

Borges – Delta revived as light rail line

Rehabilitation plans for the Borges – Delta route in suburban Buenos Aires have crystallised into the Tren de la Costa light rail route. Enrique Garibotto met Project Manager Roberto D Agosta

BY THE END of the year trains should once again be plying the coastal railway between Borges and Delta in the northern suburbs of Buenos Aires. Here a 15.5 km standard gauge double-track light rail line is rising from the remains of a 1 676 mm gauge alignment that was abandoned in the 1960s. Dubbed *Tren de la Costa*, the project is proceeding rapidly in an effort to meet the tight deadlines set by the promoting company.

The line forms part of the Bartolomé Mitre – Delta section of a General Mitre Railway suburban branch from Retiro that was closed to passenger traffic in 1961. The route subsequently saw sporadic unit coal trains moving fuel to the Mitre Railway's Canal San Fernando power station, but a decision to buy power commercially for the Mitre's electrified lines made these trains and the line redundant.

For two decades a project to turn the alignment into a road was stalled by environmental objections from local residents. The trackbed became the site of extended back gardens and car parks for riverside attractions, and the station buildings were turned into theatres, kindergartens, police stations or shelters for homeless people.

TENDERS

In 1990 Argentine Railways called tenders for rehabilitation of the line from a terminus at Maipu, just across Maipu Avenue from the end of the truncated ex-Mitre service from Retiro. This service was later turned over to Femesa, and was put out for franchise last year (RG 5.93 p279). A contract with the Metrovías consortium is now expected to be formally signed in May, allowing a handover of services to the private sector to follow in June.

Sole bidder for the 30-year concession to run the Borges – Delta line was Tren de la Costa SA, a wholly owned subsidiary of Comercial del Plata; this bid was approved by government decree on February 3 1993.

Tren de la Costa is investing US\$100m in reopening the line; this includes development of commercial and recreational

properties on FA land, for which an annual rent of US\$1m will be paid to FA. Rail infrastructure will absorb US\$40m, with US\$18.5m going on rolling stock and US\$12m on fixed installations.

Tren de la Costa's Project Manager Eng Roberto D Agosta stresses that for the first time in Argentina, the light rail line will be fully self-financing. His company will not require government subsidy and has no plans to divert money from the commercial and recreational activities to the rail operation.

With a contractual obligation to run 14 trains a day, original plans for a single-track line with three passing loops and traffic lights controlling road crossings would only have permitted 18 min headways. This was judged insufficient, and a decision was taken to lay double-track with welded rail fastened by double-elastic fasteners to wooden sleepers.

Catenary energised at 1.5 kV DC will be fed from substations at Libertador and Canal San Fernando, taking power at 3.2 kV from the commercial grid. Maintenance facilities and train control centres will be at Canal San Fernando, though heavy repairs will be contracted out. Trains will be controlled by CTC with two-aspect automatic block signalling and coded track circuits, complemented by track-to-train radio. Eight LRVs and a ninth held in reserve will suffice to provide a 10 min interval service during peak hours. Less frequent services will run between 06.00 and midnight.

SPANISH CARS

The LRVs have been ordered from the Spanish company CAF with first delivery scheduled for October. The design will be similar to cars now being delivered to Valencia in Spain. They will be articulated 30 m units weighing 47 tonnes. Although this is broad-gauge territory, compatibility with the existing broad gauge line was not considered necessary, and Tren de la Costa LRVs will run on 1 435 mm gauge. Able to run at 80 km/h, the cars will carry 80 seated passengers and 108 standees at 4 passengers/m². Air-conditioning, air

suspension and public address will be fitted. Scharfenberg couplers will allow multiple operation of up to four cars.

Two 115 kW fully suspended longitudinally mounted three-phase asynchronous motors on each outer bogie will give a continuous rating of 460 kW, allowing acceleration at 1 m/s². Rheostatic braking, complemented by air-operated disc brakes, will permit braking at 1.2 m/s². Magnetic rail brakes will cater for emergencies.

Stopping services will cover the end-to-end journey with 11 stops in 27 min at a commercial speed of 35 km/h. The cars will be painted in dark 'English Green', intended to remind travellers of the days when British companies provided public transport services in Argentina.

Much of the existing infrastructure is in good condition; two bridges in Olivos and a former lifting bridge at Canal San Fernando will require only minor repairs and plenty of paint. Major civil engineering work will be restricted to building a US\$4m viaduct in Borges to avoid several level crossings. Elsewhere, where road traffic is lighter, 30 level crossings will be retained; they will be protected by automatic barriers.

Each train will have a driver and two inspectors who will help passengers to use on-train ticket machines; they will also have a security function. Platforms will be unmanned, but tickets will be sold by kiosk owners or stallholders at stations.

The British 19th century architecture will be refurbished, with each station having its own 'personality'; water sports and recreation will be the theme at Anchorena, where the line hugs the coast. Sailing activities will be centred on the new Marina Nueva station, and Barrancas will have a theatre. Elsewhere there will be shopping complexes, for example at Maipu, where shops will be located on an air-conditioned bridge over the road, which will provide the link between Tren de la Costa and Femesa services. □

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