



Foto of the month System of platforms reserved for public transport , Castellón

## Contract awards

- FCC is awarded the contract for Valladolid's East Outer Ring Road.
- FCC to build the new Hospital de la Serranía de Ronda in Málaga.
- The Ministry of Public Works picks FCC to build the new southbound Despeñaperros portion of the A-4.
- FCC to build the motorway from Puerto Rico to Mogán on Gran Canaria.
- A new section of the AVE's Atlantic Corridor awarded to FCC Construcción.
- FCC is awarded the phase-one building contract of the Islas Baleares quay and the Tarragona Port multi-purpose terminal.
- FCC is awarded a section of the Durango/Mazatlán Motorway in Mexico.

## Other contract awards

- 439 publicly sponsored housing units for the Andalucía Council in the Pino Montano district of Seville.
- Development of Sector Montmar in Castelldefels, for the Barcelona City Council, for 20.2 million euro.
- Córdoba Contemporary Creation Centre, for the Andalucía Council Culture Department, for 19.5 million euro.
- Benicarló-Vinaroz relief road in Castellón, for the Ministry of Public Works, for 49.7 million euro. This includes 18.2 kilometres of road, five junctions and 15 viaducts.
- Construction and consolidation of bank and facilities at Port Adriano, Calviá, Balearic Islands, for Ocibar, S.A.

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- Bridge opened over the Iro River in Chiclana de la Frontera, Cádiz.
- FCC builds Banco de la Producción offices in Managua, Nicaragua.
- Marina Sant Carles opened in Tarragona.
- Work finished on the Buñuel/Cortes section of the Ebro Dual Carriageway.
- Ground broken on the work to enlarge the Hospital de Alcazar de San Juan in Ciudad Real.
- Castellón's system of platforms reserved for public transport goes into service.

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## FCC is awarded the contract for Valladolid's East Outer Ring Road

The Board of Directors of Sociedad Estatal de Infraestructuras del Transporte Terrestre has awarded FCC Construcción the contract to build the section of the Valladolid East Outer Ring Road between the Duero Dual Carriageway (A-11) (from the San Cristóbal junction) and the Castilla Dual Carriageway (A-62).

The contract's budget is 95 million euros, and the estimated completion period for the job is 32 months.

The new layout will complete a new bypass around Valladolid to the east, improve the metropolitan area and enable part of the long-distance traffic between the northern peninsula and the high central plain to be routed around the city more easily.

The job includes the construction of 13.1 kilometres of dual carriageway, eleven viaducts, four overpasses, seven underpasses, cross-drainage and longitudinal drainage, signage, striping, markings and the appropriate safety guards for roads of this type.

## FCC to build the new Hospital de la Serranía de Ronda in Málaga



City of Ronda.

The Andalucía Council's Health Department has awarded FCC Construcción the contract to build the new Hospital de la Serranía de Ronda in Málaga for 48.8 million euro.

Located in La Planilla, which lies two kilometres from the centre of Ronda, on road A-376 near the border with the province of Cádiz, the new hospital will provide services for over 93,000 inhabitants of cities and towns in both provinces.

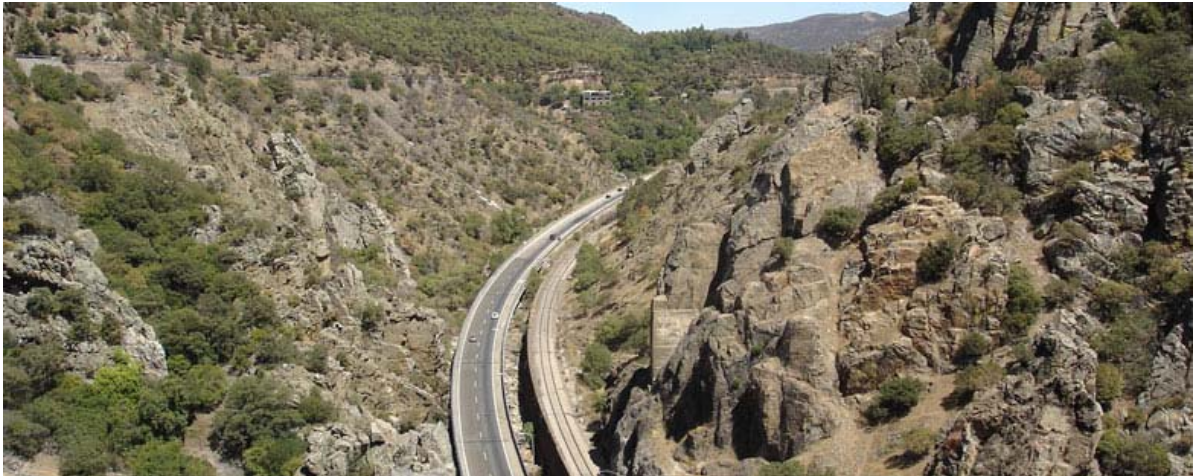
The new health centre, which will be taking over from the current facility, will occupy an area of 56,000 square metres. Of that area 26,974 square metres will be for the hospital, whose services will cover a total of four floors. Close to 30,000 square metres of the lot are set aside for roads, sidewalks and car parks.

The hospital area proper will be made up of a conventional area with 152 individual rooms and 14 newborn stations, plus a multi-purpose area that will house outpatient surgery, care for patients suffering from a combination of diseases, critical patients and observation and emergency areas.

The surgical area will be equipped with seven operating rooms, one delivery room and two labour rooms. The emergency zone will have eight examination modules, two stations in the recovery rooms, plus 14 stations, 10 beds in the observation area and 54 outpatient examination modules.

In terms of diagnostic resources, the new hospital will enjoy an advantage over the current facilities, in the form of a nuclear magnetic resonancing unit.

## The Ministry of Public Works picks FCC to build the new southbound Despeñaperros portion of the A-4



The Ministry of Public Works has picked FCC Construcción to build a new southbound portion of the A-4 between Venta de Cárdenas and Santa Elena (the Despeñaperros relief road), in the province of Jaén, for 97 million euro.

The nine-kilometre-long section has got three 3.50-metre-wide lanes, and the job includes construction from the remodelled Santa Elena junction to the connection with the current northbound A-4 at El Corzo tunnel, south of the Venta de Cárdenas connection.

The job includes the construction of the 166-metre-long La Cantera Tunnel and the 1,823-metre-long Despeñaperros Tunnel, the improvement of the already-existing El Corzo tunnel, and six viaducts, in addition to the west remodelling of the Santa Elena junction and a new junction with the Aldeaquemada road and the A-4.

The work has been designed and undertaken in a way planned to cause the least possible environmental impact, and it envisages the necessary ecological, aesthetic and landscape planning measures for the new roadway.

## FCC to build the motorway from Puerto Rico to Mogán on Gran Canaria



The Canary Island Government Public Works Department has awarded FCC Construcción, in a joint venture with other companies, the contract to build the motorway from Puerto Rico to Mogán, on Gran Canaria, for 111.7 million euro.

The new 6.3-kilometre-long section has got 3.8 kilometres of tunnels and 1.1 kilometres of viaducts. It will boast two 3.5-metre-wide lanes in each direction. Work will begin as soon as the land has been prepared.

The new motorway extends motorway CG1 to Mogán to give Mogán a better connection to the capital and eliminate the traffic problems plaguing the current road.

## A new section of the AVE's Atlantic Corridor awarded to FCC Construcción

The Ministry of Public Works has given FCC Construcción the contract for subsection A (Vacariza/Rialiño) of the Atlantic Corridor of the High-Speed Railway (AVE) connecting La Coruña with the Portuguese border, for 91.37 million euro.

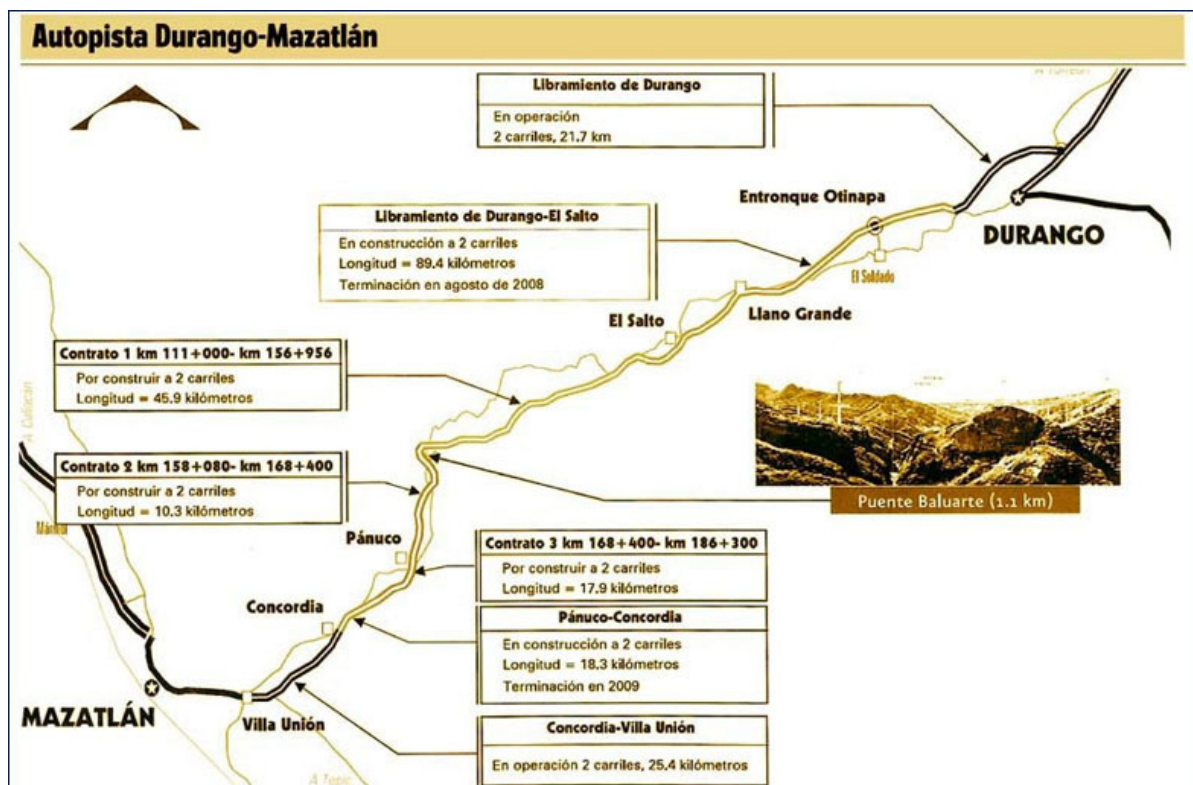
Along this eight-kilometre-long section of rail there are also two tunnels (one is 372 metres long and the other, 866 metres long) plus five viaducts.

## FCC is awarded the phase-one building contract of the Islas Baleares quay and the Tarragona Port multi-purpose terminal

Tarragona Port Services has awarded FCC the contract for phase one of the Islas Baleares quay and the multi-purpose terminal at Tarragona Port, for 71.8 million euros.

The job, which will be done within a 30-month completion period, consists in the construction of a 750-metre-long quay using 26 reinforced concrete caissons set parallel to the existing seawall.

## FCC is awarded a section of the Durango/Mazatlán Motorway in Mexico



Mexico's Office of the Secretary of Communications and Transport has awarded FCC Construcción, in a joint venture with a local company, a contract for the 17.9-kilometre-long third section of phase two of the construction of the Mazatlán/Durango motorway, for 136 million euro.

FCC will be building the two-lane motorway from kilometre point 168.4 to kilometre point 186.3, which includes the construction of 16 tunnels and 12 bridges.

The construction of this motorway is the most important public works job Mexico has tackled in recent years, because it is one of the country's

biggest, most expensive road infrastructure projects, as it crosses the western Sierra Madre. The motorway, which will link the Mexican Pacific with the central northern area of the country and then with the Gulf of Mexico, will go into service in 2012. Altogether it is 230 kilometres long and will feature 63 tunnels, 115 structures and a 394-metre-high bridge over the Baluarte River.

During its first year the motorway is expected to see 2,500 vehicles a day, and this figure will increase as times goes by, as will the lanes, which will be twinned to four. The motorway will save motorists three and a half hours.

## Bridge opened over the Iro River in Chiclana de la Frontera, Cádiz



In the presence of Andalucía Council President Manuel Chaves, Public Works Department Head Mar Moreno, Chiclana Mayor Ernesto Marín and the Andalusian Government's deputy, José Antonio Gómez Peritán, in July last the bridge over the Iro River was opened in Chiclana de la Frontera, Cádiz.



The new bridge embodies an investment of close to 8 million euro, and it creates a connection in the eastern quarter of the city, easing the pressure of part of the traffic that currently has got to go through the centre of Chiclana.

The project starts at the roundabout at the entrance to the Sport City, on the old N-340 crossing, and it ends in the Huerta del Rosario area, next to the transformer station on the Medina Sidonia access road.

The finished product is 775 metres long. There is a first section, just 260 metres long, where the existing road was improved and adapted to accommodate the new access, which has got two 3.25-metre-wide lanes running in each direction, connecting with the existing roundabout.

To cross the Iro River a 465-metre-long structure was built that gives access to the Medina Sidonia road at a two-lane roundabout.

### Basic information

**Job name:** Bridge over the Iro River.  
**Developer/Owner:** Andalucía Council Public Works and Transport Department.  
**Budget:** €7,932,359.  
**Total length:** 775 metres.  
**Bridge length:** 465 metres.  
**Road width on the bridge:** 21 metres (two 3.25-metre-wide lanes in each direction, 3.75-metre-wide sidewalks and a 0.5-metre-wide median).

### Site team

**Construction manager:** Ignacio Gutiérrez Rodríguez.  
**Production chiefs:** José Antonio de Miguel Briones/Paula Ferreras Cantero.  
**Head of topography:** Juan de Dios González Rubio.  
**Administration chief:** Juan Carlos Mena Rojas.  
**Foreman:** Juan Mármol Márquez.  
**Safety and quality chief:** Jesús Rodríguez Gómez.

## FCC builds Banco de la Producción offices in Managua



FCC Construcción, through its subsidiary MSG Nicaragua, has created in Managua the building to house the central corporate offices of Banco de la Producción, the biggest private bank in Nicaragua.

The building has got four stories and a basement, for a total area of 9,000 square metres, and in addition it has got 6,000 square metres of outdoor areas and parking.

The building's modern, elegant architectural design is the brainchild of the Costa Rican firm Zurcher Arquitectos. The building's outer walls are made up of insulated double-glass curtain walls and a fascinating variety of panels and sunscreens made of enamelled aluminium, which help make the building a real eyecatcher.



### Basic information

**Job name:** BanPro corporate building.  
**Developer/Owner:** Banco de la Producción.  
**Project management:** Tirso Celedón, engineer.  
**Project supervision:** Roberto Sansón, architect.  
**Budget:** 12 million dollars.  
**Completion period:** 18 months.

### Site team

**Engineers:** Jorge Vaamonde, Miltón Picado, Norma Calero, Carlos Araica, Deglis González.  
**Architect:** Flavia López.  
**Foremen:** Marlon Urbina, Henry Toba.

## Marina Sant Carles opened in Tarragona



On the 28th July last the Marina Sant Carles was opened in Sant Carles de la Rápita, Tarragona. It was built by FCC. The ceremony was attended by the head of the Department of Land Policy and Public Works, Joaquín Nadal, amongst other authorities.

The marina lies at the eastern edge of Sant Carles, between the city's current harbour and a quay built in the eighties, named Moll dels Alfacs. The basin is split in two by an area of fill that forms a finger of land reaching into the basin; that is where the buildings stand and the jetties spring from.

The new marina has got the mooring capacity for 1,110 boats in all. In the first phase, 843 moorings have been built, so 267 remain to be done in a future expansion. The lengths of the moorings range between eight and 30 metres.

The total area is approximately 228,000 square metres. The water occupies 180,000 square metres of that area; the land zone measures some 48,000 square metres and holds the yacht club, retail buildings, roads and parking, the central square, gardens and a dry dock.

The marina has been equipped with electricity, public lighting, drinking water, wastewater removal facilities, telephone and irrigation services.

After the opening, construction will begin on the land-based work for the dry dock, where a service station will be built to supply diesel fuel and gasoline and facilities will be installed for the removal of sewage from boats and bilge cleaning. Also construction will begin on a parking area next to the entrance, the swimming pool and garden landscaping in the building area.

**Work finished on the Buñuel/Cortes section of the Ebro Dual Carriageway.**



**FCC Construcción builds a new section of the Ebro Dual Carriageway for the Navarra Government for 15.6 million euro.**

The job was to twin six kilometres of the N-232 into dual carriageway between the municipal limits of Buñuel and Cortes, Navarra. The new lanes lie to the left of the current road.

The standard section was defined as two seven-metre-wide roadways, one-metre-wide inner verges, 2.50-metre-wide outer verges and one-metre berms. The median is five metres wide, with a space of seven metres between white stripes.

Two service roads have been built, one on each side of the trunk, from the turn-around exit to the Cortes exit, and two agricultural machinery service roads were built as well. There are also two new

exits, as just mentioned: one for changing direction only and the other providing access to the town of Cortes.

A new rest area has been created to provide service for travellers on road N-232 heading in the Cortes-Tudela direction. It is located at kilometre point 112+900, the same as the existing rest area, which will now be dedicated exclusively to traffic heading from Tudela toward Cortes. In addition replanting and landscaping plans were made for the site's slopes and the dead ground at junctions and islands, and other environmental treatment measures were taken as well.





## Ground broken on the work to enlarge the Hospital de Alcázar de San Juan in Ciudad Real



On the 23rd July last, ground was broken on FCC Construcción's work to remodel and enlarge the Hospital de Alcázar de San Juan, in Ciudad Real. Present at the ceremony were, amongst other personalities, the president of the Castilla la Mancha Council, José María Barreda, and the head of the Health Department, Roberto Sabrido.

The job consists in the construction of new four-story buildings having an approximate total area of 24,000 square metres, following the present structure of parallel connections and perpendicular wings, leaving roomy inner courtyard gardens in

the middle. This enlargement is to house 70 new rooms for hospitalised patients and new services, such as paediatric surgery and psychiatric hospitalisation.

On the ground floor is the new medicinal gas plant, and the current building has been connected with the enlargement building.

The new hospital will provide services for a population of 250,000 inhabitants and will have 400 beds, 112 examination rooms, 20 emergency units, 13 operating rooms and four delivery rooms.

## Castellón's system of platforms reserved for public transport goes into service



In July last the Uji/Parque Ribalta section of the network of platforms reserved for public transport was put into operation in Castellón. It was built by FCC Construcción for the Valencian regional government's Infrastructure and Transport Department.

The event was attended by the head of the Infrastructure and Transport Department, Mario Flores, and the director-general of Transport, Vicente Dominé, as well as diverse local personalities.

This system of metropolitan transport combines the capacity, accessibility and regularity of a tram with the flexibility and adaptability of a bus system. It is based on the effective combination of a platform reserved exclusively for the circulation of public transport (and taking priority at intersections) with a fast, comfortable, ecological hybrid tram/bus vehicle on wheels powered by an electrical traction system.

The new section is 2,037 metres long and connects Jaime I University and the Paseo de Morella with Parque Ribalta, going through the RENFE intermodal transfer station, making this an important east/west transport facility for Castellón.

The platform is seven metres wide where the lanes go in two directions and 3.5 metres wide for single lanes, plus a 50-centimetre-wide technical band on each side to accommodate separators and catenary posts. It has also got five 25-metre-long, three-metre-wide stops. One special feature of the line is the cable-stayed bridge over the bed of the Seco River.

## FCC Construcción in Panama

At present Spain is one of Panama's biggest investors, as the Central-American country is the number-two recipient of Spanish investments.

Panama is in the flush of economic growth, with the enlargement of the Canal and all eyes set on the expansion of the energy, petrochemical and real-estate sectors.

FCC Construcción, through its subsidiary M&S, has lately finalised a number of different civil engineering projects in Panama. These are a few of the more important ones.

### Improvement of the Soná/El María Road, province of Veraguas



This consists in the improvement of 17.5 kilometres of road and streets in the districts of Soná, Río de Jesús and Las Palmas. The job involved road scarification and shaping, placement of a layer of hot asphalt concrete, double sealing, and deep and surface patching.

Included were the laying of drainage tubes 45, 60, 75 and 90 centimetres in diameter, the removal of structures, dredging, the construction of stone masonry, paving of road banks and other areas, installation of reinforced concrete slabs for entrances, the repair and maintenance of vehicle bridges, and road striping and signage, amongst other jobs.



**Location:** Province of Veraguas.

**Completion period:** 270 days.

**Budget:** US \$5,634,149.

#### Site team

**Superintendent:** Jorge Rigg.

**Site administrator:** Kathia Mendoza.

**Engineering and quality assistant:** Karina Frago.

**Environment and industrial safety assistant:** Carlos Martínez.

**Technical assistant:** Gustavo Quintero.

**Installation of vehicle bridge and overpass at Avenida Domingo Díaz in the province of Panama**



The project includes the construction of seven supports for the assembly of the prefabricated steel vehicle bridge's structure, each support set on top of concrete pilings 0.60 metres in diameter, the lifting of the steel girders into position five to seven metres apart, and the laying of the access slab.

It also includes excavation work, the construction of the bridge access lanes, adjacent districts and a shopping centre, the relocation of public and private utilities, river bed cleaning, storm drainage system improvements, and horizontal and vertical road signs and indications.



**Location:** Province of Panamá.  
**Completion period:** 300 days.  
**Budget:** US \$4,729,418.

**Site team**

**Superintendent:** Alicia Olmedo.  
**Site administrator:** Maritzel Giroldi.  
**Engineering and quality assistant:** Charlotte Murillo.  
**Environment and industrial security officer:** Carlos Rodríguez.

**Improvement and widening of the Pan-American Highway. Section: Arraiján to La Chorrera, in the province of Panama**



The project includes the study, final design and construction work to improve and widen the highway and to improve streets in the adjacent towns.

The work at stake includes the improvement of 21.9 kilometres of existing pavement on the Pan-American Highway and the construction of two new lanes parallel to the existing highway, for a total of four lanes of traffic.

The site has been cleaned, and obstructions have been taken down and demolished; structures have been refurbished, maintained or built; the storm drainage system has been built and enhanced; enhancements have been made to the intersections leading to existing districts; bus stop sheds and bays have been built; and six vehicle bridges and 28 pedestrian bridges have been built.

The project also envisages the improvement of 100 kilometres of streets in the towns in the districts of Arraiján and La Chorrera.



**Location:** Province of Panamá.

**Completion period:** 910 days.

**Budget:** US \$70,487,425.

**Site team**

**Superintendent:** Juan M. Rodríguez.

**Site administrator:** Laydé Borja.

**Engineering assistant:** Melina Escudero.

**Environment and industrial security officer:** Carlos Rodríguez.

**Quality officer:** Humberto Moreno.

**Production foreman:** Yadira Amuy.

**Improvement of the access roads to Las Américas Bridge in the province of Panamá**



The project includes repairing the four accesses, a total of 3.6 kilometres of roadway, by truing and laying a 10-centimetre-thick layer of asphalt concrete, demolishing old slabs and replacing them

with Portland cement concrete paving, and providing surface patching and sealing for joints and cracks as needed.

**Location:** Province of Panamá.

**Completion period:** 160 days.

**Budget:** US \$1,092,570.

**Site team**

**Superintendent:** Yovanna Torres.

**Site administrator:** Héctor Maradiaga.

**Engineering and quality assistant:** José M. Castillo.

**Environment and industrial security officer:** Carlos Rodríguez.

**Site foreman:** Víctor Santamaría.



## FCC Construcción releases its fourth sustainability report

FCC Construcción has released its 2007-2008, Sustainability Report which was prepared according to the Global Reporting Initiative's G3 international standard. The report earned an A+ from independent third-party organisation AENOR. FCC reports every two years and updates its reports on the odd years. With this new edition, the company is backing up its commitment to transparency in dialogue and information with all interest groups, to inform them of the company's economic, social and environmental progress. Each chapter contains the objectives and results for 2007 and poses the objectives for 2008.

In the social area, FCC created 2,506 jobs, 836 of them in Spain. It also signed an agreement with the ADECCO Foundation for the integration of persons with disabilities into the working world, which enabled FCC to start up its Family Plan. The company paid close attention to occupational health, bringing accident indices to levels far below those of the sector as a whole and firmly backing career

development measures for its employees, furnishing over 193,000 hours of training.



In the environmental context, how far the company has gone and what advances it has made in its system for the introduction of good practices are shown in all areas: the company's relationship with society, atmospheric emissions, noise and vibrations, water dumping, land occupation and soil pollution or loss, use of natural resources, waste creation and land use planning.

Several of the company's projects have been distinguished by prestigious awards, such as the Mies van der Rohe award for the Contemporary Art Museum of León designed by Emilio Tuñón and Luis Moreno Mansilla, the Alcántara Bridge prize given to Terminal T4 at Madrid-Barajas Airport, by Lamela and Rogers, and the Garrigues Expansión prize in the category of Sustainability and Social Responsibility for the biennial publication of environmental statements.

## FCC Construcción publishes its New Recruit's Handbook



FCC Construcción is making its New Recruit's Handbook available to all its new employees. The handbook contains all the essential information on the company, its culture and its professionals.

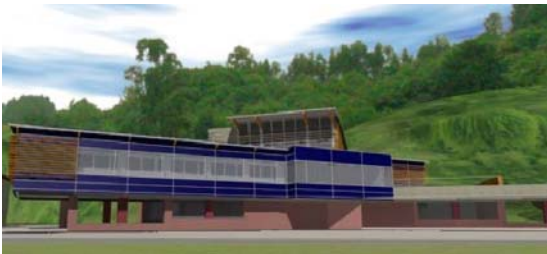
The handbook's objective is to create greater closeness between the company and new employees, so recruits can quickly and easily gain a greater familiarity with the company.

## FCC builds a bioclimatic office building in Asturias as part of the Arfrisol Project



FCC Construcción has built a bioclimatic office building with solar cooling in Asturias for the Barredo Foundation, as part of the Arfrisol Project.

The new building, which is to house the tunnel fire and ventilation research centre headquarters, is situated in the town of Siero and has been designed under sustainability and bioclimatic design criteria suited to the mild, humid climate of the area.



The building has three narrow floors (the ground floor and two above-ground floors), which have got natural cross ventilation. The glassed-in front is protected by sunscreens and is set up in different configurations (as window, gallery or hothouse) depending on the building spaces behind, to pre-heat the air for the heating system or to promote ventilation.

The building has got a heating furnace that runs on biomass, solar heating panels and absorption cooling for indoor temperature control, in addition to hydronic heating and a photovoltaic installation built right into the outer glass wall.

### The Arfrisol Project

Arfrisol is the first of the unique strategic projects sponsored by the Ministry of Education and Science, whose aim is to adapt bioclimatic architecture and solar energy for use in heating, cooling and related functions in symbolic public buildings.

Plans made under Arfrisol include the use of photovoltaic panels to produce electricity in symbolic public buildings, new public buildings and refurbished public buildings located at different sites featuring a range of climate conditions (Almería, Madrid, Soria and Asturias).

These centres use only 10 to 20% of the conventional energy used by buildings constructed using conventional technology in the same locations, so an 80-90% reduction in energy consumption is expected, significantly reducing CO2 emissions into the atmosphere.



## **The Esther Koplowitz Foundation to give the Castilla y León Council a centre for persons with intellectual disabilities**

On the 22nd July the Esther Koplowitz Foundation announced the construction of a centre to care for persons with intellectual disabilities in Valladolid, which the foundation will be donating to the Castilla y León Council and the Valladolid City Council, who will manage the centre.

The three institutions have therefore signed a protocol regulating the future construction and opening of a residential centre with over 6,000 square metres of useful area, with the capacity to tend to 83 elderly or aging persons with intellectual disabilities, and one specialised treatment unit for regional referrals of persons with intellectual disabilities and behavioural problems.

The centre, will have a home for 48 persons, a day centre for 15 and a specialised treatment unit for 20 persons.

The agreement signed on this occasion is the start of a process that will be implemented through an accord between the Valladolid City Council and the Esther Koplowitz Foundation for the construction of the centre and tracking of its operation and an accord between the Castilla y León Social Services Management Office and the Valladolid City Council for the centre's management.

## **Esther Koplowitz honoured for her commitment to society**



Dirigentes magazine has given Esther Koplowitz its award for commitment to society as part of 2007's Fourteenth "Excelencia" awards.

FCC Director Rafael Montes accepted the award on the behalf of FCC's leading shareholder, in an event held on the 23rd June at the Hotel Ritz in Madrid, which was attended by FCC's chairman and chief executive officer, Baldomero Falcones, directors Marcelino Oreja, Gonzalo Anes, Antonio Pérez Colmenero and Felipe B. García Pérez and other executives of the FCC Group.



## FCC Construcción at FICNI 2008



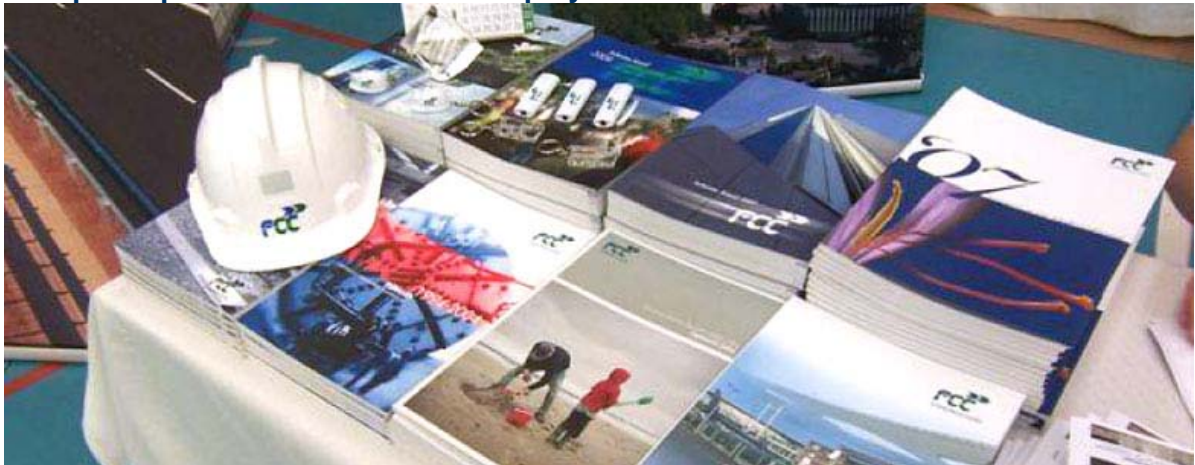
The Ninth Monographic Construction and Public Works Fair of the Iberian Northwest, FICNI 2008, was held in June last at the Luis Adaro Fair and Exhibition Grounds in Asturias.

This biennial monographic fair featured 180 exhibitors and received visits from close to 65,000 people, mostly sector professionals. The fair was divided into thematic and exhibition areas covering

elements common to both building and public works, new materials and technological innovation, environmental technology and measures, building restoration technology, urban furniture, housing developments and home automation.

As in years before, FCC Construcción was there in the technical exhibit area, with a designer stand.

## FCC participates in the Romanian employment forum



On the 28th June last FCC Construcción participated in the forum on employment organised by the Romanian Ministry of Labour and the Romanian Embassy in Spain at El Juncal Sport Pavilion in Alcalá de Henares, Madrid.

The object of the event was to inform the Romanian colony residing in the Community of Madrid about their real possibilities of returning to their country, coinciding with the decline in employment in Spain and Romania's heavy demand for unskilled labour and professional services.

A great number of Spanish and Romanian companies offering employment, housing or financing in Romania participated in the forum.

FCC Construcción was there, with a stand dispensing information on the company's activities in Romania and the different kinds of jobs that need to be filled right now. It collected around a hundred résumés from Romanian workers interested in returning to their country, and it also handed out information on the company to anyone interested.

The event was attended by Ciro Martín, the FCC Group's personnel screening manager, and José María Merino, the group's international human resources manager.

## In-place soil stabilisation with cement in a wet process Machinery Manager's Office, FCC Construcción

One of the job units that has seen the most development and advancement in recent decades in Spain is in-place stabilisation of the soil on a graded surface with cement or lime. Some of the main reasons for the big upswing in the use of this system of execution are:

- The great difficulty of finding borrowing pits, stone and gravel quarries and dumps due to government environmental constraints. For this reason it has become increasingly necessary to use all the materials found on the projected road's site, regardless of their properties.
- The possibility of using soil that has a high clay and lime content, with a high plasticity and low load-bearing capacity. Such soil is very abundant in Spain.
- Marginal soil is used to fill in embankments and ungraded material, by mixing in soil from the road site itself or borrow pits nearby (containing no organic matter or chemical compounds that could have an adverse effect on the cement-hardening process) plus an agglomerant (cement or lime). The ultimate goal is to improve the mechanical characteristics of the materials in question. The idea is that, with improved workability and compactability, the materials' properties can be improved enough that they can form part of the upper layers of the graded surface.

In-place stabilised soil is defined as the homogeneous, uniform mixture of a soil with lime or cement, and eventually water, at the road construction site. Once suitably compacted, the stabilised soil is used to reduce the soil's water permeability or increase its strength so it can be used to form graded surfaces.

Since June 2005 FCC Construcción has had the equipment for in-place stabilising with cement in a wet process. Its components are:

- A Wirtgen WR-2500-S Road Reclaimer and Soil Stabiliser, with a 500-kW engine and a working width of 2,438 mm.



- A Wirtgen WM-1000 Cement Slurry Mixer, with a 165-kW engine, a 25-m<sup>3</sup> cement tank and an 11,000-litre water tank.



- A Hamm 3520 single-drum vibratory compactor, weighing 19.80 tons, with a 147-kW engine, run by a single operator.



- A Caterpillar 14-G motor grader, with a 149-kW engine, equipped with a 3D grading system.



The crew is made up of an equipment chief and four machinery operators.

This crew and their equipment have done in-place wet cement stabilising work and made in-place cement soil in the following construction jobs: Cartagena-Vera toll motorway (Murcia-Almería), Alhama-Campo de Cartagena Motorway (Murcia), Castrovido Dam (Burgos), Variante de Monzón (Huesca).

In summary, it can be concluded that during the total working period of the crew and its equipment, from 03/11/05 to 27/11/07, 2,420,370.63 m<sup>2</sup> of soil were stabilised and the average output was 4,929 m<sup>2</sup>/day.

## ALPINE builds the Hotel Zwei in record time

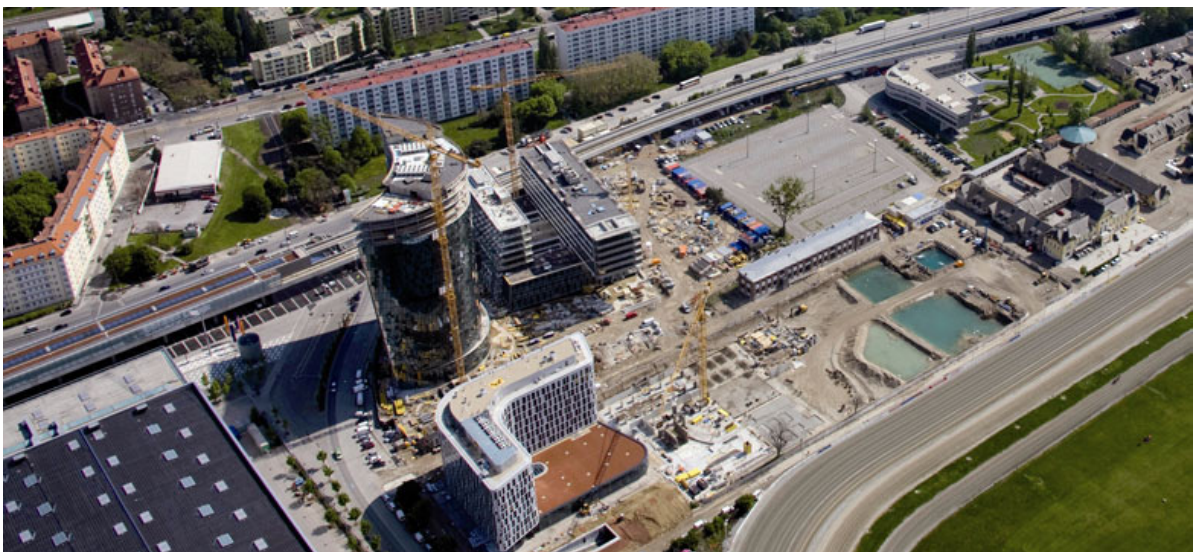


ALPINE Bau GmbH has built the Hotel Zwei in the new Viertel Zwei (district two) of Vienna's Prater in 15 months, with a budget of 24 million euro.

The twelve-story Hotel Zwei has got 22,800 square metres of floor area. On the ground floor is the reception desk, the lobby, the conference and seminar rooms, the restaurant area, the kitchen and the hotel administration services. The first floor houses more conference rooms, large and small.

The rooms, a total of 251, are on the second to the eighth floor. The building has also got a 150-car garage.

The Hotel Zwei, strategically located on Trabrennstraße, a roomy green area with its own lake, has become the gateway to the new Viertel Zwei district. The hotel is connected directly to the public transport system and stands near the Vienna Trade Fair and Ernst Happel Stadium.



## ALPINE has built the stadiums for the 2008 Euro Cup

Now that the 2008 Euro Cup is nearly upon us, ALPINE, in a joint venture with another company, has taken on the task of enlarging the stadiums in Salzburg and Innsbruck and building Klagenfurt Stadium.

In all three stadiums ALPINE has managed to facilitate spectator proximity to events, improve the acoustics and make for more fluid crowd management. The stadiums are similar in structure, with a low set of tiered seating made of cast-at-site

or prefabricated concrete, on top which a high set of tiered seating has been set in the enlargement phase. Except in Innsbruck, in the other two stadiums the tiers of seating are split by a concourse from which the grandstands are reached. The upper tiers of seating are made of steel and can be disassembled. The enormous roof and outer wall areas, made of plate metal and translucent materials, offer protection from the elements while acting as an acoustic reflector at the same time.

### Wals-Siezenheim Stadium, Salzburg



Wals-Siezenheim Stadium was originally built in 2003. For the 2008 Euro Cup its original seating capacity of 17,000 has been increased to 30,000. The most important part of the enlargement has been the raising of the roof. This was done with the stadium in operation, posing quite a technological challenge. In just two short days, the roof, which has an area of 17,000 square metres and weighs in at over 1,900 tons, was raised 10.5 metres by twelve huge jacks, and 56 smaller cranes swung it into in the desired position.

Another thing about the stadium that ought to be highlighted is the contrast between the lower area of the grandstands and playing field and the lightness of the roof. The stadium is located in the middle of a flat landscape near the baroque Klessheim Palace, and to blend the enormous building into its surroundings it was decided to sink



it into the ground, to the level of the water table, and surround it with a sloped construction.

**Job cost:** 35.9 million euro.

**Developer:** SWS Stadion Salzburg Wals-Siezenheim Planungs-und ErrichtungsgmbH.

**Architects:** ARGE Schuster Architekten GmbH – Albert Wimmer ZT GmbH.

**Construction period:** April 2006-July 2007.

**Useful area:** 10,366 m<sup>2</sup> (stadium enlargement) + 8,198 m<sup>2</sup> of temporary facilities = 18,564 m<sup>2</sup>.

**Seating capacity during the 2008 Euro Cup:** 30,900 spectators.

### Tivoli Stadium, Innsbruck



Tivoli Stadium in Innsbruck has almost a hundred years of history behind it. For the 2008 Euro Cup, the seating capacity has been enlarged from 17,400 to 31,600, while allowing the stadium to carry on with its regular activities. The original steel roof was removed, and in its place a high three-sided set of tiered seating was built, which partly perches on the steel construction. Due to the stadium's inherent architectural features, only three sides were built up, but to compensate there is a magnificent view of the mountains. The roof was raised by 30 metres.

The temporary enlargement was made bearing in mind that, when the 2008 Euro Cup is over, the stadium must be restored to its original condition.

Tivoli Stadium has become a lot of football fans' favourite amongst the new Austrian venues, thanks to its versatility and the way it is built, which is reminiscent of old-fashioned English stadiums.

**Job cost:** 33.3 million euro.

**Developer:** ISpA Innsbrucker Sportanlagen Errichtungs-und VerwertungsgmbH.

**Architects:** Albert Wimmer ZT GmbH.

**Construction period:** December 2005-September 2007.

**Useful area:** 2,185 m<sup>2</sup> (stadium enlargement) + 2,945 m<sup>2</sup> of temporary facilities = 5,130 m<sup>2</sup>.

**Seating capacity during the 2008 Euro Cup:** 31,000 spectators.



## Wörthersee Stadium, Klagenfurt



Klagenfurt's Wörthersee Stadium is the most modern stadium in Austria. The building's attractive architectural features blend seamlessly into the idyllic surrounding landscape. The roof is a sort of sickle-shaped steel lattice with a load-bearing superstructure built on the basis of pony girders.

The western side dips low to provide a better view of the Karavanken Mountains. Another innovation

is the construction of a see-through VIP zone on the lower west side. The elevation of the east-side grandstands lends the elegant shell shape movement and underlines the outer elegance of the building as a whole.

In 2009 the stadium will regain its 12,500-spectator seating capacity.

**Job cost:** 65.2 million euro.

**Developer:** Klagenfurt municipal government.

**Architects:** Albert Wimmer ZT GmbH.

**Construction period:** January 2006-August 2007.

**Useful area:** 20,522 m<sup>2</sup>; net seating capacity: 32,000 spectators; subsequent seating capacity: 12,500 spectators.

## ALPINE wins its second contract at Berlin-Brandenburg Airport

Berlin Airports has awarded ALPINE Bau Deutschland AG a 25-million-euro contract to build the north and south piers at Berlin-Brandenburg International Airport (BBI).

The work will include finishing the raw structure of the low-cost north and south piers, which are 220 to 240 metres long and are connected straight to the main pier. This project forms part of the tender to build the airport's passenger terminal.

The contract for the two piers is ALPINE's second project related with the expansion of Berlin-Brandenburg, since last year the company took home the contract for the airport's new rail connection, budgeted to cost 63.6 million euro. That job included the construction of six sections of underground track (a total of 2.5 kilometres), three railway bridges and four highway bridges, plus the laying of some 33 kilometres of track.