



Photo of the month Aerial view of the Parque de Valdebebas site in Madrid

Contract awards

- FCC wins a new contract in Romania
- The Unquera - Pendueles section of the A8 is awarded
- FCC to build Torre Chamartín
- FCC is awarded the roof on Valencia CF's new stadium

Other contract awards

- Subsidiary execution, ad hoc jobs and other work for the Madrid City Council's Government, Development and Housing Area, for a four-year period and 29.8 million euro.
- 116 homes and garages in Montecarmelo, Madrid..
- Forest fire prevention and extinction service in the eastern zone of the Community of Madrid for FCC subsidiary Matinsa, for 24.9 million euro.
- Refurbishment and maintenance of two roads in Nicaragua and one in Panama for FCC subsidiary M&S, for a joint total of 15.9 million euro.

Events

- Boring on La Cabrera tunnel is concluded
- The last section of the Eje del Llobregat is opened to traffic
- Start of the San José-Caldera concession in Costa Rica

CSR

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FCC wins a new contract in Romania

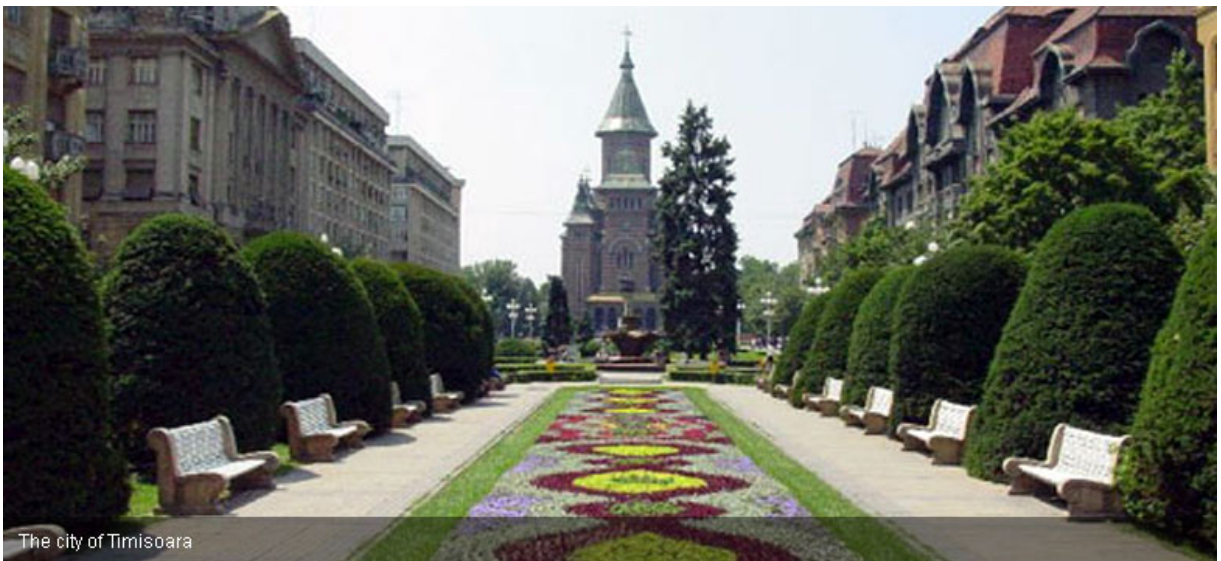


The city of Lugoj

FCC has been awarded a new contract to remodel a road in Romania worth 37 million euro, in a 20-month completion period.

The newly awarded job consists in widening and improving national road NR6 along the 52.2-kilometre-long section between Timisoara and Lugoj and includes the construction of three bridges and the improvement of another nine.

FCC Construcción's construction backlog in Romania is worth 500 million euro, and ALPINE's backlog adds another 200 million euro.



The city of Timisoara

The Unquera - Pendueles section of the A8 is awarded

The Ministry of Public Works has awarded FCC the construction of the Unquera-Pendueles section of the A8, also known as the Autovía del Cantábrico, where it crosses the municipalities of Llanes and Rivadedeva near road N-634 and the FEVE narrow-gauge railway line.

The section is 11.797 kilometres long. Of that length, 1,189 metres run along viaducts, 1,260 metres are through tunnels and a large part of the remainder is set into the mountainside.

Plans for the section call for the construction of the Santiuste and El Peral tunnels (the latter between road N-634 and the FEVE line, near the Colombres station), five viaducts (the Arroyo Novales viaduct, the Buelna 1 and 2 viaducts over the Cabra and Ahijo rivers and the Bustio viaduct) and four underpasses.

Several temporary detours are also included, as are the resurfacing of road AS-346, road N-634 at the La Franca junction, road RD-1 to Pimiando and Camino de la Estación, the rectification of the layout of road N-634 between kilometres 8.800 and 10.900 and the initial and final connections with the adjacent sections.

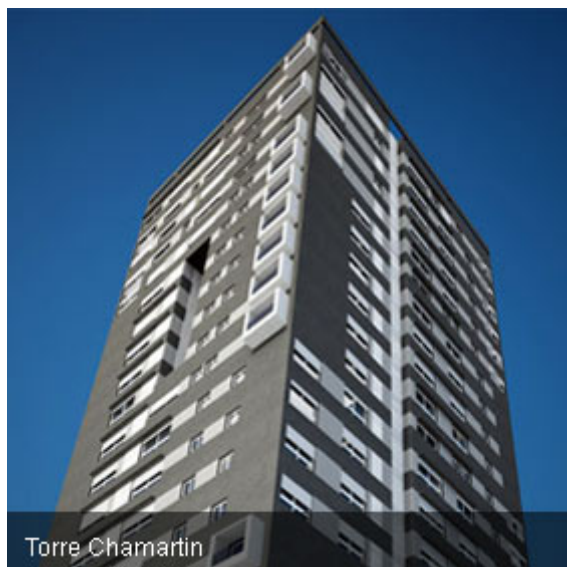
FCC to build Torre Chamartín

FCC will be in charge of building Torre Chamartín, a 22-story high-rise tower for Madrid developer Gestesa.

The building will be located on a 5,168.56-m² lot in the area of Madrid known as Isla Chamartín, which is situated at the end of calle Arturo Soria, between Sanchinarro and the M-11.

The building will be residential, with two-room flats and two- to three-room duplex flats. It will also have three floors of garage space under ground level, a building swimming pool and a paddle-tennis court.

The project has been approached as an exercise in optimising energy use, as the building has been designed for sustainability and energy efficiency.



FCC is awarded the metal structure and roof support for Valencia Club de Fútbol's new stadium



The €48.3-million job will be completed in 10 months' time.

FCC will be building the metal structure and roof support for Valencia CF's new stadium. The job, worth 48.3 million euro, will be finished in 10 months' time. The structure will be put up after work has finished on phases I and II, the car park and stands, which were also awarded to FCC Construcción and are currently in progress.

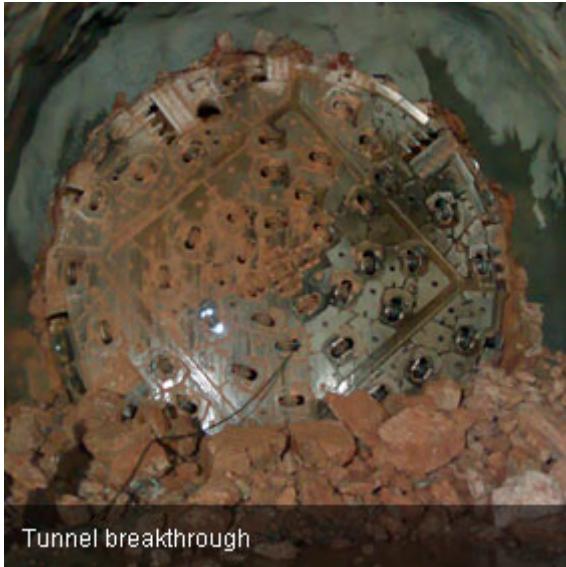
Work on the new stadium is taking place according to schedule, and the stadium is expected to be up and running for the 2009-2010 season.

The new stadium, which will replace the club's classic Mestalla Stadium, will hold 75,000 spectators and will be situated on Avenida de las Cortes Valencianas.

The project, designed by the architectural firm of Reid Fenwick Asociados, features a striking montage on its roofed facade, which simulates the city's 16 districts as if they were tectonic blocks joined by a sinuous track that represents the Turia River.

To get the best possible viewing throughout the stadium, oval-shaped tiered seating has been chosen, so that all seats are given the best orientation toward the pitch. The job also includes a three-story underground car park with capacity for 3,500 vehicles, plus the stadium's foundations, concrete structure and stands.

Boring concludes on the first tube of the section between Siete Aguas and Buñol for the Madrid-Levante AVE high-speed railway line



Tunnel breakthrough

FCC has finished its excavation work for tube 1 of the La Cabrera railway tunnel, between the localities of Siete Aguas and Buñol, the longest tunnel on the entire line. Breakthrough (when the teams working at the two ends meet) happened on Friday, 25 January, at 2 pm. This section of railway is for the Madrid-Castilla La Mancha-Comunidad Valenciana-Región de Murcia High-Speed Line, a job awarded by ADIF.

Excavation work for the first tube of La Cabrera tunnel, which is 7,156 metres long, was done from the Siete Aguas end using conventional excavation and blasting methods to cover 1,158 metres; from the Buñol end, 5,998 metres were hollowed out by a double-shielded tunnel-boring machine.

La Cabrera is the first tunnel in the history of Comunidad Valenciana to use a double-shielded tunnel-boring machine, a device capable of simultaneously digging and setting reinforced concrete rings in place in perfect synchronisation.

In the almost-six kilometres of excavation with the tunnel-boring machine, the FCC squad beat the world record for daily progress five times, pushing the figure up to 83.2 metres excavated and 52 concrete rings set in a single day. Daily performance averaged out to 21 rings, or 33.6 metres/day of finished tunnel.

The section from Siete Aguas to Buñol is 11.2 kilometres long, and in addition to containing the longest tunnel on the line, La Cabrera, it also has another three tunnels and two viaducts traversing steep mountainous terrain.

Basic information

Job name: Nuevo acceso ferroviario de Alta Velocidad de Levante. Madrid-Castilla la Mancha-Comunidad Valenciana-Región de Murcia. Tramo: Siete aguas-Buñol
Developer/Owner: ADIF
Budget: 322.697.400 euros

Site team

Project manager: Juan Carlos Monge Cristóbal, ingeniero de CCP (ADIF)
Infrastructure chief: Raúl Miranda Miguel, ingeniero de CCP (ADIF)
Job construction manager: Mariaemma González Andreu, ingeniera de CCP (ADIF)
Technical office chief: Joaquín Arias, Jefe de Unidad (U.T.E. SIABU (IBERINSA Y GEOCONSULT))
Building firm: Joaquín Roura Portillo, ingeniero de Minas. Gerente de la UTE
Site manager: Miguel Cruceyra Betriu



Inside the tunnel

The last section of the Eje del Llobregat is opened to traffic



The section opened in December last involved the construction of 21 kilometres of dual carriageway on the Eje del Llobregat, or Llobregat Corridor. This particular portion is denominated the “Puig-Reig to Berga” section and lies in the province of Barcelona.

Construction was done by the joint venture made up of FCC (34%), Comsa (22%), Copisa (22%) and Copcisa (22%), and the Generalitat de Catalunya’s Directorate of Roads has awarded the 33-year shadow-toll concession to operate the dual carriageway to CEDINSA, which has the same partners as the joint venture that built the corridor.

The new section has eight junctions: Puig-Reig south, Puig-Reig centre, Puig-Reig north (zones 1 and 2), Gironella south, Gironella centre (which includes the construction of the access road to Casserres, about 4 kilometres long), Gironella north (which includes the Olván road, about 1.5 kilometres long), Cal Rosal and Berga south.

It includes the construction of a double tunnel about 1000 metres long and a double cut-and-cover tunnel about 140 metres long. It also features nine viaducts (four over the Llobregat River and one at the access to Casserres).

Construction began on 11 May 2004. In July 2006 the first five kilometres were opened to traffic; in August 2006, the last six (Berga side); in July 2007, three kilometres more; and on 31 October 2007, the entire central section except the kilometre where the mixed structure stands. This last section, opened in December last, completes the full dual carriageway.

Site team

Construction manager: Carlos Loscertales

Administration chief: Carme Capsada

Production chief, Earth, pavements and drainage: Antonio Molina

Production chief, Tunnel: Javier González

Production chief, Tunnel installations: Pere Garrigó

Technical office: Julio Santamaría

Topography chief: Marcelo Serracanat

Quality and environment chief: Patrícia Golobardes

Earthwork foreman: Pedro Campos

FCC and M&S start work on the San José-Caldera concession in Costa Rica



Costa Rican President Oscar Arias attended the official ground-breaking ceremony

The job is divided into three sections:

- San José-Ciudad Colón, 14 kilometres long. Plans are to widen the road to three lanes up to the locality of Escazú, and this includes remodelling several junctions. In the rest of the section the existing road is upgraded.
- Ciudad Colón-Orotina, 39 kilometres long. This is an entirely new section of road comprising one lane in each direction and slow lanes on steep hills.
- Orotina-Caldera, 24 kilometres. Where the existing road will be upgraded and improved.

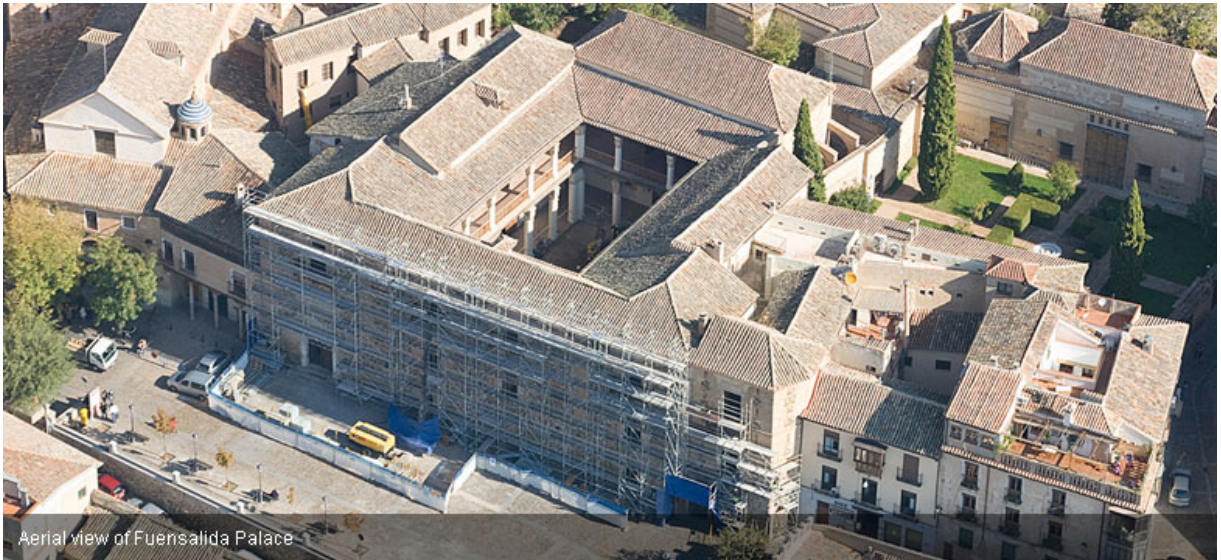
With a total of 77 kilometres, this route links Costa Rica's major Pacific port, Puerto Caldera, with the country's capital through Santa Ana, Ciudad Colón, Atenas and Orotina. The new road will cut 45 minutes off the time it takes to get from Puerto Caldera to San José, thanks to the fact that the new layout runs through smoother terrain and in addition is 13 kilometres shorter than the current route.

The importance of Puerto Caldera lies in the fact that it is an entry point for goods for domestic consumption.

The official ceremony to mark the start of the San José-Caldera concession took place on 17 January last in the locality of Siquiara. The event was attended by the president of the republic, Oscar Arias, the minister of the presidency, Rodrigo Arias, the minister of public works and transport, Karla González, and the assistant minister of concessions, Luis Diego Vargas, as well as other authorities.

The concession holder, Autopistas del Sol, in which FCC Construcción holds 35% and Corporación M&S holds 13%, will be operating the motorway once it has been finished. This is the first road concession for Costa Rica, a country where FCC and M&S have also got a contract for a second concession on the Pan-American Highway between San José and San Ramón.

Refurbishment of Fuensalida Palace, Toledo



Aerial view of Fuensalida Palace

Fuensalida Palace is situated in the historic centre of Toledo, in the vicinity of the El Greco Museum, the Moor's Workshop and Santo Tomé Church. It was built in the 15th century by the first count of Fuensalida, Pedro López de Ayala, and it currently houses the offices of the president of the Council of Communities of Castilla-La Mancha.

The Mudejar-style palace stands around a two-story rectangular courtyard. Inside it has fine Mudejar Gothic plaster work on its arches and lovely carvings on its coffered ceilings and heavy doors.

The refurbishing work that FCC Construcción is currently involved in includes taking down and rebuilding the roofs, reinforcing the frames, reinforcing several façades and some foundations for improved stability, in addition to restoring some of the existing elements of the building that form part of Spain's historic heritage, such as coffered ceilings, ironwork, massive doors and moulded plaster.

Remodelling is also being done in areas intended for use as offices and meeting rooms, which therefore have to be fully equipped with appropriate heating and cooling, power lines, voice and data lines and, as the building is for presidential use, security against intruders.

The job is planned in three phases, one of which ("sector 3") must be completed in 12 months' time, while the other two areas ("sector 1" and "sector 2") have an additional six months for works completion.

Basic information

Job name: Refurbishing of Fuensalida Palace,
Toledo
Developer/Owner: Council of Communities of Castilla
la Mancha (Culture Department)
Budget: 3.9 million euro
Completion period: 18 months

Site team

Department head: Pedro M. Aparicio Muñoz
Construction manager: José María Molina Gallego
Production chief: David Sanchez-Valverde Alonso
Office staff head: Marta Ramos Mendez
Foreman: Pablo Román Gomez

Parque de Valdebebas en Madrid



Parque de Valdebebas zoning plan

Parque de Valdebebas is one of the biggest development projects in the history of Madrid. Measuring over 10 million m², it lies north of the capital, next to Barajas Airport and the IFEMA fairgrounds.

FCC Construcción recently finished two lots, Lot I "North Development" and Lot XII "Finishing Work Encinar de los Reyes", for 34.6 and 5.3 million euro, respectively.

The distinctive trait of this project is its integration into the natural environment. Nature is incorporated into the city, with Valdela Fuentes Creek showcased as an ecological corridor woven right into the urban fabric.

A comprehensive urban design strategy has been tackled, with innovative solutions, especially as regards environmental aspects. There are five million m² of green (five times the size of Retiro Park) divided into an extensive stretch of publicly owned parks threaded with promenades and paths for pedestrians and cyclists next to the Forest Park, whose 470 hectares will make it Madrid's future "oxygen farm".

Plans are for 1,250,000 m² of the development to be for residential use, where a total of 12,500 homes will be built. Of those homes, 45% will have some kind of public sponsorship. Parque Valdebebas will also boast a vast commercial, entertainment and business complex measuring over 182,000 m².

Recently FCC Construcción was awarded two new lots, Lot VIII "Bridges over R-2" and Lot XI "Finishing work on development", worth 4.1 and 18.3 million euro, respectively, slated to begin execution soon.

Main job units

Excavation at clearing site: 25.151.563,00 m³
Embankment formation: 2.217.825,00 m³
Street and sidewalk pavement: 236.543,00 m²
Kerbs: 54.522,00 ml
Sewage conduits: 21.225,00 ml
Lines to water mains: 7.425,00 ml
Other conduits: 125.000,00 ml

Equipo de obra

Department head: Pablo Marchito Guilmain
Construction manager: Guillermo Jerez Ortega
Production chiefs: Javier Vaquero Robledo,
 Daniel Molera Gonzalez-Cotrruelo
Technical Office chief: Jose Gonzalez García
Foreman: Fernando García

Barcelona's mayor and Esther Koplowitz wind up preparations to start work on the CIBEK



On 6 February 2007 Esther Koplowitz met with Barcelona Mayor Jordi Hereu to finalise the details involved in launching one of the most ambitious research projects in Spain, the construction of the Esther Koplowitz Centre for Biomedical Research (CIBEK).

Plans call for construction work on the CIBEK, which will have an area of over 9,500 square metres, to begin late this month and for the centre to be equipped and fully operational sometime in 2010.

The CIBEK, which will have work space for 400 researchers, will focus on looking into the origin, diagnosis and treatment of diseases and will promote teaching in medical research, with particular emphasis on professionals from other areas of Spain, from Latin America and from Africa.

The CIBEK will be the new building where scientists from the Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), an institute created in 1996 by the Higher Council for Scientific Research (CSIC) and

Barcelona's Hospital Clinic, can develop their full scientific potential. This ambitious project will be possible thanks to the generosity of the Esther Koplowitz Foundation. The construction of this building is the single largest work of sponsorship of scientific research in Spain and one of the largest in Europe.

The new centre will specialise in the study of:

- Diseases of the liver and digestive tract
- Metabolic diseases, nutrition and obesity
- Cancer
- Neurological diseases
- Poverty-related diseases
- The development of diagnostic and therapeutic techniques

Its activity will be focused especially on what is termed "translational research", meaning research that ties together fundamental research (conducted at basic research institutes and centres) with clinical research (conducted in hospitals).

The Esther Koplowitz Foundation

Biomedical research support and the fight against disease are among the main areas addressed by the Esther Koplowitz Foundation.

The Foundation has provided a grant to help with the construction of Universidad de Navarra's Applied Medical Research Centre (CIMA) and donated a Da Vinci robot to Hospital Clínico San Carlos to support its robotic surgery programme.

The Esther Koplowitz Foundation is one of the most important private charitable organisations in Spain and Europe. Financed exclusively by its president and founder, it has funded a number of programmes to assist patients, prevent diseases such as leprosy and conduct research into Alzheimer's disease.

The Head of the Extremadura Health Department visits the Hospital de Cáceres site



New Hospital de Cáceres

On 30 January last María Jesús Mejuto, councilwoman in charge of the Extremadura Health Department, visited the site where the new Hospital de Cáceres is being built by FCC. Dámaso Villa, manager of the Extremaduran Health Service, accompanied the councilwoman on her visit.

Located on a 145,840-m² lot, the building is zigzag-shaped to facilitate the flow of people throughout the enclosure. It has a basement, a semi-basement for the emergency area and pathological anatomy, a ground floor where the intensive care, reanimation, surgery, obstetrics and neurological hospitalisation units are, a mezzanine for building facilities and three floors of hospital rooms.

The new hospital will have 476 beds and will be opened in three stages. The first zone to be used will be the surgical zone; then the maternity/childcare zone will be opened, and lastly the surgical block will go into operation.

Areas

Lot area: 145.840 m ²	1 ^a PHASE	2 ^a PHASE	3 ^a PHASE
Floor area	40.915 m ²	11.893 m ²	14.802 m ²
Useful area	24.354 m ²	7.074 m ²	8.811 m ²
Nº of beds	204	102	170



In the grey coat, the councilwoman in charge of the Health Department, on her visit to the site

FCC Construcción publishes a book on the refurbishing of the Archive of Simancas



FCC Construcción publishes a book on the refurbishing of the Archive of Simancas

To mark the completion of the refurbishing work on the Archive of Simancas, FCC Construcción has published a book, **Casa Archivo de Simancas. La Intervención 1999-2007**.

With a forward by José Luis Rodríguez de Diego, the Archive's director, the book reflects the building's career through history and the development of the General Archive of Simancas from its beginning as a medieval fortress to the present day, in addition to a detailed description of the restoration done by FCC Construcción.

As an extra feature, a set of scale maps of the entire project has been published, to be distributed with the volume.

To see the book, go to
<http://www.fcco.es/jsp/publicaciones.jsp>



AP-7 Toll Motorway - Cartagena-Vera Section

Latest-Generation Motorway

Story published in "Cauce"

By Diego Suarez and Francisco Javier Cea, civil engineers



The toll motorway between Cartagena and Vera is a high-capacity traffic route that occupies a corridor parallel to the coast, connecting the two cities. It is a good alternative to regional roads N-332 and A-332, which link Murcia and Almería and are heavily travelled, especially during holidays. This project completes the north/south AP-7 coastal corridor, enabling fast-moving traffic to flow smoothly.

Thanks to this new 115-kilometre section of toll motorway, drivers can make the trip between Cartagena and Vera in about 60 minutes, which cuts approximately 60% off the time it took to make the same run before the motorway opened. This savings of time and fuel consumption (one of the motorway's biggest advantages) will benefit 750,000 people now and an extra 500,000 during holidays.

The job is divided into two parts: the toll section from northern Vera to northwest Cartagena, which is 97.8 kilometres long, and the toll-free section bordering the city of Cartagena, which is 17.2 kilometres long.

Nine toll booth areas have been set up:

- Two on the main body: Vera and Molinos-Marfagones
- Seven at on/off ramps: Los Lobos, Pulpí, Águilas, Cabo COPE, Ramonete, Mazarrón and Las Palas

Thirteen junctions have been built, nine of which coincide with the nine toll booth areas, while four (Santa Ana, Cartagena Centre, La Palma and Los Beatos) lie along the toll-free section. There will be three service areas, one situated between the Pulpí and Águilas junctions, one between the Ramonete and Mazarrón junctions and the last in the section that skirts Cartagena.

Furthermore, the new motorway extends and supplements the AP-7 Mediterranean Corridor, which runs down the coast from the French border (La Junquera) to the city of Vera in Almería, and it will become an alternative for long-distance traffic that is currently taking motorway A-7 to travel between the provinces of Almería, Murcia and Alicante.

General characteristics and technical specifications

The project is built for 120 km/hr travel. The main body of the motorway is a divided highway, with two 3.5-metre-wide lanes, a 2.5-metre-wide outer verge and a 1.5-metre-wide inner verge. The median is 2.62 metres wide and fitted with a double-faced concrete safety barrier. The roadway has got 1-metre-wide outer berms, and in the Cartagena section the median is 10 metres wide and fitted with a double metal safety barrier.

To add to the information on the motorway's main characteristics, the motorway has got three major tunnels (Sierra de Aguilón, 1,200 metres long; Loma de Bas, 1,820 metres long; and Sierra Lo Alto, 395 metres long) and the cut-and-cover tunnel of Las Moreras, 660 metres long. In addition, 6,930 metres of motorcycle safety barrier, 316,336 metres of metal barrier and 92,745 metres of rigid concrete barrier have been installed.

Latest-generation motorway

This new section of the AP-7 is equipped with latest-generation technology enabling the road to be supervised from the motorway control room in real time by means of fibre optics. There are 178 solar-powered SOS posts, one every 1,800 metres, and 176 control cameras, 114 electronic information panels and 6,930 metres of motorcycle safety barriers, which make the Cartagena-Vera Motorway one of the most modern, safest roads in Europe.

Toll system

A closed toll system is used, with two main toll stations (junctions 1 and 9) and seven intermediate toll stations (junctions 2 to 8), accepting manual payment or automatic payment, by credit card or TELEPEAJE "VIA T" card, at all stations. In addition, at the main toll stations there are special lanes for payment using the remote "dynamic toll" system for drive-through subscribers.

The section skirting Cartagena is toll-free for all the section's internal traffic

Aucosta has introduced a system of variable rates for light vehicles, which ranges between 3 cents at off-peak hours and 9 cents at peak hours. There are two rates for heavy transport lorries, depending on vehicle tonnage; the first varies from 6 to 13 cents, depending on whether it is an off-peak or peak hour, respectively, while the second rate ranges between 7 and 15 cents.

This new section of the AP-7 is anticipated to reach an average daily traffic (ADT) of 7,606 vehicles in 2007, its first year of operation, rising to 28,575 vehicles by the year 2039. According to the prior studies conducted by the concession holder, 91% of the traffic is expected to be light vehicles, while 9% will be lorries in the two heavy transport categories.

Tunnel safety



On 26 May 2006, in the middle of construction on Motorway AP-7 between Cartagena and Vera, Royal Decree 635/2006 on minimum safety requirements in tunnels on national roads was approved.

The Cartagena-Vera Motorway was adapted to the Royal Decree's terms, including the necessary modifications to guarantee compliance. Heeding the new legislation's instructions on tunnels and adding some additional safety measures, the tunnels were outfitted with safety equipment capable of minimising the consequences in the kinds of dangerous situations that can happen inside a tunnel, and the most modern safety systems were installed: 76 SOS posts (one every 125 metres), 78 cameras covering 100% of the tunnels and their accesses, 70 variable signage panels, traffic lights, barriers at accesses, 55 exhaust fans for automatic gas extraction, weather stations to alert drivers to hazardous conditions, 1,315 automatic lights that adjust according to the amount of outdoor light, five watertight tunnel-to-tunnel passages (one every 400 metres), etcetera.

These tunnels have got a traffic control centre where potentially hazardous situations are processed automatically in real time, by means of systems such as digital image analysis and automatic fire detection.

Foremost among the newest items is the AID (Automatic Incident Detection) system, which reports obstacles, fires or any other anomaly through a complex image analysis system and automatically locates hypothetical fires with a precision measurable in metres, by analysing temperature variations. In addition, 6,220 metres of broadcast wire have been deployed, an innovative system that permits communication by radio with emergency services and at the same time inserts traffic warnings that are broadcast to user vehicles' radios.

In the Loma de Bas tunnel, which is the longest, a fireproof pavement of tinted concrete has been used, which entirely eliminates the smoke hazard and dangerous temperatures that occur when asphalt agglomerate burns in a tunnel fire, at the cost of a minor reduction of comfort for users.

These are some of the most significant safety facilities the tunnels on this motorway are fitted with:

- Sidewalks for pedestrian evacuation on both sides of the roadway.
- Emergency exits every 400 metres.
- Cross-connections every 400 metres to give emergency vehicles access.
- A drainage and collection system to deal with potential spillage of toxic or hazardous liquids inside the tunnel.
- CC-TV covering 100% of the tunnel's length and its mouths.
- Computerised smoke extractor system.
- Different intensities of lighting depending on outdoor luminosity.
- Safety lighting and emergency lighting.
- Forced ventilation that is activated automatically to meet the system's programmed fresh air needs.
- Guaranteed power supply, with dedicated transformer centres, emergency generators and a back-up unit
- CO detectors, NO detectors, opacimeters, anemometers, tell-tales, etc.
- Cable for detecting fires with laser technology.
- Automatic incident detection, with digital image analysis system.
- Emergency stations equipped with a fire hydrant, two fire extinguishers, an SOS telephone and an alarm that goes off when the extinguisher cupboard is opened.
- Exit signage and emergency equipment with glow-in-the-dark lettering, illuminated signs and strobe lamps for quick, easy location.
- Signs indicating distances to exits and the nearest evacuation routes.
- Signage according to IC Standards 8.1 and 8.2.
- Indoor variable signage panels, for sending text messages to users, closing or opening lanes to traffic and placing separate speed limits on different lanes.
- Outdoor variable signage panels, illuminated signs warning of nearby STOP signs, two lines of traffic lights, barriers at the entry mouths and traffic lights at the mouth.
- Indoor traffic lights every 400 metres.
- Public address circuits in corridors and outside and inside the tunnel.
- Hydrant system with water tanks and pumping units.
- Auxiliary fire-fighting equipment at tunnel mouths.
- Radio comms system that guarantees radio coverage for police, Civil Guard, fire-fighters and ambulances equipped with TETRA and TETRAPOL transmitters.
- VHF radio comms system for tunnel maintenance services.
- Halogen-free cables were used, so that in case of fire they will not add to the production of toxic fumes. Cables resistant to high temperatures were used in the safety facilities, so that they will remain operational in the event of fire.

These features all make the AP-7 Motorway's tunnels some of the safest tunnels in the entire Spanish road system.

Environmental measures



In the making of this motorway, over 17 million euro were set aside for bringing this new infrastructure up to the mark in terms of European Union environmental requirements.

The measures to correct environmental impact called for in the DIA and in the project "Bank Protections, Dump Treatment, Sound Walls and Other Items" were taken.

Despite the breadth of the job, special care was taken to respect the land and its natural resources all along the motorway. Measures were taken to minimise the effect on the zone's most valuable animal species. Such is the case

of the Testuda graeca tortoise. In cooperation with Universidad Miguel Hernández in Elche, a protection plan was established for the tortoise, under which work was not begun in the tortoise's habitat until its hibernation period had ended, and specimens were later reintroduced into nearby areas and tracked to evaluate their biological behaviour. The same was done with native plant life.

Archaeological measures

Fifteen archaeological sites of various sizes and fifty-six ethnographical elements were identified. To make protection of the historic heritage compatible with the implementation of the new infrastructure, the ethnographic elements were catalogued. Most of the elements found were hydraulic structures, cisterns, watermills, pools, wells, water mines and reservoirs. The "cave dwellings", rural dwellings, limestone quarries and mines were also documented. The windmills that are so characteristic of the landscape of Campo de Cartagena received special attention, as they are declared Assets of Cultural Interest and thus hold top category in terms of protection.

One especially important archaeological site was detected at Finca Petén, near the control centre situated in Mazarrón. Finca Petén is a Roman site at the base of the northern foothills of Cerro de San Cristóbal, where there are numerous lead mines. The site lies in an area called "la Italia", in the municipal limits of Mazarrón. Some 15,500 m² of the site were affected by the construction work. Findings so far show that this was a mining settlement for ore extraction and processing, dating to somewhere between the second century BC and the first century AD. For the sake of reconciling the cultural interest of the site with the social interest of the motorway, the project was modified to include two structures that enable the site to be visited and the pertinent studies to be conducted later on.

Basic information

Job name: AP-7 toll motorway. Cartagena - Vera section.

Authority granting the concession: Ministry of Public Works

Company holding the concession: AUCOSTA. Autopista de la Costa Cálida. Concesionaria Española de Autopistas, S.A.

Project design: Gabinete de Estudios Técnicos e Ingeniería (GETINSA)

Project manager: Diego Suárez Jiménez, civil engineer and also general manager of the company holding the concession, for the construction phase.

Construction company: Joint venture between FCC CONSTRUCCION, S.A., and PLODER, S.A.

Manager of the joint venture: Francisco Javier Cea Sanguino. Civil engineer

Construction manager: Juan Antonio López Canovas. Civil engineer

Total investment: 728.174 million euro

Concession period: 36 years

Main characteristics

Total length: 115 km

Length of toll section: 97.8 km

Length of tunnels: 7,490 m

Structures: 181

Cutting: 17.6 million m³

Embankment: 19.5 million m³

Stabilised soil: 878,000 m³

Soil/cement: 567,000 m³

Agglomerate: 1.14 million T

No. toll areas: 9

No. service areas: 3

Control/maintenance centre: 1

ALPINE's three projects in Spain



Spain looks like a promising market for ALPINE; in just a few months, it has taken home two new contracts, to participate in the preparation of the Museum of Royal Collections and to build a solar power plant in Almería.

ALPINE recently took part in the installation of a space antenna in Villafranca del Castillo, Madrid. The European Space Agency (ESA) engaged ALPINE to introduce what is known as the Tracking, Telemetry and Command Antenna, the biggest deep-space antenna, standing 40 metres tall, weighing in at 620 tons and containing a reflector 35 metres in diameter, manufactured and developed by Vertex Antennentechnik GMBH.

Right now the company is lending a hand in the construction of the new Museum of Royal Collections in Madrid, a job awarded to FCC Construcción. ALPINE is doing the work to anchor the retaining wall that is in progress. The anchors, which are over 50 metres long and tip the scales at a combined total of 180 tons, will be installed all along the 300-metre construction job. All in all, some 18,000 linear metres will be anchored.

The new museum, which will house the royal collection of works of art, household goods, weapons, tapestries and so on, will be raised in the centre of Madrid, right between Almudena Cathedral and the Royal Palace.

In addition, Meinl International Power has reported that it has signed a contract with ALPINE for the implementation of a solar power plant designed for a total capacity of 15.4 MWp in Almería, scheduled to be finished in September 2008.

The total investment in this solar facility comes to €87 million. In one 300,000-m² area, over 91,000 photovoltaic modules will be installed. The yearly energy output, around 24 million kwh, will be enough to power an average of 6,000 homes.

ALPINE has started to build the new headquarters of Aachen Münchener in Aachen, Germany



The project includes the refurbishing of one part of an existing administration building, the construction of three more new buildings, with an underground car park, and improvements to the already-existing underground car park. The core of the new complex will be a seven-story building that will hold the main entrance to the offices.

All sectors of the building will be connected by a sort of boulevard on the second story. Approximately 10 percent of the area of phase two will be let as office space.

From Aachen train station to the centre of the city, where the offices are located, there will be direct access by a staircase. The building complex will be girdled by a park.

The new building has been designed by the "kadawittfeldarchitektur" firm of architects in Aachen, whose project won first prize. The panel considered that the design helps improve the city's urban configuration and meets AachenMünchener's high demands in terms of transparency and functionality.

ALPINE with art



At its Viennese headquarters, ALPINE is exhibiting a new show under the name “Cities of the World/World of Cities”, which displays work by Voka, an artist who espouses spontaneous realism. Voka’s pictures are related with Austria and with the countries of its central- and eastern-European environment, and they are characterised by their chromatic richness and their singularity of form.

Peter Preindl, managing director of ALPINE Bau GmbH, stated that the objective of these shows was to give an artistic touch to the daily business of construction and at the same time to open this platform up to artists of current importance.

The show was opened by Federal Chancellor Alfred Gusenbauer and can be visited year-round by employees and clients.

VOKA

Austrian artist VOKA, born in 1965, is considered the founder of spontaneous realism. The foundations of his artistic ability reside in many years of study of realist art, when he shifted from drawing through watercolours to his currently preferred technique, acrylics. VOKA’s motifs are the quotidian, the apparently concealed and at the same time omnipresent. In his pictures he endeavours to capture snapshots that move him. His work has been shown at occasions including the 2007 Biennale Austria, which was held in Carinthia, at Golf ART in Cincinnati and New York, USA, and in various art shows. VOKA is a member of the Professional Fine Arts Association and teaches at the Fine Arts Academy in Bad Reichenhall, Germany, and at the Stift Geras Fine Arts Academy. He lives and works in Puchberg am Schneeberg.