review of technical documents.

Technical Bid Evaluations, development of technical specifications, material requisition, submission of reports to the general manager of the Project. Follow-up of the design, building and related activities of project.

Report of weekly progress to the Project Manager. Distribution and allocation of resources. Coordination and technical meeting with the client.

Preparing structural discipline man-hour estimates to perform project tasks Preparing designs, sketches and reports with supporting calculations for projects and supplying drafting staff with information to assist in the production of detailed drawings, the development of quantities, materials lists and cost estimates as required. Forecasting and allocation of resources. Supervision of a civil team.

Structural design integrity of work scope and maintenance of standards.

Liaising with suppliers, clients, consultants or commissioning engineers concerning the design, installation or construction and commissioning of assigned work.

Company Lockwood Greene. Engineering & Construction (currently CH2M Hill). 2004 ï 2006

Position – Principal Civil Engineer – Location, Atlanta Office, US.

Project – Crystal (Expansion of Sucralose Inc.) - Client Tate & Lyle – Location Jurong Island, Singapore.

Pipe racks, Building Facilities and Foundations. The facility was constructed on an 11ha site in Jurong Island in Singapore's industrial zone. The construction work on the project was managed by the Lockwood Greene (currently CH2M Hill) Asia, Pacific.
The piping includes 33km of piping material (various different materials) ranging in diameter from 20mm to 1.2m. John Zink Co LLC supplied and installed a waste heat boiler system for the new plant. The quantity of the steel was of 75tons and 5,400m² of structural decking for the project.

Main responsibilities:

Establish the structural and civil criteria for the project, assist the Project Manager. Coordination with the other specialties, manpower resources, preparation of the guidelines for the structural engineers and draughtmen. Preparation of the list of the deliverables of the project. Revision of steel shop drawings from Singapore Company. Revision of the Concrete and Rebar Shop Drawings from our offices of Asia.

Position – Civil Team Leader – Location, Buenos Aires Office, Argentina.

Projects developed in the office of Buenos Aires:

Western Emulsion Plant. Refinery Expansion. Client Sherwin Williams. Location Fernley, Nevada. U.S.

Toray Carbon Fiber Facility. INC. Refinery Expansion. Client Toray Industries. Location Decatur, Alabama, U.S.

Project BB1-BB2. Interconnecting Header (Polyethylene Plants). Petrochemical Expansion Client Dow PBBPolisur... Polisur. Industrial Park. Location Bahía Blanca. Argentina

Main tasks:

- Preparing structural discipline man-hour estimates to perform project tasks. Assist the Project Manager.
- Preparing designs, sketches and reports with supporting calculations for projects and supplying drafting staff with information to assist in the production of detailed drawings, the development of quantities, materials lists and cost estimates as required.

- Forecasting and allocation of resources. Supervision of the civil team, structural design integrity of work scope and maintenance of standards. Liaising with suppliers, clients, consultants or commissioning engineers concerning the design, installation or construction and commissioning of assigned work.

Company bai ï Ingeniería- Engineering Consulting Firm ï Wilde ï Province of Buenos Aires (Argentina). 2002 ï 2004

Position: Civil Engineer

Project: Extension of Refinery La Plata (Repsol YPF). ABB S.A.

Project: Area Huantraico – Oil Field Trapiel. Neuquén. ABB S.A.-Chevron-Texaco.

Project: Resolution 01 of 2003 of the Energy Secretariat. "ET Romang – Frame of 500 and 132 kV ", Transener S.A.

Bi-national project: Extension of High Voltage Line of 500 kV – Line Chocon Temuco. Transener S.A.

Project: Extension of six electrical substations of Lines of 400 /115kV (Saltillo, Villade García, Tepic, Guamuchil, Mazatlán, Pueblo Nuevo y Tepic). México, Techint S.A. de C.V. México

Main responsibilities:

Structural calculation and design. Development and review of technical documents.

Analysis and study of technical and economic alternatives.

Company Buenos Aires Subways State-owned Company (S.B.A.S.E) Government. Buenos Aires. 2000

Position: Civil & Structural Engineer.

Project: Extension of Line E of Buenos Aires City Subways.

Main responsibilities:

Structural design and calculation. Development of technical reports. Development of technical documents necessary for the Bid. Study of alternatives of tracings, building methods and economic evaluations.

Company del Carril - Fontán Balestra Ingenieros Asociados (Advisory and Consulting Engineers on structures).Buenos Aires (Argentina). 1999 ï 2000

Position: Civil Engineer – Coordinator of Civil Specialty.

Project: International Airport El Calafate, Province of Santa Cruz. Architectural design: Architect Carlos Ott.

Main responsibilities:

Coordinator of civil area specialties (reinforced concrete structure, steel structure, pavement, soil movements). Progress reports to the manager. Development of activities schedules, review of technical documents, coordination between the work site and the building company.

Company Armando Raúl Stescovich Ingeniería S.A (Consulting Firm on structures) Buenos Aires (Argentina). 1998 ï 1999

Position: Civil & Structural Engineer.

Projects:

Draft Project of "Ciudad Judicial" (Judicial City).

Bank Boston. Architectural Design, Architect Cesar Pelli.

More than 20 residential and commercial buildings for different architecture firms of Buenos Aires City (Mario Roberto Alvarez and Assoc., Robirosa Beccar Varela Pasinato S.A., Solsona Salaberry Sanchez Gomez arch., etc.).

Main responsibilities:

Structural calculation of reinforced concrete and steel structures. Development of technical documents (calculation sheets, material sheets) and review of drawings.

Company Alberto Giovambattista & Juan Carlos Galuppo. (Engineering Firm Specialized in Concrete Technology) Buenos Aires. Argentina.

Position: Civil Engineer

Thermal Analysis for evolution temperature into the concrete massive:

- Project: Antel – Telecommunications Tower, Montevideo, Uruguay. Mat foundations, Roggio-Stiler-American Bridge. February 1997.
- Project: Extension of Line D of the Underground, Juramento Station. Buenos Aires. Plate of the concrete (roof). INGESUB U.T.E. September 1998.
- Project: Potrerillos Dam, Mendoza. Mat foundations of the Powerhouse. José Cartellone Civil Constructions S.A. June 2000.

EDUCATION

Building Engineer. School of Engineering. National University of La Plata. La Plata, province of Buenos Aires, Argentina. 1989-1996.

Civil Engineer. School of Engineering. National University of La Plata. La Plata, province of Buenos Aires. Argentina. 1989 – 1997.

TRAINING COURSES

Management Courses

Financial Management of Projects according to the philosophy of the PMI. PMValue Institution, Organization that belongs to the Project Management Institute. 12 hours. June, 2010

Personal Skills in Project Management according to the philosophy of the PMI. PMValue Institution. 24 hours. December, 2008.
Management of Times in Projects according to the philosophy of the PMI. PMValue Institution. 8 hours. October, 2008.
Management of Scope, Requirements and WBS according to the philosophy of the PMI. Institution PMValue. 12 hours. August, 2008.
Project Management Methodology according to the PMI philosophy. Institution PMValue, organization that belongs to the Project Management Institute (PMI). 15 hours. February 2008.

Structural Courses

New Code CIRSOC 201. According to ACI 318-2002. La Plata University. April – July 2003.
Economy in the Company and Evaluation Projects. Economy Department. Buenos Aires University. April – July 2002.
Steel Structures for High Buildings. Introduction to calculation according to Load and Resistance Factor Design (LRFD) from American Institute of Steel Construction". Buildings and Structures Department. Buenos Aires University. April-June 2002.
Seminar on **"Scope and applications of Poststressing as a construction method".** November 2-3, 1998, Maccarone and Florida & Cable Buenos Aires.
Fourth World Congress on computational mechanics. June, 28 to July, 2, 1998. Argentine Association of Computational Mechanics, Spanish Association of Numerical Methods and International Association of Computational Mechanics, Sheraton Hotel Convention Center, Buenos Aires.
Finite Elements in non-linear Problems. May 27-30, 1997. University of Cuyo, Mendoza. Ph.D. Francisco Armero (Professor of Berkeley University, California)
Computational Mechanics, March –August, 1996. Buenos Aires University. Ph.D. Eduardo N. Dvorkin.
Workshop on generation of three-dimensional Mesh of Finite Elements, 9º Congress of Numerical Methods and Applications. November 6 to 10, 1995. Bariloche, Argentina.
World of Concrete. August 1997. Buenos Aires. The Aberdeen Group and ICPA.
Structural Damage. June 1995.Buenos Aires. Structural Engineering Associations.

Languages

Course on**: English as a Second Language**. Sandy Springs International Education Center. Atlanta, GA. USA- March – April, 2005.

LANGUAGES

Spanish, native language.
English, advanced level.

TEACHING EXPERIENCE

- *Buenos Aires National University.* First Assistant of the subject "Continuum Mechanics" from March, 2001 to 2010.

- *La Plata National University* Honorary Assistant Student of the subjects "Structural Mechanics III and IV" from 1994 to 1996. Honorary Graduated Assistant Professor of the subjects "Structural Mechanics III and IV", "Continuum Mechanics" and "Steel Structures" from 1997 to 1998.