CONSTRUGOMES

THE OTHER SIDE IS CLOSER

Index

OUR PROJECT 4

MISSION / VISION / VALUES 6

SUSTAINABILITY 7

OUR WORK 8

OUR SERVICES 8

COMPLETED PROJECTS 11

ON-GOING PROJECTS 83

OTHER PROJECTS 93

CONTACTS 99

Our Project

Structures such as viaducts, bridges and tunnels are often referred to as “Engineering Works of Art” because of their visual scale, uniqueness and complexity, also because of the level of expertise involved in their construction. These infrastructures in addition to having the purpose to link service networks and overcome natural barriers have a responsibility to be in harmony with the natural scenery that surrounds it.

We can define the architect, the engineer and the companies that are involved in the design and construction of these “Engineering Works of Art” as artisans. Their job is to shape and give form to these structures in harmony with their surroundings, combining technique, technology and aesthetics.

This portrayal of the connection between Engineering and Art should be seen as a natural connection, just like a bridge that ensures the link between two banks once inaccessible by land.

This is a connection that here at ConstruGomes we strongly believe in, this belief is something that we have yet further emphasised throughout this brochure by depicting some of our projects in picturesque watercolour paintings.

In addition to aesthetic concerns CONSTRUGOMES takes it upon themselves to integrate social and sustainability responsibilities into the engineering process, fulfilling these requirements enhances our desire to become an international leader in this field in the construction industry. Preparing for a better future, adopting advanced technology and promoting innovation is something that CONSTRUGOMES prides itself on. The experience of our people and quality of the works completed by CONSTRUGOMES is our guarantee to our clients, that we will fulfil their requirements and exceed their expectations.

This brochure highlights some of the projects that CONSTRUGOMES have completed and currently have on going, this has been created including both the technical details and the main project objectives of the included structures. We feel that these projects highlight our strengths and technical innovation which are already well known within the industry.

The challenge ahead of CONSTRUGOMES is to develop these strengths bringing regions, cities and resources closer together.

Carlos Gomes
Chief Executive Officer

WE TAKE PRIDE IN THE STORY OF OUR SUCCESS

Mission

Our mission is to structure a better future.
We want to ensure the excellence of construction services that we provide.

Vision

We aim to be the reference company in structural engineering, building bridges, tunnels and viaducts.

Values

Safety, commitment and dedication of employees.
Satisfaction of clients and suppliers.

Sustainability

1. SUSTAINABILITY AND SOCIAL RESPONSIBILITY

CONSTRUGOMES, as a company that operates in three continents, takes up the challenge of contributing to a sustainable development and the adoption of social responsibility practices.

2. HUMAN RIGHTS

CONSTRUGOMES advocates the Universal Declaration of Human Rights, committing to respect and protect its founding principles.

3. LABOUR RIGHTS

CONSTRUGOMES adopts the Declaration of the International Labor Organization on Fundamental Principles and Rights at Work, supporting freedom to join an union, bargain collectively and take action and flatly rejects any discrimination in respect of employment and all forms of forced and child labor.

4. ENVIRONMENTAL PROTECTION

CONSTRUGOMES endorsed the Rio Declaration on Environment and Development, through a precautionary approach to environmental challenges, the promotion of environmental responsibility and the development of environmentally friendly technologies.

5. ANTI-CORRUPTION PRACTICES

CONSTRUGOMES supports the United Nations Convention against Corruption, pledging to fight corruption in all its forms within the framework of its business activities.

6. SOCIAL RESPONSIBILITY

CONSTRUGOMES is committed to contribute to a fairer society and a cleaner environment, through an ethical and transparent behaviour with their business partners and the communities in which develops its activity.

Our Work

CONSTRUGOMES core business relies on the execution of major infrastructure projects, in particular high scale bridges, commonly called works of art. Besides this particular area, we also highlight the contribution in the construction of tunnels, dams and buildings.

In the Civil Construction and Public Works markets, CONSTRUGOMES clearly stands out concerning its wide scope of work. We not only execute the work, but also operate in the technical drawings and layout, contributing with technical solutions that maximize the project's improvement.

With the significant support of the Research and Development Department, CONSTRUGOMES invests time and resources on the search of new and best solutions in the production and technological area.

Within the wide range of services that CONSTRUGOMES offers its clients, the following technical solutions are worthy of highlighting: form travellers, incremental launching, movable scaffolding systems, crane-climbing and self-climbing formwork, traditional scaffolding formwork and tunnel formwork.

COMPLETED PROJECTS

Duplicação da Serra do Cafezal

Rodovia Régis Bittencourt
OAE 30 e OAE 34

2016

LOCATION
BRAZIL, São Paulo

CLIENT
Consórcio Ferrovial – TB

DESIGNER
Enescil

TECHNICAL FEATURES - OAE 30

- PYLONS MAX. HEIGHT | ***24.50 m***
- FULL LENGTH | ***845.30 m***
- MAX. SPAN BETWEEN PYLONS | ***68.00 m***
- WIDTH | ***13.10 m***
- SEGMENT | ***5.00 m***

TECHNICAL SOLUTION

- Pylons built with crane-climbing formwork
- Segment 0 executed with shoring tower
- Deck built with five pairs of form travellers, with a capacity of 200 metric tons

GENERAL PROJECT INFORMATION

Serra do Cafezal or Serra do 90, is located between the counties of Juquitiba and Miracatu located in the State of São Paulo, Brazil in the Atlantic Forest. As a result contained huge environmental value. It has an altitude of 1,100 meters and it's crossed by Rodovia Régis Bittencourt for aproximately 40 km.

PROJECT BENEFITS

This project had long been required by the locals and the people that commute through the area. On completion the constant queues and delays that had long been a problem were significant reduced. In addition to this the previously high number of collisions on the route were also significantly decreased.

Ponte Itapaiúna

Complexo Chucri Zaidan

2016

LOCATION
BRAZIL, São Paulo

CLIENT
Consórcio Complexo Itapaiúna (Odebrecht e Bmx)

DESIGNER
Maubertec Engenharia e Projetos, Ltda

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***8.00 m***
- FULL LENGTH | ***654.00 m***
- MAX. SPAN BETWEEN PYLONS | ***113.00 m***
- WIDTH | ***12.46 m***
- SEGMENT | ***5.00 m***

TECHNICAL SOLUTION

- Pylons built with crane-climbing formwork
- Segment 0 executed with shoring tower
- Deck built with two pairs of form travellers, with a capacity of 200 metric tons

GENERAL PROJECT INFORMATION

During the colonial times, the “Pinheiros River” was first called “Jurubatuba” in Tupi which was the native language of the people living on the coastal provinces of Brazil during the sixteenth century this roughly translates as “a place with a lot of jerivás palm trees”. However in 1560 the Jesuits then started to refer to it as the “Pinheiros River” this was due to the large amount of araucárias or pinheiro-do-brasil (Brazil pine tree) in the area.

PROJECT BENEFITS

São Paulo is the biggest city in South America where more than 20 million people live. Ponte Itapaiúna crosses the Pinheiros River, through Marginal de Pinheiros and between the Morumbi and Brooklin neighbourhoods. The development of this bridge reduced the traffic problems that had long been an issue in the South zone of São Paulo for some time between the two very popular neighbourhoods.

PONTE ITAPAIÚNA

Viaduto V3

Autoestrada A4

2015

LOCATION
PORTUGAL, Amarante

CLIENT
1ª fase: Infratúnel ACE (Somague e MSF)
2ª fase: OPWAY Engenharia S.A.

DESIGNER
JL Câncio Martins

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***126.20 m***
- FULL LENGTH | ***910.80 m***
- MAX. SPAN BETWEEN PYLONS | ***148.00 m***
- WIDTH | ***29.50 m***
- SEGMENT | ***5.00 m***

TECHNICAL SOLUTION

- Pylons built with self-climbing formwork
- Segment 0 executed with G brackets of high capacity
- Deck built with three pairs of form travellers from CONSTRUGOMES, with a capacity of 450 metric tons, and high duty shoring towers with 40 meters maximum high

GENERAL PROJECT INFORMATION

The methodology that was used to build the bridge deck was developed using the balanced cantilever method, this had a cross section of 29 meters in width. This represented a first in Portugal, as it was the first time that concreting at this width had been accomplished.

PROJECT BENEFITS

Highway A4 is also known as The Marão Highway, which is where the Viaduto V3 is located. The Marão tunnel is also located in this highway, it has a length of 5656 meters and it is the biggest tunnel in Portugal. The introduction of this new Highway A4 provided people with a safer alternative route to the Itinerário Principal 4 (IP4). The Itinerário Principal 4 (IP4) is a notoriously dangerous highway in Portugal that allows the traffic to flow through Trás-os-Montes.

VIADUTO DO MARÃO

Viaducto sobre el río Miño

Autovía A54 Lugo-Santiago

2015

LOCATION
SPAIN, Lugo

CLIENT
UTE Nadela (Aldesa e Copasa)

DESIGNER
Carlos Fernández Casado, SL

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***47.40 m***
- FULL LENGTH | ***341.00 m***
- MAX. SPAN BETWEEN PYLONS | ***155.00 m***
- WIDTH | ***22.80 m***
- SEGMENT | ***5.00 m***

TECHNICAL SOLUTION

- Pylons built with self-climbing formwork
- Segment 0 executed with G brackets of high capacity
- Deck built with three pairs of form travellers from CONSTRUGOMES, with a capacity of 450 metric tons, and high duty shoring towers with 25 meters maximum high

GENERAL PROJECT INFORMATION

Viaducto sobre el río Miño was the first CONSTRUGOMES construction project that the company took part not only in the construction phase but also in the design phase. CONSTRUGOMES formed a partnership with Carlos Fernández Casado, SL, and developed the design and the constructive solutions including all the activities that were needed to carry out the construction of this viaduct.

PROJECT BENEFITS

The cities of Lugo and Santiago de Compostela are connected through the ancient pilgrimage route of Santiago de Compostela. This is an ancient holy path which was used by the pilgrims of the Asturias Kingdom to make the connection between the mountains of Picos da Europa and Santiago de Compostela. Twelve centuries after the first pilgrims crossed this path the construction of this bridge finally allowed the connection by highway between the two cities of Lugo and Santiago de Compostela.

VIADUCTO SOBRE EL RÍO MIÑO

Aproveitamento Hidroelétrico Ribeiradio-Ermida

2014

LOCATION
PORTUGAL, Sever do Vouga

CLIENT
Ribeiradio Ermida ACE (FCC, OPWAY, RRC)

DESIGNER
COBA Consultores de Engenharia e Ambiente

TECHNICAL FEATURES

- BLOCKS | ***11***
- CREST LENGHT | ***175.10 m***
- MAX. HEIGHT | ***38.00 m***

TECHNICAL SOLUTION

- Wall executed with climbing brackets
- Special structures such as bottom discharge connection, water intakes and suction connections, were executed with traditional formwork, being these developed by the Civil Engineering Department at CONSTRUGOMES

GENERAL PROJECT INFORMATION

Aproveitamento Hidroelétrico Ribeiradio-Ermida is composed of two dams with an average annual production of 139 GWh, which is enough to fulfil the needs of 28,000 to 30,000 people. Construction began in 2010 involving more than 600 workers and more than a hundred companies working side by side. With this project, the counties of Aveiro and Viseu now contain a reservoir of more than 23km in length.

PROJECT BENEFITS

The project goal was to contain the Vouga River to create a lake, this would then in turn be used to increase the production of energy from natural renewable sources. This new lake or reservoir provides the public with a reliable source of water supply and can also be used to assist with firefighting when required. The risk of flooding was also reduced. Another benefit of the lake is the value it generates through tourism for the surrounding areas aiding social and economic development.

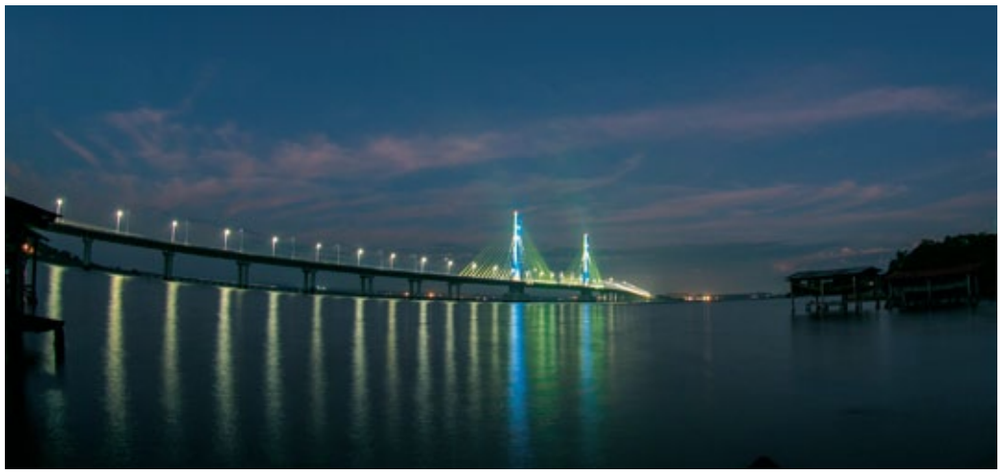
Ponte Anita Garibaldi

2014

LOCATION
BRAZIL, Laguna

CLIENT
Consórcio Ponte de Laguna (Camargo Corrêa, Aterpa, M. Martins e Construbase)

DESIGNER
Enescil



TECHNICAL FEATURES

- FULL LENGTH | ***2,830.00 m***
- TYPICAL SPAN BETWEEN PYLONS | ***50.00 m***
- No. OF SPANS | ***49***
- WIDTH | ***24.00 m***
- SEGMENTS | ***14 by span***

TECHNICAL SOLUTION

- Deck built with precast segments - LG50/100S

GENERAL PROJECT INFORMATION

Ponte Anita Garibaldi, also known as Ponte Laguna is the third longest bridge, the first curved cable-stayed bridge in Brazil and it is the main route between São Paulo and the south of the country. The bridge won several awards, such as: first place in the “Categoria Estrutura do Prêmio Talento Engenharia Estrutural 2015”; second place of “Prêmio Especial de Iluminação Eficiente” and third place in the “Categoria Urbana”. These last two awards are from the Associação Brasileira da Indústria de Iluminação - VII Prêmio Abilux Projetos de Iluminação.

PROJECT BENEFITS

Ponte Anita Garibaldi was designed and built in order to replace Henrique Lage Bridge. The bridge was officially opened on September 1st, 1934, due to its advanced age the bridge was becoming very outdated and was struggling to meet the current needs that the state of Santa Catarina requires. As a result this new bridge was created to meet the current demands and to allow for the growth of tourism in the coastline of the State of Santa Catarina.

PONTE ANITA GARIBALDI

Viaduto Rodoanel

Trecho Leste do Rodoanel
Mário Covas, SP-021

2014

LOCATION
BRAZIL, São Paulo

CLIENT
Contern – Construções e Comércio, LTDA

DESIGNER
Enescil

TECHNICAL FEATURES

- FULL LENGHT | ***1,350.00 m + 1,322.00 m***
- TYPICAL SPAN BETWEEN PYLONS | ***30.00 m***
- No. OF SPANS | ***90***
- WIDTH | ***16.04 m***

TECHNICAL SOLUTION

- Deck built with superior movable scaffolding system – two M30X2-S. With this system it was possible to launch two spans of 30 meters simultaneously

GENERAL PROJECT INFORMATION

The construction of this viaduct benefits 1,4 million people with more than 33,000 vehicles cross this viaduct on a daily basis.

PROJECT BENEFITS

Several routes along the Pinheiros River, in São Paulo, Brazil have to cope with heavy traffic from all over the state. This project has had a great impact in the area as the Viaduto Rodoanel links ten of the main roads to the city of São Paulo. As a result the traffic in the surrounding areas was significantly reduced.

VIADUTO DO TRECHO LESTE DO RODOANEL MÁRIO COVAS

Viaducto de San Benito

Eje Atlántico de Alta Velocidad

2013

LOCATION
SPAIN, Pontevedra

CLIENT
UTE Cerponzons (Sacyr)

DESIGNER
Apia XXI

TECHNICAL FEATURES

- PYLONS MAX.HEIGHT | ***11.00 m***
- FULL LENGTH | ***171.00 m***
- MAX. SPAN BETWEEN PYLONS | ***87.00 m***
- WIDTH | ***14.00 m***
- SEGMENT | ***5.00 m***

TECHNICAL SOLUTION

- Deck built using a pair of form travellers, from CONSTRUGOMES, with a capacity of 450 metric tons

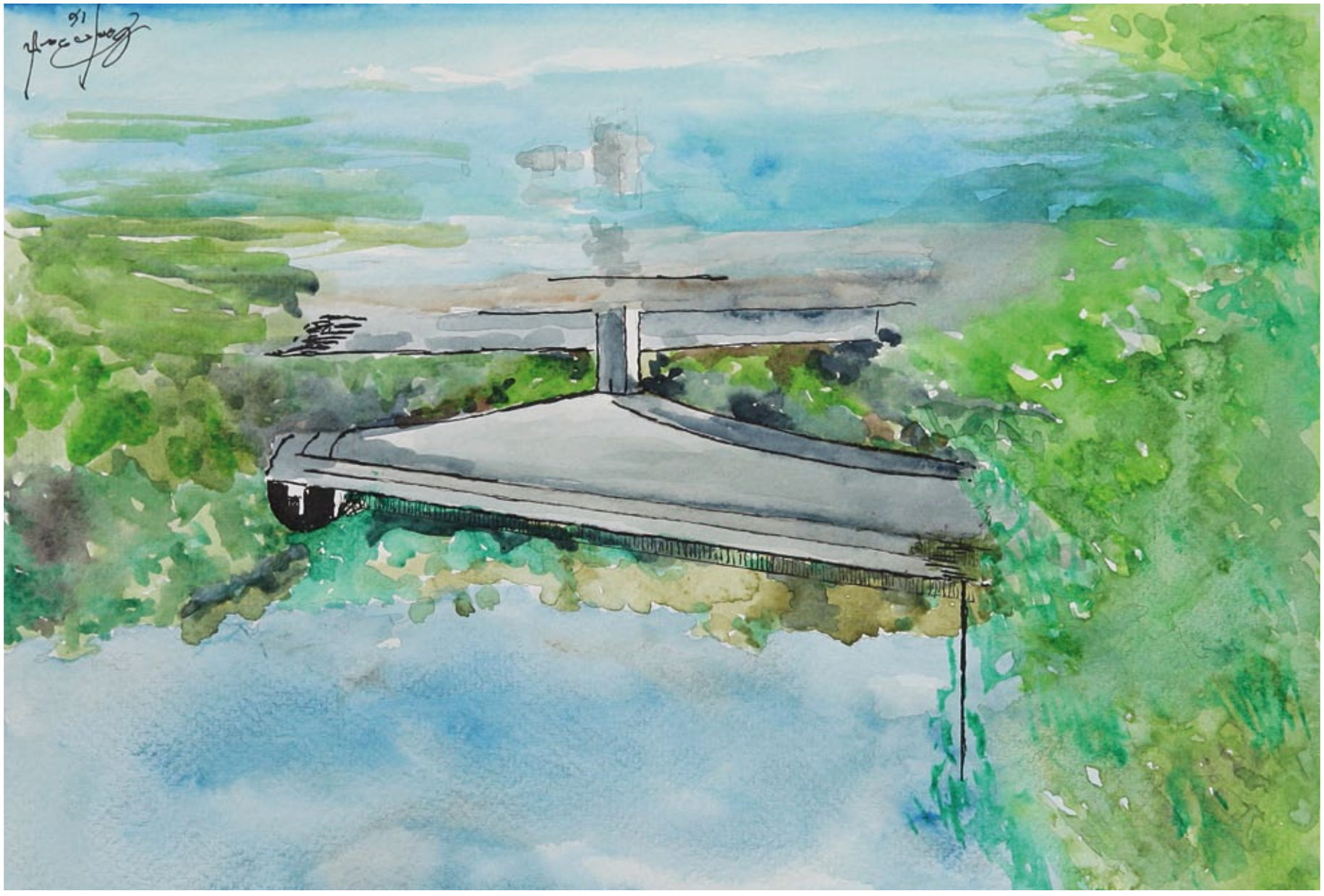
GENERAL PROJECT INFORMATION

The creation of new viaduct not only improved transport links but it also made it possible for the old viaduct to be transformed into a solely pedestrian walkway. This pedestrian walkway was a structure that the local population had been requesting for some time.

PROJECT BENEFITS

Spain has been heavily investing in the high-speed train lines. Viaducto de San Benito is a part of the Atlantic Axis high-speed rail line that connects A Coruña and Vigo. As a result it is possible to travel from one city to another in just under one hour when it used to take over 2 hour. The entire construction process was specially designed to support the AVE Spanish high-speed train.

VIADUCTO DE SAN BENITO



Viaduto do Corgo

Autoestrada Transmontana

2013

LOCATION
PORTUGAL, Vila Real

CLIENT
Caet XXI ACE
(FCC e Soares da Costa)

DESIGNER
LCW

TECHNICAL FEATURES

- FULL LENGTH | ***2,796.00 m***
- TYPICAL SPAN BETWEEN PYLONS | ***60.00 m***
- No. OF SPANS | ***42***
- WIDTH | ***28.00 m***
- DECK MAX. HEIGHT | ***230.00 m***

TECHNICAL SOLUTION

- Deck section built using an inferior movable scaffolding system – M60-I
- Deck wings executed using a wing traveller – CONSTRUGOMES' CM21 with an execution ability of 21.00 x 6.50 meters of deck's slab

GENERAL PROJECT INFORMATION

Viaduto do Corgo is the biggest structure within the highway link A4 and Transmontana highway, which connects Porto to Bragança. This work of great technical complexity and architectural beauty gave a greater shine to Douro Vinhateiro, considered of significant importance to World Heritage.

PROJECT BENEFITS

The execution of this viaduct fulfilled the main goal of this project which was ensuring the crossing of Corgo's River Valley, in Vila Real. As a result it has enhanced territorial cohesion, reduced road accidents and ultimately increased employment opportunities.

VIADUTO DO RIO CORGO

Viaduto
Despe-te que suas
SCUT dos Açores, Tramo Nordeste

2010

LOCATION
PORTUGAL, Azores, S. Miguel Island

CLIENT
Ferrovial Agroman

DESIGNER
JSJ Estruturas, Cenor

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***91.00 m***
- FULL LENGTH | ***385.00 m***
- MAX. SPAN BETWEEN PYLONS | ***185.00 m***
- WIDTH | ***12.24 m***
- SEGMENT | ***5.00 m***
- DECK MAX. HEIGHT | ***162.00 m***

TECHNICAL SOLUTION

- Pylons built using large dimension self-climbing formwork system
- First segment executed by using great capacity G brackets
- Deck built using two pairs of form travellers with a capacity of 450 metric tons, from CONSTRUGOMES

GENERAL PROJECT INFORMATION

The peculiar name that this bridge has been given is due to an existing stream in the area. The name “Despe-te que suas” roughly translates as “Take your clothes off because you are going to sweat”. This name had been given to the stream due to the pronounced landscape that surrounds it, when crossing this landscape on foot the locals would struggle hence the name.

PROJECT BENEFITS

The Viaduto Despe-te que suas is the highest on Azores and the biggest of all the 27 viaducts that compose the highway. The highway is an alternative to the region’s roads that have been in a poor condition for decades ultimately restricting the economic progress for the region.

VIADUTO DESPE-TE OUE SUAS

Viaducto de Trapagaran

Supersur de Bilbao

2010

LOCATION
SPAIN, Bilbao

CLIENT
OHL

DESIGNER
IPSA

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***37.00 m***
- FULL LENGTH | ***955.00 m***
- MAX. SPAN BETWEEN PYLONS | ***125.00 m***
- WIDTH | ***35.60 m***
- SEGMENT | ***5.00 m***

TECHNICAL SOLUTION

- Pylons built using a climbing formwork system
- First segment executed by using great capacity G brackets
- Deck built using three pairs of form travellers, from CONSTRUGOMES, with a capacity of 450 metric tons

GENERAL PROJECT INFORMATION

This viaduct is one the most complex and long structures to form part of the Supersur highway in Bilbao. In 2010, year of its construction, it was one of the widest in the whole of Europe. The viaduct was designed to follow the shape of a letter “S” to mitigate the visual impact on the landscape. Over 9,400 vehicles and 14,300 passengers cross the viaduct on a daily basis.

PROJECT BENEFITS

This viaduct greatly relieved the traffic of the A8 highway, both at the entrance and the exit from Bilbao to Santander. It also provides an alternative route for vehicles transporting heavy and dangerous loads, as a result this has increased the area’s road safety by simplifying the entry and exit of the city.

VIADUCTO DE TRAPAGARAN

Viaducto sobre el río Barbantiño

AG-53 Santiago-Ourense

2009

LOCATION
SPAIN, Carballiño

CLIENT
San José

DESIGNER
Tema Ingeniería y Proyectos

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***88.55 m***
- FULL LENGTH | ***780.00 m***
- MAX. SPAN BETWEEN PYLONS | ***128.80 m***
- WIDTH | ***25.00 m***
- SEGMENT | ***5.00 m***

TECHNICAL SOLUTION

- Pylons built using a climbing formwork system
- First segment executed by using great capacity G brackets
- Deck built using three pairs of form travellers, from CONSTRUGOMES, with a capacity of 450 metric tons

GENERAL PROJECT INFORMATION

The Autonomous Region of Galicia is formed by seven great cities: A Coruña, Pontevedra, Vigo, Ferrol, Lugo, Santiago de Compostela and Ourense. Throughout the region the landscape is made by mountains and rivers. Connecting these cities required a high level of technical complexity.

PROJECT BENEFITS

This project was an integral part of the Territorial Rebalancing Plan of Galicia with the connection between Ourense and Santiago seen as crucial in improving the economy in the region.

VIADUCTO SOBRE EL RÍO BARBANTIÑO

Puente sobre el río Turia en Manises

2009

LOCATION
SPAIN, Manises

CLIENT
Vías y Construcciones, S.A.

DESIGNER
CMD Ingenieros

TECHNICAL FEATURES

- TOTAL HEIGHT | ***42.00 m***
- FULL LENGTH | ***145.00 m***
- SPAN BETWEEN PYLONS | ***55.00 m + 90.00 m***
- WIDTH | ***21.50 m***

TECHNICAL SOLUTION

- Pylons built using a climbing formwork system
- Deck executed using a high-duty shoring tower

GENERAL PROJECT INFORMATION

The Puente sobre el río Turia, in Manises, is one of the most striking bridges of Valencia's metropolitan area in Spain. Over 1,250 cubic meters of material used in the construction of this viaduct came from recycled materials from the demolition of the previous bridge. The entire structure was a pilot project in the use of recycled aggregates in a cable-stayed bridge. On completion the project was accredited by the International Association of Engineers and Structures as it was the first bridge in the world of its type to use recycled material in its construction construction.

PROJECT BENEFITS

The existing bridge was deemed as being too narrow as it only allowing passage in one direction, forcing alternated traffic flow. As a result traffic flow in the area was restricted often being the cause of much frustration for those living local to the area, as a result a solution was required. The old structure was demolished and then replaced with this new structure that then in turn allowed for two way traffic ultimately resolving the local transport issues.

PUENTE SOBRE EL RÍO TURIA EN MANISES

Viaducto sobre el río Deza

Eje Atlántico de Alta Velocidad

2009

LOCATION
SPAIN, Silleda

CLIENT
COMSA

DESIGNER
Apia XXI

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***96.50 m***
- FULL LENGTH | ***1,175.00 m***
- SEGMENTS | ***35.00 m***
- No. OF SPANS | ***18***
- WIDTH | ***14.00 m***
- MAIN SPAN | ***OGIVAL ARCH WITH 150.00 m OF SPAN and 106.00 m of HEIGHT***

TECHNICAL SOLUTION

- Pylons executed resorting to a climbing formwork system
- Deck built using the incremental launching system, capable of launching pre-fabricated segments of 35 meters long

GENERAL PROJECT INFORMATION

The deck's entire construction was performed outside of the bridge so that it could be pushed over the pylons until its final location. The bridge deck was completed using the incremental launching method, having a total length of 1,175 meters and a total weight of 65,000 metric tons. In addition, the construction of the Ogival Arch over the Deza River, was executed with two semi-arches of 110 meters, firstly built in the vertical position and then after gradually inclined until the two elements merged together.

PROJECT BENEFITS

The construction of this viaduct enabled the passage over the Deza River valley, in Silleda by the high speed railway. This design had to incorporate all the characteristics required for the use by the high speed railway to ensure the smooth passage over the structure.

VIADUCTO SOBRE EL RÍO DEZA

Viaducto de Basagoiti

2008

LOCATION
SPAIN, Basagoiti

CLIENT
Dragados

DESIGNER
Carlos Fernández Casado, SL

TECHNICAL FEATURES

- FULL LENGTH | ***427.00 m***
- DESIGN | ***THREE 35.00 m LONG V SHAPED PYLONS***
- No. OF SPANS | ***7***
- MAX. SPAN BETWEEN PYLONS | ***125.00 m***
- WIDTH | ***12.00 m***

TECHNICAL SOLUTION

- Deck built using a high-duty shoring tower

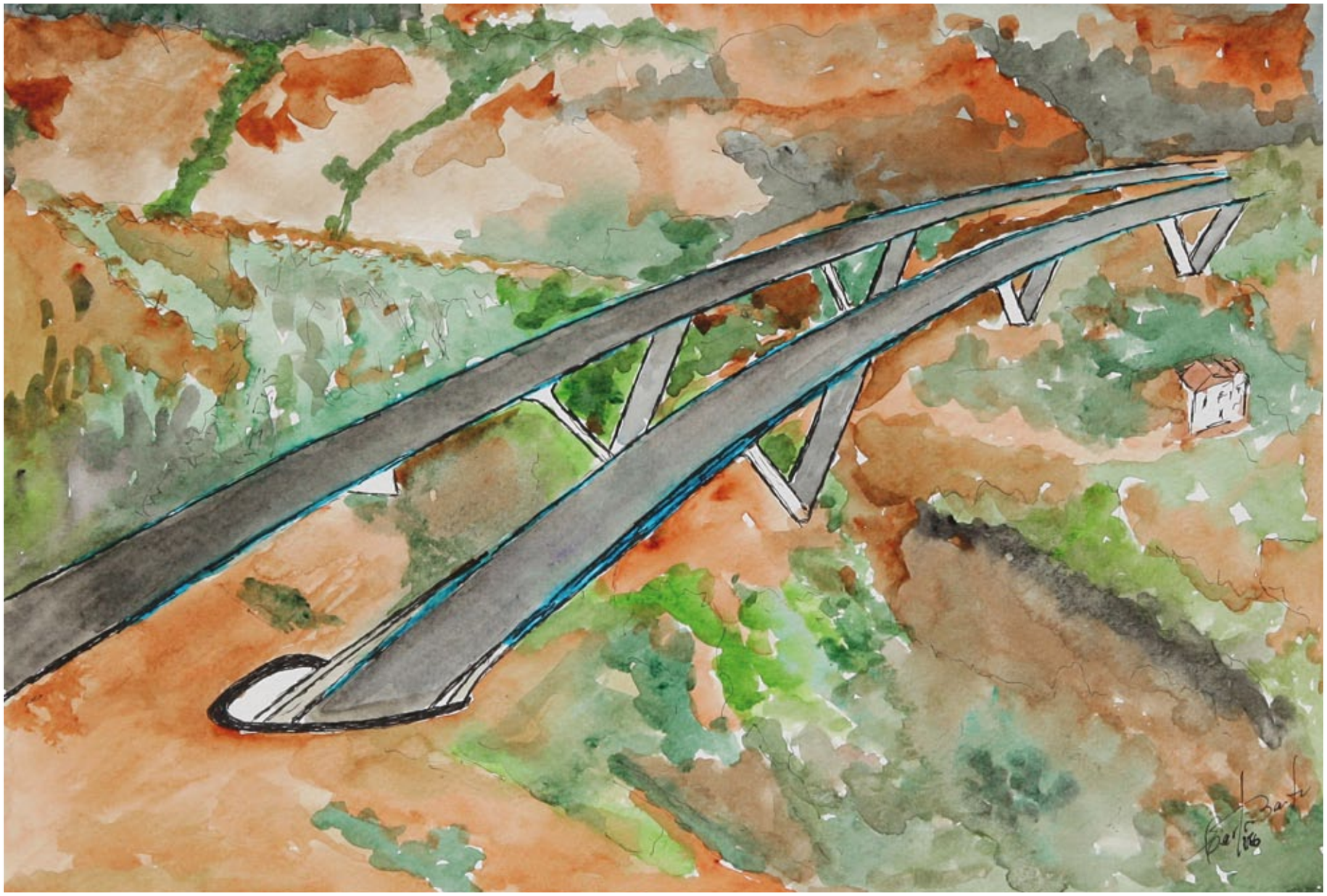
GENERAL PROJECT INFORMATION

The Basagoiti Viaducts are situated over the village of Aretxabaleta on the stretch between Arrasate and Eskoriatza of the new Deba Motorway linking Vitoria-Gasteiz with Eibar. When designing this viaduct, it was designed to include inclined pylons, not only to decrease the number required but also to mitigate the environmental impact. An interesting fact about this viaduct is that it is actually a double viaduct in order to join two separate tunnels.

PROJECT BENEFITS

Viaducto de Basagoiti is an essential viaduct in the Mondragon valley crossing, it is at the heart of a large industrial production group and also distribution companies operating in Northern Spain. The Mondragon Cooperative Complex is a world-famous example for its ability to gather 120 companies in the form of Cooperatives. Only its employees are member of the Cooperatives, which in 2016 were about 93,000 people.

VIADUCTO DE BASAGOITI



Viaducto sobre el río Cabriel

Variante de Cofrentes

2008

LOCATION
SPAIN, Cofrentes

CLIENT
PAVASAL E.C., S.A.

DESIGNER
Rafael Argüelles Pintos

TECHNICAL FEATURES

- PYLONS MAX. HEIGHT | ***45.00 m***
- FULL LENGTH | ***520.00 m***
- TYPICAL SPAN BETWEEN PYLONS | ***70.00 m***
- No. OF SPANS | ***8***
- WIDTH | ***11.00 m***

TECHNICAL SOLUTION

- Deck built using a superior movable scaffolding system – M70-S

GENERAL PROJECT INFORMATION

The main standout feature of this viaduct comes for the origin of the construction process involved which at the time was ground-breaking. For the 70 meters span execution, BERD's superior movable scaffolding system was used, with its main feature the Organic Pre-stressing System (OPS). This innovative system mimics the human muscle, minimizing the deformations and/or stresses caused by live loading.

PROJECT BENEFITS

The village of Cofrentes although not being home to a lot of residents still possesses a great industrial value as it is the home for one of the biggest nuclear power plants in Spain. As a result there was a real need to ensure that the area had good transport links. The resulting construction of this viaduct notably improved the transport links and also greatly contributed to the region's road safety which before had been very poor due to the unsatisfactory and unfit conditions of the surrounding roads.

VIADUCTO SOBRE EL RÍO CABRIEL