



Picture of the month

Riverside walk in Deltebre, Tarragona

Leading



FINISHED PROJECTS

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## FCC wins two high-speed line maintenance contracts

The investment comes to a total of 93 million euro, with a four-year completion period

The publicly owned railway infrastructure company ADIF has awarded two contracts to maintain the high-speed lines linking Madrid with Barcelona and Seville. The contracts cover a four-year period (2010-2013).

The first contract refers to the Madrid/Zaragoza section and is worth 45.8 million euro all told.

The second contract is divided into two sections; the first is Madrid/Adamuz,

Córdoba, and the second is the La Sagra/Toledo branch line. It is worth 47.3 million euro overall.

The maintenance stipulated in the contracts refers to track and way equipment upkeep, upkeep of the drainage systems and fencing on both sides of the track, immediate corrective action if incidents occur and the necessary preventive measures in the event of storm warnings or other causes for alarm.



High-speed line

## FCC to build a dam in Jalisco, Mexico, with a budget of 128 million euro

This infrastructure will provide Los Altos de Jalisco and the city of León-Guanajuato with drinking water



Verde River, Mexico

The National Water Council has awarded FCC the contract to design and build El Zapotillo Dam on the Verde River in the state of Jalisco, Mexico, for 128 million euro.

This infrastructure will supply drinking water for Los Altos de Jalisco and the city of León-Guanajuato.

The job is to build a curved, compacted-concrete gravity dam with a crown 320 metres long. The dam will stand 132 metres high above its foundations and will have a water storage capacity of 910 cubic hectometres. The foundations for the body of the dam will lie about 25 metres beneath the current bed of the river.

The dam's construction will require more than two million cubic metres of excavation work and the use of more than 1.1 million cubic metres of concrete and 8.5 million kilograms of steel.

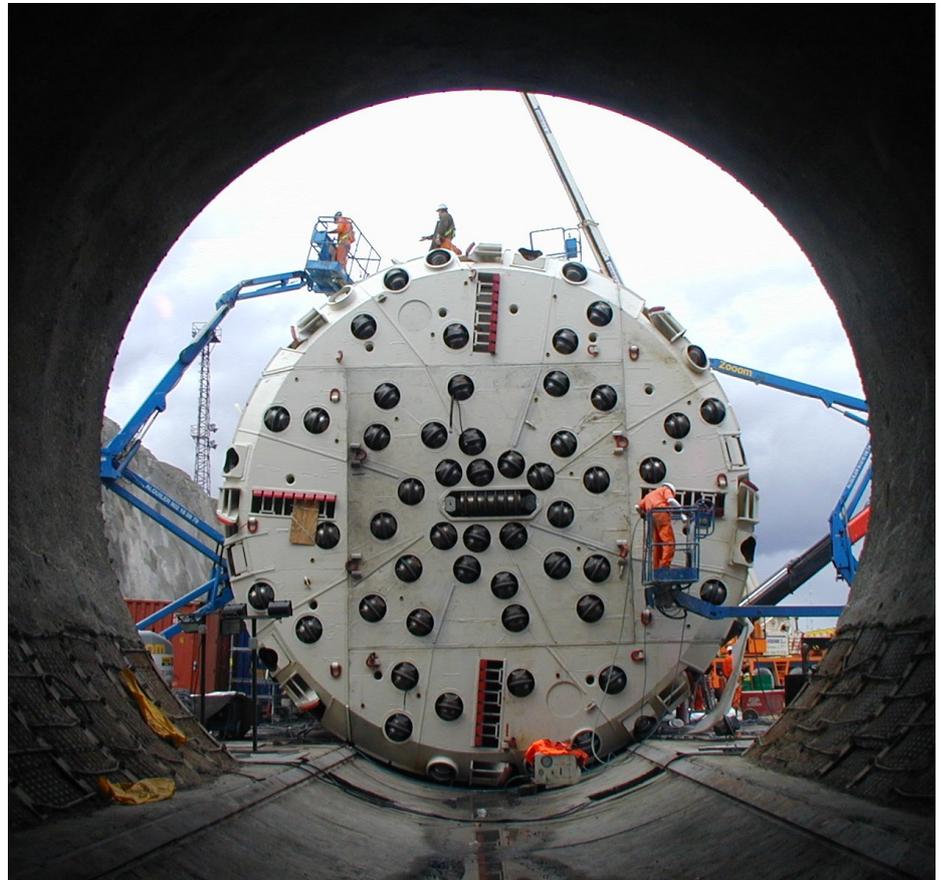
## FCC to build two new sections of Singapore Metro for 334 million euro

The contracts are for two sections of line 2, a total of four kilometres in length

LTA, the Singapore Land Transport Authority, awarded the contract for the construction of two new sections of the Singapore underground railway system to FCC through FCC's Austrian subsidiary ALPINE. The sections are a total of 4,000 metres long, and the contract is worth 334 million euro.

The contract awards the firm has won are for two sections belonging to Line 2, and they are 1,800 and 2,200 metres long, respectively. Both sections will be built almost entirely in the shape of twin tubes having an outer diameter of 6.6 metres. The project completion period will be 46 months long.

The tunnel's two tubes will be bored out with two tunnel-boring machines and lined with prefabricated concrete segments.



Assembly of a TBM

## Other Contract Awards

- First phase of the second main drinking-water distribution ring for the Community of Madrid, for Canal de Isabel II, worth 37.3 million euro.
- EPISA, a public land company dependent on the Andalusia Council, has awarded FCC Construcción surface rights for the construction of two sets of low-income housing units (containing 182 and 160 units, respectively) in Seville.
- Puertos del Estado, the national harbour policy enforcement authority, has awarded a joint venture featuring FCC Construcción the contract to upgrade operational efficiency at the commercial docks at Vigo harbour for 49.7 million euro.

# The Cuatro Calzadas/Montejo section of Dual Carriageway A-66 opened

The 14.9-kilometre-long section was thrown open to traffic in August

On 27 August 2009, Minister of Development José Blanco and the heads of the departments of Development and the Interior of the Castilla y León Council, Antonio Silván (Development) and Alfonso Fernández Mañueco (Interior), accompanied by the assistant deputy of the national government in Salamanca, Jesús Málaga, proceeded to cut the ribbon on the Cuatro Calzadas/Montejo section of the “Autovía de la Ruta de la Plata”, otherwise known as Dual Carriageway A-66, built by FCC Construcción.

The section is 14.9 kilometres long, and it follows a route that is actually a bypass along the right-hand side of road N-630. A total of 17 structures have been built: flyovers and undercrossings, river crossings and an overhead structure.

The entire project has been designed for a speed of 120 kilometres/hour, with two

carriageways measuring 2 x 7 metres apiece, outer and inner verges 2.50 and 1.00 metres wide, respectively, and one-metre-wide berms. The central reserve is ten metres wide, the minimum radius is 1,300 metres, and the maximum grade is 4%.

Measures have been envisioned to protect water resources and the archaeo-

logical heritage, and the area has been hydroseeded and planted with new vegetation belonging to species selected to match the local climate and soil types.

## + Team

**Department heads:** José María Quintanilla García, Fernando Flórez Tejado

**Construction managers:** Luis José Mayo Martín, David Céspedes Ferreiro

**Production chiefs:** Jesus Rodriguez Martín, Miguel Angel Vicente Ramos

**Technical Office chief:** Javier Robledillo Martín

**Safety technician:** Jorge García Martínez

**Foremen:** Lorenzo Sanchez Romero, Jesus Carlos Fernandez Grajal and Olegario Martínez Rodriguez

Aerial view of the site



Ribbon cutting on the Cuatro Calzadas-Montejo section

# Enlargement of Mercamadrid and Parque de las Comunidades completed

The project will make room for four new markets

With this project, Mercamadrid will have an extra 45 hectares for its facilities. That's an increase of its current area by 25%.

In July 2007 FCC Construcción received the contract to design and build the enlargement of Mercamadrid, Madrid's central wholesale food market, and a park, Parque de las Comunidades. Work began in April 2008.

The special soil conditions of the site, a former landfill, posed the greatest difficulties for getting the job done. In the course of the work 1,800,000 cubic metres of earth were moved and compensated, and 28,000 metres of controlled modulus columns were used to treat the settling embankment.

In creating the embankment, all the excavated material was used, encap-

sulated in reinforcing, waterproofing geotextiles. These solutions have proved themselves successful in terms of innovation, sustainability, environmental friendliness and quality.

## + Team

Construction manager: Carlos Martínez Montero

Production chief: Oscar Candal García

Production chief: Gonzalo Rodríguez Mateos

Technical Office chief: José González Jiménez

Quality and safety technician: Claudia Valdés-Miranda Cros

Foreman: José Luis Herrero Marín

Topographer: Felipe Flambó Dias



Aerial view of the enlargement

# Head Offices for the Provincial Directorate of the National Social Security Treasury in Lugo

**The building will house the Provincial Directorates of the National Social Security Treasury and the National Social Security Institute**

The building, constructed by FCC Construcción, is rapidly becoming one of the city of Lugo's landmarks. The different Social Security offices currently scattered all over the city will soon be relocated to the new site.

Outwardly, the building rests on a stone platform squatting at the ground-floor level to hold up the upper volume, in the shape of a stone box open on both sides, with facing sides of glass. The interior has been designed with central courtyards that enhance the sensation of luminousness and spaciousness.

The building has an area of 14,188 square metres, distributed into public service areas and offices; these occupy 8,905 square metres on the ground floor, the mezzanine and seven upper floors. The garages, files and technical areas occupy 5,283 square metres and are distributed into three basements, making for a grand total of twelve storeys.

The finishes fundamentally feature four materials, quartzite, black slate, wood and glass. The quartzite has been used on the ventilated façade, the roof and

the indoor and outdoor veneers. The slate has been used in the raised-access floor and in the rest of the floorings and stairs.

The 4,000 square metres of glass have been used in curtain-wall-type façades and in handrails and indoor space dividers. The wood (sporting a stained cherrywood finish) has been utilized to make office dividers, panelling for walls and circular pillars, cabinets and false ceilings in public areas.

## + Team

**Department head:** Francisco González Raposo

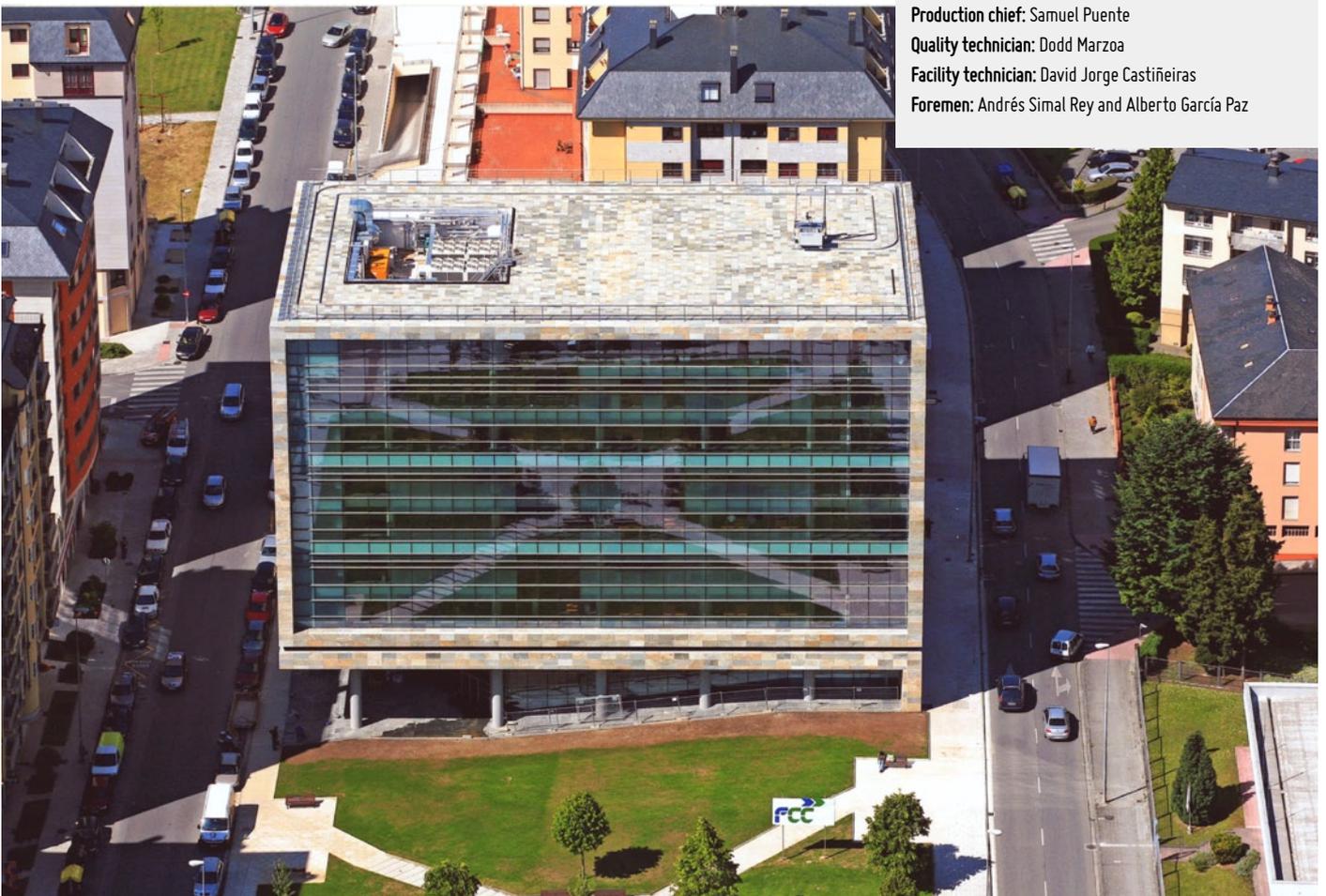
**Construction manager:** Ignacio Solar Alonso

**Production chief:** Samuel Puente

**Quality technician:** Dodd Marzoa

**Facility technician:** David Jorge Castiñeiras

**Foremen:** Andrés Simal Rey and Alberto García Paz



Aerial view of the building

## ALPINE makes tunnel breakthrough for a section of New Delhi's metro

Alpine, FCC's Austrian subsidiary, has successfully made the breakthrough for the first section of the metro link between New Delhi and the airport. Alpine won the 139.3-million-euro contract in September 2007.

The tunnelling conditions have been tough, and Alpine has used three TBMs on the job. Work has been done at depths of between 35 and 45 metres, at a longitudinal grade of 2.85%. In addition, New Delhi's main vehicle arteries, such as the Minot railway bridge, Connaught Square, Connaught Circle and the two metro lines, all located just above the construction site, have remained in operation without interruption during the work.



Tunnel breakthrough

## ALPINE is finishing Europe's biggest power plant in Bulgaria



Tsankov Kamak Dam

Tsankov Kamak hydroelectric power plant is situated in the Rhodopes Mountains, near the Greek border, and forms part of the Vacha Cascade. The Vacha River is one of the biggest in

Bulgaria, and it has excellent potential for producing hydraulic power.

The project includes the construction of 130.5-metre Tsankov Kamak Dam,

a reservoir that will hold a total of 110 million cubic metres of water and the Tsankov Kamak power production plant, which will have a total installed capacity of 85 + 1 MW (2 x 42.5 MW), which will generate 188 + 10 GWh of electricity each year.

The new Tsankov Kamak hydraulic power plant is the first project that is going to utilize the flexible instruments furnished by the Kyoto Protocol, such as the joint application of climate protection mechanisms. According to estimates, some 200,000 tons of CO<sub>2</sub> per year can be reduced.

# Opening of the Social Integration Centre in Granada

The centre is a complex of buildings interconnected by green areas and athletic areas



The centre

The Granada Social Integration Centre, which was opened on 16 June 2009 by the secretary-general for Penitentiary Institutions, Mercedes Gallizo, will alleviate the overcrowded conditions at the prison in Albolote, Granada.

The centre is divided into three buildings interconnected by green areas

and athletic areas. In the first building are the entrance and the main control post, the aid area, a multi-purpose room, dressing rooms and offices. The second building holds the housing, 150 double rooms with independent lavatories for each room. The third building is set aside for communications and social

services, and the production workshop is also located there.

The centre has a coffee shop, laundry, library, multi-purpose rooms and a gymnasium as well.



The SIC is opened

# Opening of the Riverside Walk in Deltebre, Tarragona

This new walk reclaims a run-down section of the Ebro River



Aerial view of the site

The minister of the Environment and the Rural and Marine Environment, Elena Espinosa, opened a new riverside walk in Deltebre, Tarragona, on 14 July 2009. The Ebro River delta contains the most important wetlands in Catalonia and the second most important wetlands in all of Spain.

The riverside walk is 4,739 metres long and eight metres wide, and it accommodates a pedestrian path and a bicycle path.

A screen of red eucalyptus pilings has also been created, to contain the foot of the slope running down to the river.

Rest areas have been built, and there are 25 wooden fishing piers. There are also green areas, where 6,263 species of trees and 4,492 species of shrubs have been planted.



Opening of the Riverside Walk

## FCC earns international acknowledgement in sustainability

FCC has earned international acknowledgement for its sustainability policy through the inclusion of the company in two of the most prestigious indices there are, the Dow Jones Sustainability Index (DJSI) (for the second year running) and the FTSE4Good.

The Dow Jones Sustainability Index, created in 1999, is a stock market index whose objective is to classify the companies that show the best sustainability profile. It distinguishes the firms that have scored the highest on a yearly questionnaire that looks at economic, environmental and corporate criteria. Each year this index reviews the management work of 2,500 selected companies and evaluates them

through more than 50 criteria in general matters and matters specific to the sector where each does business. FCC has earned the highest economic score and is the leader in 8 of the 19 criteria evaluated: crisis management; non-financial project evaluation; code of conduct; environment, efficiency and resource use; labour practices and talent scouting and retention.

The FTSE4Good, created by the London Stock Exchange and launched in July 2001, selects listed firms from throughout the world that meet the requirements set in advance by the index: corporate social responsibility practices in human rights, anticorruption measures, the environ-

ment, climate change and relations with interest groups, based on the principles of responsible investment.



## FCC Construcción releases its 2009 Environmental Report



FCC Construcción has just released its 2009 Environmental Report, which is the sixth since it pioneered environmental reporting in its sector and released its first such publication in 2000.

The point of the report is to state the environmental risks stemming from the company's actions and the efforts made to keep risk at bay. Once the risks have been identified, the company can plot far enough in advance what good practices to roll out to minimize the probability of harm.

We consider the opinions of stakeholders and the points of view and suggestions of our clients, employees, shareholders, suppliers and subcontractors, government, universities, partners and the general public fundamental.

That's why we make an ongoing effort to upgrade the instruments we use to gather and analyze data, through which we come to grips with the reality of different projects and from which we draw the information we pass on to society.

## FCC Construcción earns ISO 27001 certification for its Information Security Management System

FCC Construcción has developed and introduced a security system for the information and documentation of projects that have special security requirements. The system has been certified by AENOR pursuant to UNE-ISO/IEC 27001. FCC is the first major construction firm to make such an achievement.

The new system covers the security of not only information stored in electronic formats, but also physical project docu-

ments (building plans, certificates, order books, quality plans, etc.).

The achievement of this certification for the Information Security Management System enables our company to prove that the right set of checks has been introduced to ensure the confidentiality, fullness and availability of its system of information, be that information in the form of hard copies or electronic files.

This new system has been introduced as an integrated part of the ISO 9001 quality management systems and the ISO 14001 environmental management systems (since the requirements of UNE-ISO/IEC 27001 are complementary with the requirements of the other systems), within the FCC Construcción Management and Sustainability System. Existing procedures have been modified as necessary, and a specific procedure has been added.

### Current events

## Two FCC Construcción projects win prizes in Zaragoza

These prizes attest to the fine execution of two major projects to reclaim the Ebro River



Water Park

Two projects done by FCC Construcción, both in the city of Zaragoza with the Ebro River as their protagonist, have received prestigious prizes.

This year's Ricardo Magdalena Architecture Prize recognized the project on the Ebro River's bank between Tenerías and Las Fuentes, designed by archi-

itects Antonio Lorén, Eduardo Aragües and Raimundo Bambó.

At the awards ceremony, stress was laid on the pleasing and effective connections designed in the riverside project for this area of the Ebro. It used to be a green area with scanty tree cover, a difficult terrain to get through in order to

reach the river; now it has been made over into an open space for leisure and sport activities. The zone has an area of 87,355 square metres and stretches for a length of 1,180 metres.

Zaragoza Water Park, designed by architects Margarita Jover and Iñaki Alday, has received the prestigious FAD Prize to Foster Arts and Architecture Design in the "City and Landscape" category.

The project, which FCC Construcción executed in the southern area of the city under the motivation of the construction of EXPOAGUA, focuses on recovering a vast green area that integrates country and city, seizing the opportunity offered by a meander of the Ebro River where it passes Zaragoza.

## Machinery at FCC Construcción



FCC Construcción's Machinery Pool

At FCC Construcción, the Management Office for Machinery, part of the Deputy Corporate Management Office for Technical Services, is in charge of purchasing, maintaining and running the firm's machinery and auxiliary resources and providing advisory and support service covering everything that has to do with machines and facilities. This includes bid studies, procedure implementation and works execution.

Work on studies, facility design, documentation, procedure implementation, works tracking, investments and operation control is done by the Technical Services offices in Madrid, while the Central Machinery Pool and the Central Auxiliary Resource Warehouse take care of machinery and equipment maintenance and running, with the support of regional pools or, in the case of subsidiaries abroad, national pools.

The Central Machinery Pool, located in Arganda del Rey, occupies 170,000 square metres and is equipped with 4,500 square metres of shops. It has a team of highly qualified technicians, operators and mechanics with the specialization required for operating the kinds of modern machines now used in construction, whose technological component is becoming more and more important.

The Machinery Pool is a production centre that participates actively in works exe-

cution. Due to today's high degree of mechanization, especially in major projects, the Machinery Pool is called upon to furnish all kinds of machines and equipment: tunnel-boring machines for tunnelling, special marine equipment for work in harbours, formwork for viaduct building, agglomerate-manufacturing and -spreading equipment for roads and facilities for making and placing concrete in dams.



Close up of a TBM