

OUR FOUNDER

Carlos Otto Bonilla Barco

Structural Civil Engineer

History

A man and his dream



Studies

1946-1953

Universidad Central- Quito, Ecuador-
Civil Engineering Degree

1953- 1954

STUP Societe Technique d'utilization de
precontrainte- Paris, France

1953-1955

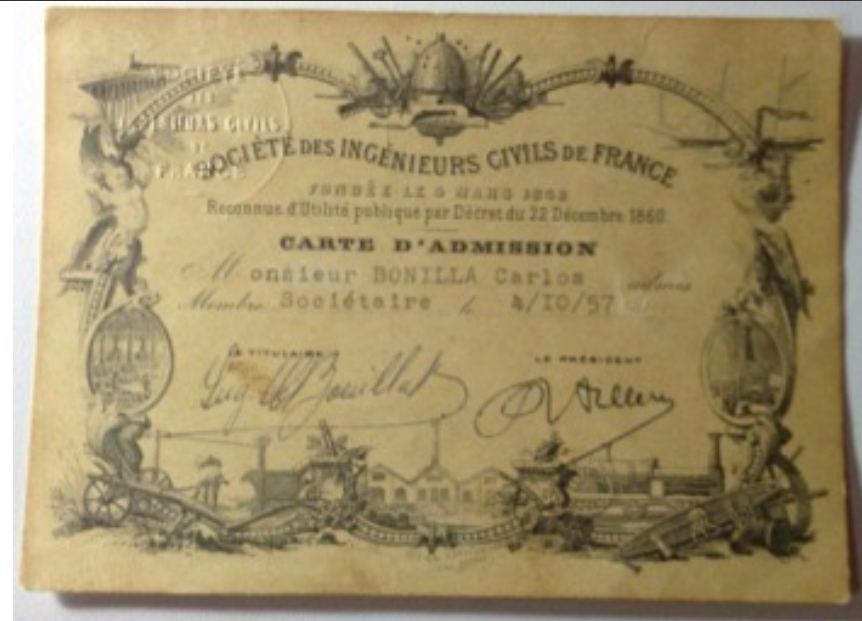
Ecole des Ponts et Chauses – Specialization on
Bridges and Structures

1973

STUP- Reciclaje- Paris, France

1974

STUP – Campenon Reciclaje – Paris, France



Memberships



▣ 1953- Present

Sociedad de Ingenieros Civiles del Ecuador

▣ 1953- Present

Camara de la Construcción de Quito

▣ 1954- Present

STUP- Societe Technique pour l'utilisation de la
Precontrainte

▣ 1975- Present

Founder of CLAES (Comite Latinoamericano de
Estructuras)

Professor Experience



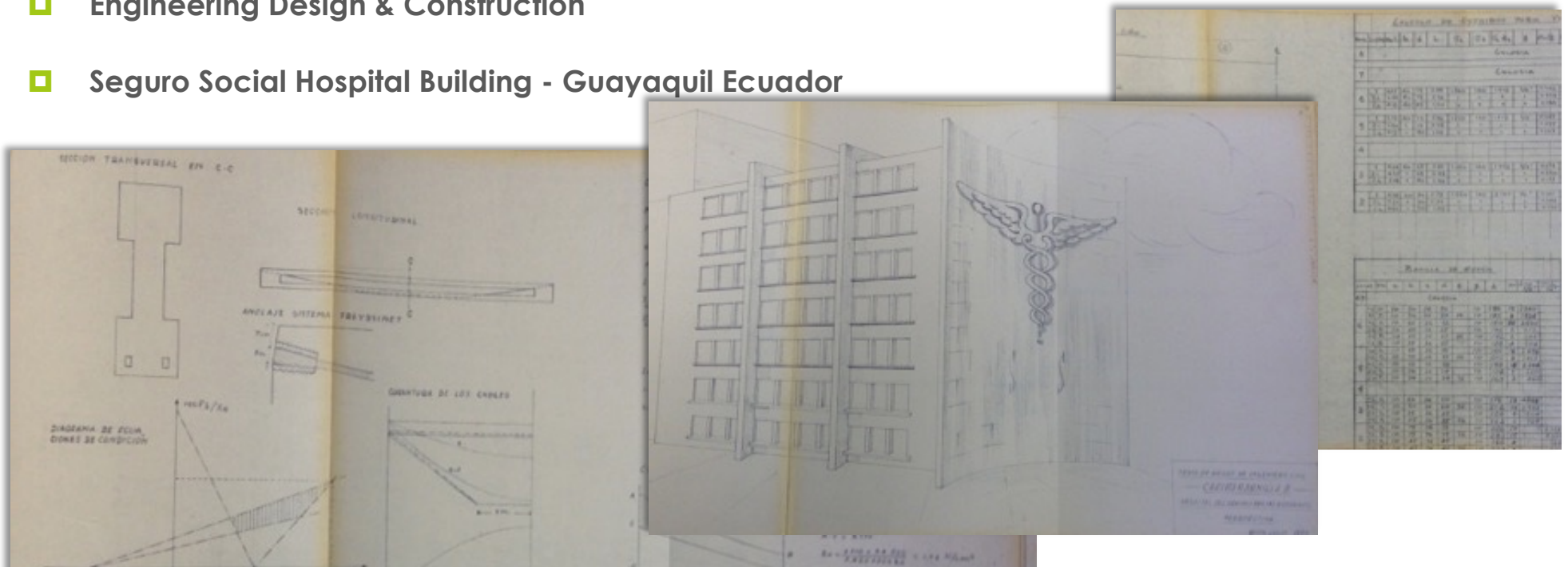
- 1960-1982
 - Universidad Central del Ecuador
 - Master: Bridges and Prestressed Concrete
 - Escuela Politecnica del Ecuador
 - Master: Bridges and Structures
 - Escuela de Ingenieros Militares del Ecuador
 - Master: Bridges and Prestressed Concrete



A life dedicated to
PRESTRESS and POST-TENSION
Concrete Structures

Early design using Prestress Technology was rarely used in the construction industry.

- Engineering Design & Construction
- Seguro Social Hospital Building - Guayaquil Ecuador



In 1952 Carlos contacted Campenon Bernard in France, a company leading prestressing technology in Europe, for his project needs.

Because of his years of study, hard work ethic, and excellent communication, Carlos was invited to work for Eugene Freyssinet in Paris, France, and later hired by Campenon Bernard.

1953 – 1960

Campenon Bernard

Paris, France

From 1953 to 1960, Carlos Bonilla got the chance to work and learn from Eugene Freyssinet, the inventor and developer of prestressed concrete and post tension technology (Since 1928).

Carlos Bonilla soon became one of Freyssinet's disciples, learning and working in projects to rebuild Europe following the aftermath of World War II.



Project Radio Europe No. 1 Felsberg, Germany

■ Collaborating in Engineering Design

2" Prestress Shell Roof Structure (Butterfly)

Span = 86 m x 46 m (282 ft x 150 ft)

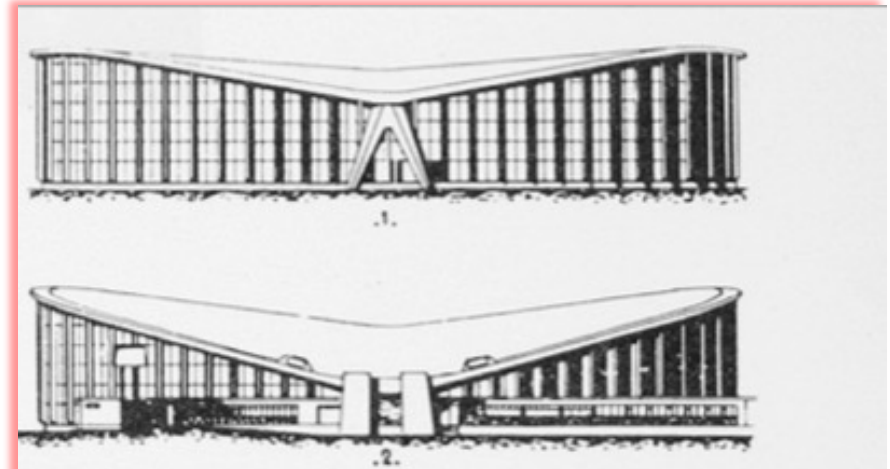
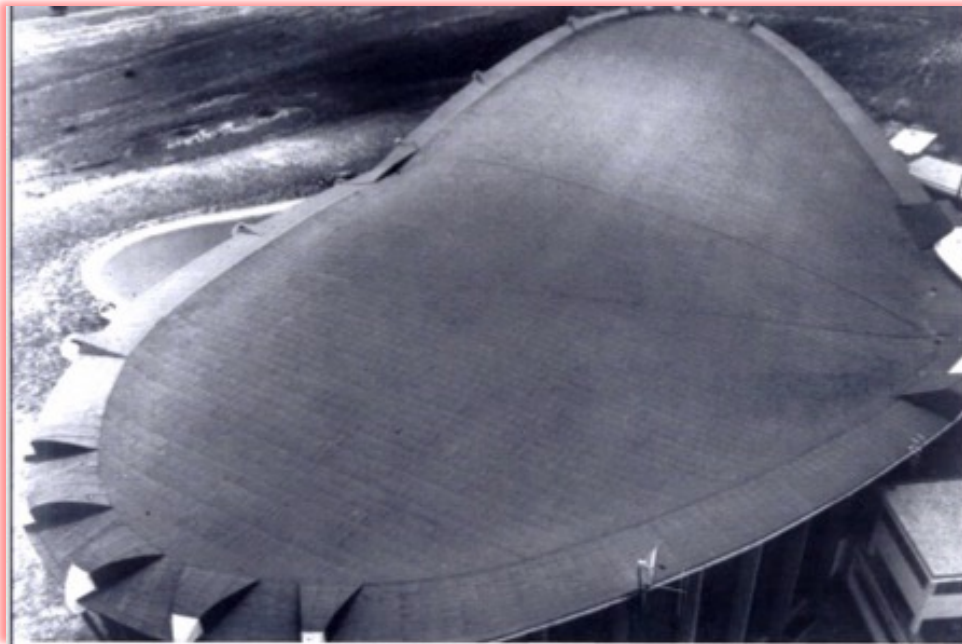


Fig.1 Façades du bâtiment

VUE EN PLAN DU BATIMENT

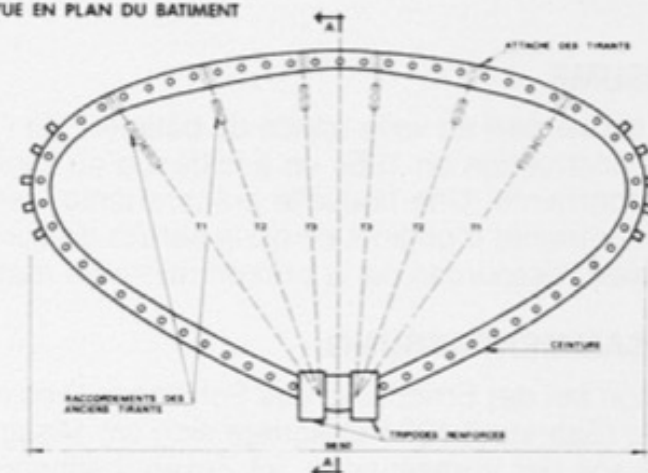


Fig.2 Disposition des tirants

Project Radio Europe No. 1 Felsberg, Germany

▣ Collaborating in Engineering Design

2" Prestress Shell Roof Structure (Butterfly)

Span = 86 m x 46 m (282 ft x 150 ft)



Project Radio Europe No. 1 Felsberg, Germany

■ On the roof with Eugene Freyssinet



Pierre Xercavins

Carlos Bonilla

Yves Guyon

Eugene Freyssinet

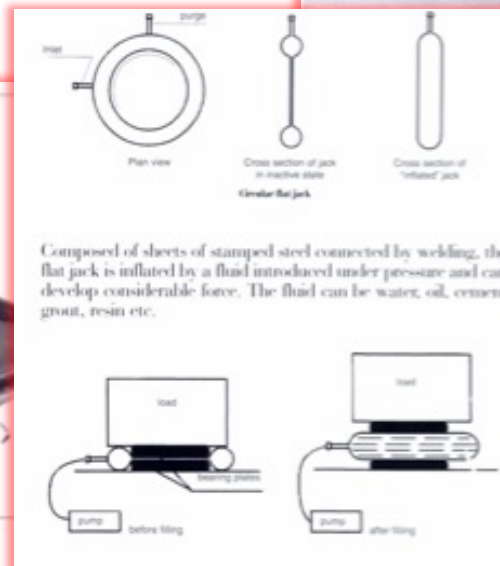
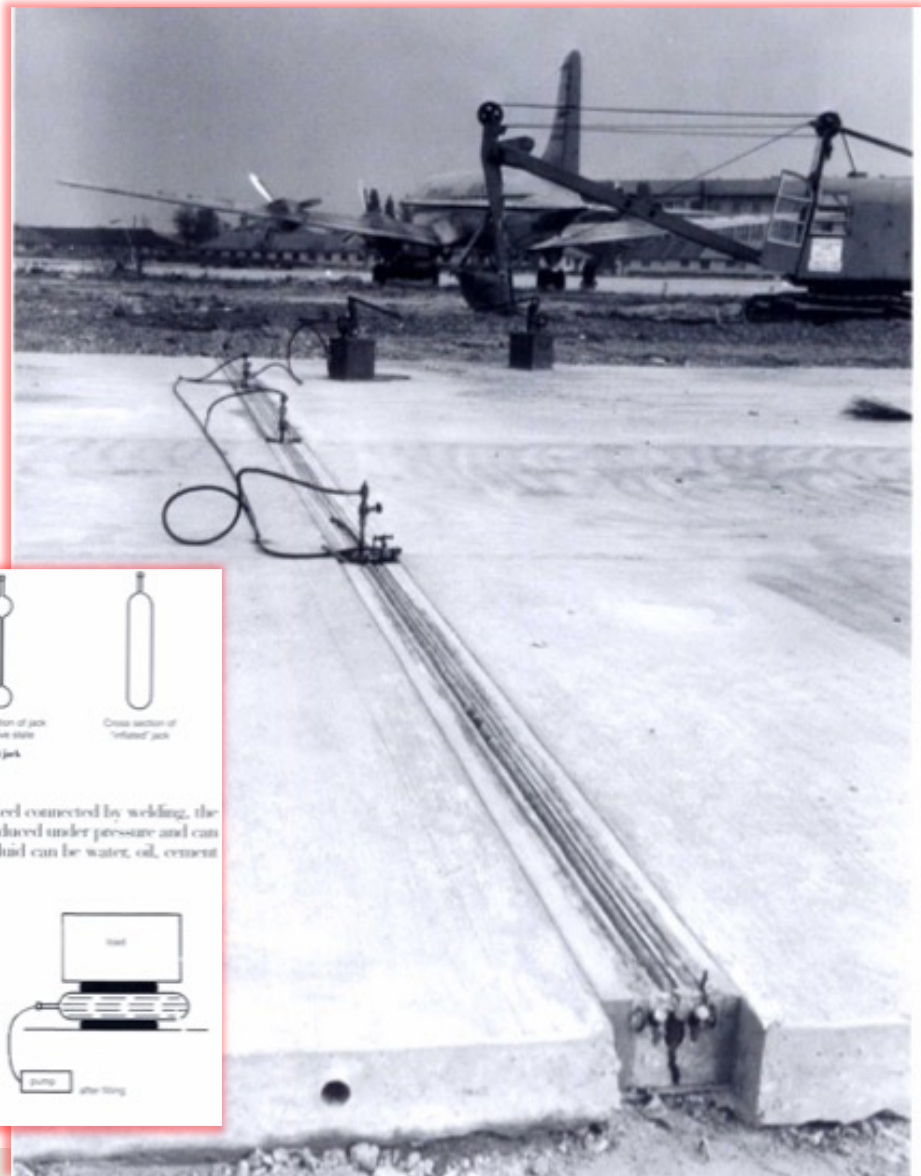
Project Orly Airport

Paris, France

▣ Collaborating in Engineering Design

Eugene Freyssinet, aware of the difficulty of applying prestress to these structures by means of tendons invented the FLAT JACK in 1938 for compressing the raft of the Portes de Fer dam,

This same technology was later used in the Paris Orly airport.



Project La Guaira Bridge

La Guaira, Venezuela

■ Collaborating in Engineering Design

Span = 130 m (426 ft)

Type = Post Tensioned Arch

Total Length = 180 m (600 ft)



Figure 21 - Caracas Viaduct during construction



bridge 1 completed



bridges 2 and 3 completed

Figure 22 - Caracas Viaduct completed (1951-1953)

Project Chantiers de L'Atlantique Saint Nazaire, France

▣ Collaborating in Engineering Design

Post Tensioned Concrete Sliding Floating Gates



Project Saint Nazaire Bridge

Saint Nazaire, France

■ Collaborating in Engineering Design

Post Tensioned Approaching Box Girders

Span = 520 m

2 cantilevers

Total Length = 4200 m



Project Lake Pontchartrain Bridge Louisiana, USA

▣ Collaboration in Engineering Design

By then the Longest Bridge in the World, until 1999.

Connects Metairie, LA to Mandeville, LA, USA

38.35 Km Long

Span = 32 m



Project Pio X Basilica Louvre, Paris

■ Direct Engineering Design

Length: 200 m

Width = 81 m

Height = 10 m above the altar

The roof in prestressed concrete is supported in 29 raking-strut arches

Capacity = 20,000 people



Other Projects

- Swiss Grande Dixence Dam
- Swiss-France border area bridges
- Convoissor Bridges
- Bugey Atomic Central Station

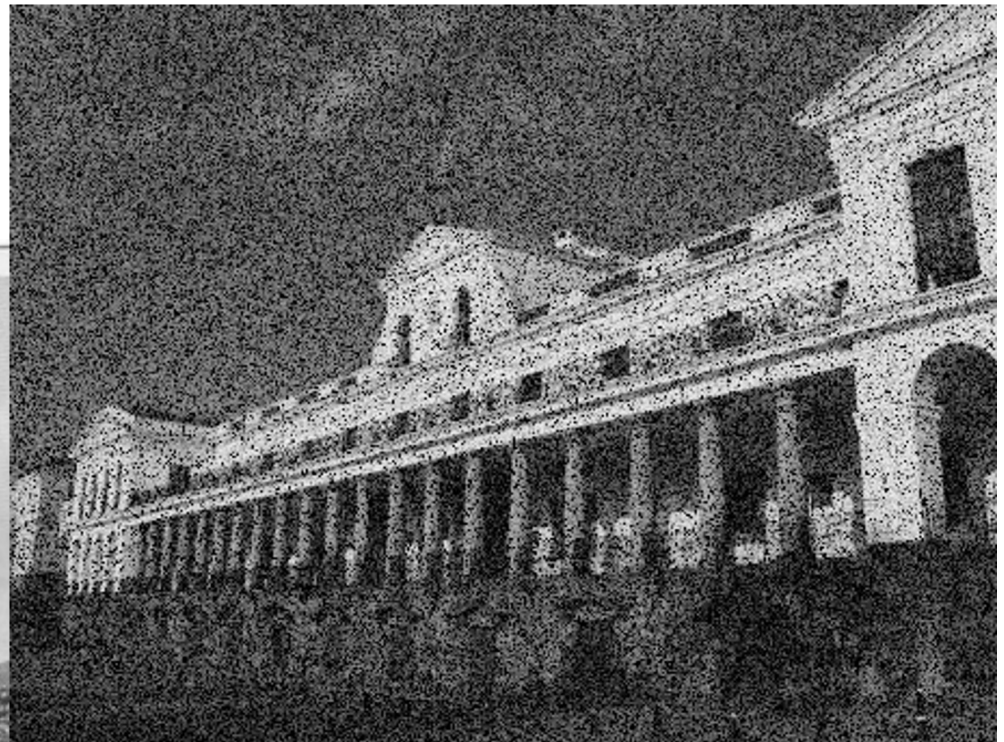
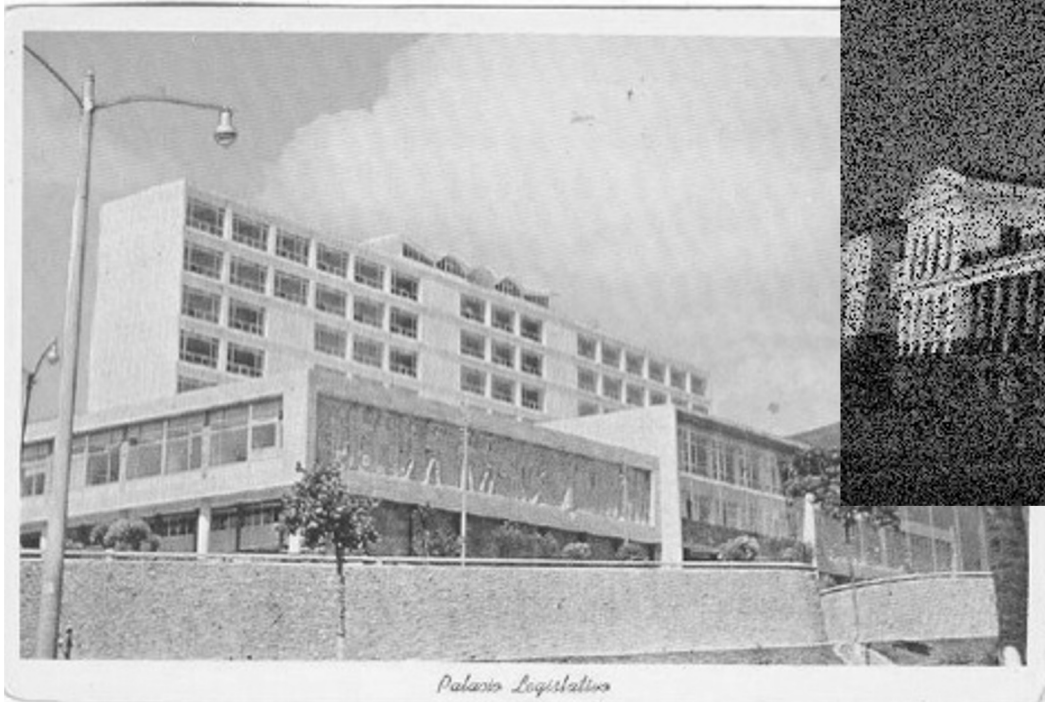


1961 Founded Precontraint Inc. Fabrication of prestressed posts and prestressed beams

■ Structural Design & Construction

Ecuador Presidential House renovation

Ecuador Congress Meeting building



Small Span Bridges

■ Structural Design & Construction



Mid Span Bridges

■ Engineering Design & Construction



Prestressed Concrete Electrical Posts

▣ Structural Design & Construction



Post Tensioned Water Channels & Acueducts

■ Structural Design & Construction

110 Km of Acueducts & Channels



Heavy Capacity Prestressed Concrete Slab panels



Curved Structures Post Tension Services

▣ Structural Design & Construction



www.PRECONTX.com



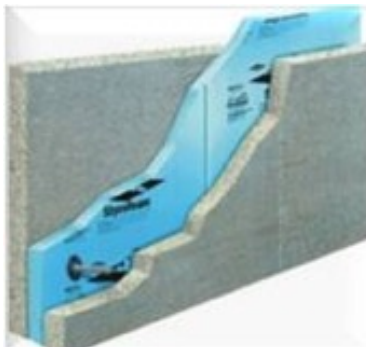
Prestressed Insulated Sandwich Walls

■ Structural Design & Construction

Guilford Mills, Tampico, Mexico

400,000 sq-ft dying and finishing textile plant

Structural & Technical Engineering Design and Fabrication Direction



Stadiums



Arenas



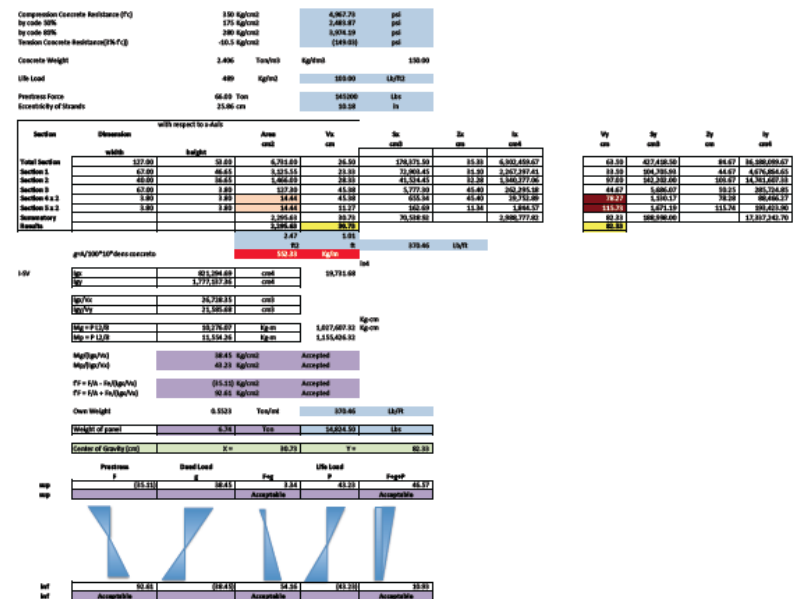
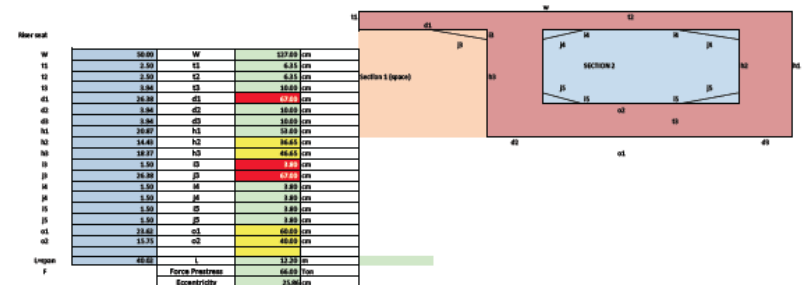
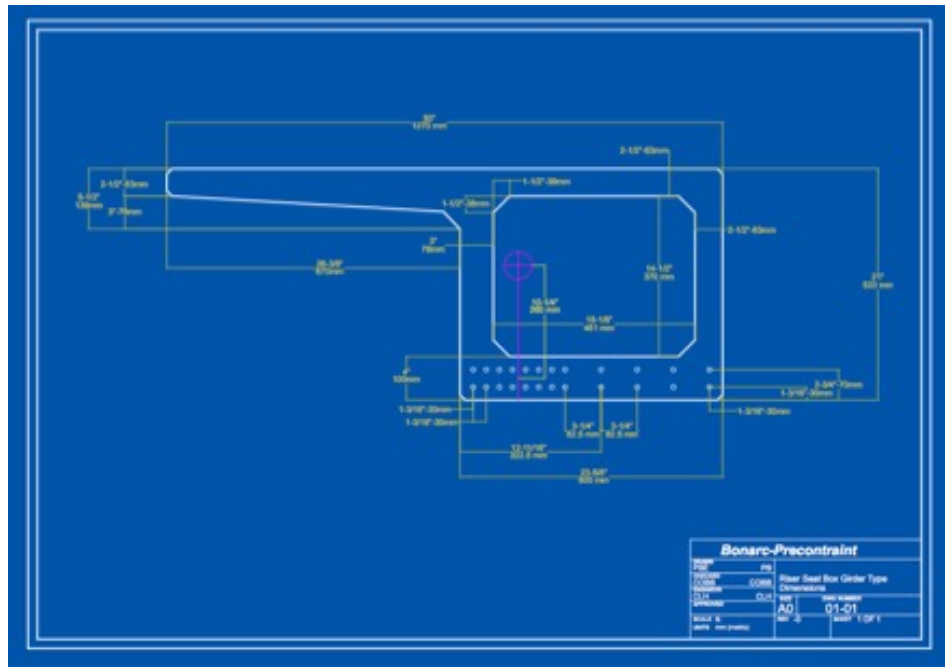
Parking Garages



Engineering Design

Structural Design & Project Direction or Construction

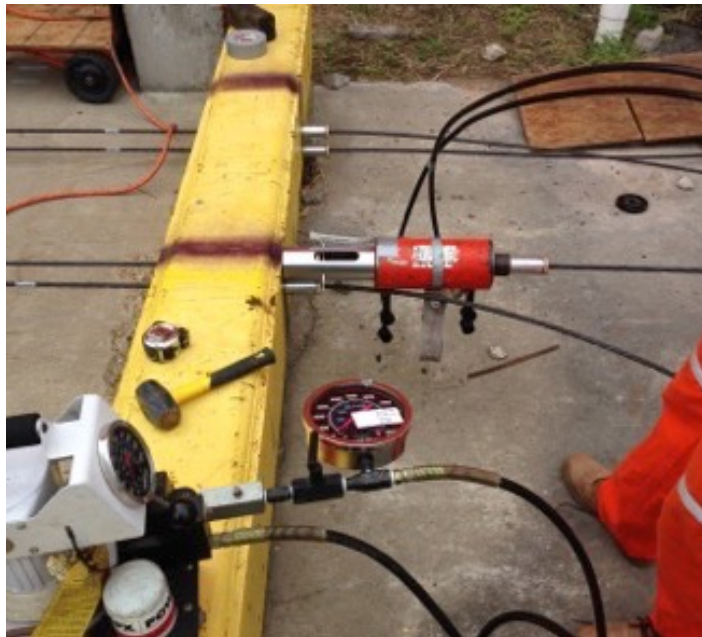
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Application

- ▣ Structural Design & Project Direction or Construction

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