

# Build the bridge over the Strait of Messina

by Fortunato Covelli

*The following paper by Fortunato Covelli, an engineer who is in charge of public relations for the Strait of Messina, Inc., was summarized at the conference sponsored by EIR and the Italian Solidarity Movement, in Rome on April 10. It has been translated from Italian.*

Our blueprint was born on the basis of a federal law passed in 1971. Twenty-five years have passed since then: Many years were wasted waiting for bureaucratic demands to be met, while on the other hand, eight years were spent productively by our company, in doing the investigative studies and making the plans that have allowed us to reach, at the end of 1992, the current, very advanced general outline of the project.

The building of the bridge over the Strait, is the result of analyses, research, and experimentation, employing what is considered the most advanced “state of the art,” in this discipline, in the international scientific-technical context (Japanese, Chinese, American, Danish, and so on): It is the first bridge which will be able to exceed the threshold of 2,000 meters for the central span.

## An extraordinary work

It is a suspension bridge, made entirely of steel, one span of 3,300 meters, 60 meters wide, with two railway lines and 12 traffic lanes. It is 70 meters above sea level, with two towers 376 meters high (that is, 6 meters higher than the Eiffel Tower and about the same height as the twin towers of [the World Trade Center in] Manhattan). Its backbone is a suspension system that uses two pairs of cables, 1.24 meters in diameter, and 5,300 meters long.

The bridge will have extraordinary strength and durability: It is designed to withstand, without damage, an earthquake of 7.1 on the Richter scale (more severe than the devastating earthquake that struck Messina in 1908, as well as the one which struck Kobe in Japan last year).

Thanks to its aerodynamic characteristics, it can withstand wind speeds of greater than 216 kilometers per hour (the winds in the Strait have a maximum speed of 130 kph), and survive even cataclysmic events, such as the crash of an airplane or a missile).

It is a safe work.

The suspension bridge permits 120,000 cars and trucks, and 200 trains to cross the Strait every 24 hours, and guaran-

tees safety, dependability, and continuity of service, even in extreme conditions. The overall security of the work is guaranteed, even against possible acts of sabotage.

The cost of the bridge, relative to the other proposed methods of crossing the Strait (subterranean or under water, which, for that matter, have been amply shown not to be feasible), are substantially lower, and it has none of the serious disadvantages of the other proposals—even without considering those disasters which are daily talked about in the papers, such as fires and hours-long interruptions in the tunnel under the English Channel, flooding and mud slides in the tunnels in Japan.

It is a work which is “married” to the landscape.

The compatibility between the bridge and the surroundings, has been amply demonstrated: The bridge inserts itself into the landscape, and becomes an integral part of it, a non-repeatable event, which is extraordinary, because it exalts it, rather than suppressing it; and it is extraordinary, precisely because that bridge fits within that landscape.

## Where do we stand?

The definitive overall blueprint for the bridge, presented by Stretto di Messina, Spa, in which the most qualified Italian and foreign experts have taken part—given the extraordinary dimensions of the work, which have demanded in-depth experimental research, an earlier study, preliminary to the one executed here, and full details of the particulars and of the construction processes—is to be considered very advanced, so much that it would require at this point a very short time to carry it out; moreover, the blueprint in any case is sufficiently detailed to be used as a basis for offering bids.

We believe, besides, that the in-depth report requested by the Concessions—ANAS and FS, the state-controlled companies that are in charge of highways and railways, respectively—which have already expressed their substantially favorable opinion, and the examination of the general blueprint by the Ministry of the Environment and Cultural Heritage, may be concluded shortly.

We also predict that the 1971 Law 1158, which has, in the context of the current international and Italian economy, become anachronistic and out of step with the times (among other things, it does not allow the involvement of private capital, Italian or foreign, in the construction of the bridge), will soon be modified, and made more flexible, conforming it to more modern criteria.

Thus, once the political decision to cross the Strait were made, it would be possible to set up an international competition, of pre-qualification for constructing the bridge, and at the same time to begin looking to preliminary work (detouring short sections of the superhighways and rail lines in Calabria, the construction of docks for servicing the principal shipyards, the depots, and the assembly zones in Sicily and Calabria). The cost of this preparatory work, which is estimated to take two years to complete, is on the order of 200 billion



*An artist's model of the bridge over the Strait of Messina. "The bridge as an element of national cohesion, carrying Europe into the heart of the Mediterranean, is a fundamental link of the north-south axis of the industrialized countries to those emerging in Africa, which will rationalize what has already been achieved, promote development, and bring with it a high standard of living and a higher quality of life for people," said Fortunato Covelli.*

liras [roughly \$130 million] and would employ about 1,000 people.

### **Vital to the Mezzogiorno**

The bridge over the Strait of Messina is surely one of the most important and complex blueprints, from a strategic standpoint, for the socioeconomic and territorial development of southern Italy.

This is located within a complex logic of the upgrading of the transportation infrastructure of the Mezzogiorno [the south of Italy], as a crucial element in structuring one of the plurimodal corridors identified by the General Transport Plan: the "Tyrrhenian Corridor," along the north-south orientation of Europe, and looking toward the Mediterranean.

It is an historic occasion to undertake a general process of reorganization and development of a geographic area, of prime importance in the economic panorama of the Mediterranean and with respect to the transfer of goods and knowledge to the other, mature countries of Europe, and to the developing countries of North Africa.

As a consequence, the prospect that beckons the Mezzogiorno, is one of becoming the industrial and industrializing "north" for the countries on the southern shore of the Mediterranean.

With its national scope, welding together the Italian regions with superhighways and railways, upgraded along the principal north-south highway (we cite in particular the upgrading of the SA-RC [Salerno-Reggio Calabria superhighway] and the completion of the ME-PA [Messina-Palermo superhighway]), the realization of the bridge constitutes an historic occasion for promoting territorial cohesion, which is also a cohesion of economic and social development for the

whole country: The bridges on the Bosphorus, the network of bridges between the islands of Japan, the connection via the [English] Channel, the bridges between the European continent and Denmark, and between it and Sweden, are all examples of how the logic of territorial continuity is today a prerequisite for balanced economic development.

### **The bridge will transform the area**

The bridge is the occasion for the revitalization and reorganization of the entire region of the Strait. Passing over a stretch of water 3 kilometers wide, the bridge becomes an element central to a reorganization of the urban area: The "system of the Strait" will complement the systems that have developed up to the present.

The welding together of the highway and railway systems between Sicily and the continent will rationalize the systems of transport, a condition necessary to the synergetic forming of infrastructure and the radiation of positive economic and social effects.

The easing of ferry traffic across the Strait—today one ferry leaves every eight minutes—will unclog the Strait, and open it back up to large-scale maritime traffic, while the ports of Messina, Villa, and Reggio, which today are substantially cut off from the principal Mediterranean routes, will be able to once again find their true vocation, opening themselves up again to coastal shipping, tourism, emergency and other services relevant to port cities.

The bridge is an element of cohesion for the cities along the Strait.

Connecting Reggio, Villa, and Messina with a superhighway and a train that will take barely 30 minutes to bring you from the station in Reggio to the one in Messina, including

intermediate stops (less time than takes to go from one part of Rome to another), will ignite a “metropolis effect” in the regions around the Calabrian and the Sicilian coasts.

The bridge will, in fact, bring into being one single and densely populated basin, which will permit the institution of very high-level services, sustainable only by a metropolis, the “city of the Strait,” further facilitated by the dovetailing of complementary services, today separated, which can instead form integrated systems—with the obvious economic benefits.

To get a sense of the scope of such potential of the Strait, there exists only one airport, at Reggio, and one single industrial port, Milazzo; and there are usefully integrable differences between the two shores in university structures, health care, and the productive sector, and primary and secondary services—to which one can add the conditions in some areas, favorable to locating new economic activities, such as container ports and industrial parks.

### The bridge brings jobs

The bridge is also a social fact in an area lacking in industrial and tertiary development, where the rate of unemployment has reached dangerous levels, and where emigration is producing the alarming phenomenon of entire areas being abandoned—areas which could be used in many different ways, where now the crime rate is very high, because of the lack of valid employment opportunities. The bridge brings jobs, with important spin-offs for all the productive sectors, among them, steel production, and the manufacture of steel products, which must grow to satisfy a demand for more than 500,000 tons of steel.

The bridge will introduce into the area of the Strait, a process of metropolitan integration and development, with an advanced tertiary pole, which will be a point of reference for the entire Mediterranean basin.

The number of those employed directly in the eight years of construction will be, for the bridge itself, about 2,600 men on average, and for connecting the highways and the railways, another 2,000 men. There will be 9,300 jobs created per year, for the whole system, locally and nationally, during the construction period, but this effect will continue for another five years, at an average job-creation rate of 2,300 per year.

Moreover, just to operate and maintain the bridge once finished, will require 500 men, with another 450 being hired on average each year.

It must be underlined that the jobs we talked about in the operating phase of the bridge, should not be considered as replacing those jobs presently brought by the ferry service: Past experience (e.g., Lisbon, Istanbul) confirms that, even when a bridge is built, the activities of ferries are partially maintained, even if they are operative in different forms and modalities (tourism, transport of hazardous materials and so on), and many of the people working on the construction of the bridge will be able to find work in a transformed area, not only in terms



*This map shows the transport connections that will be established with the completion of the bridge over the Strait of Messina. The bridge will connect the superhighway from Salerno to Reggio Calabria, with a superhighway that will link Messina to Palermo (solid line). The new rail line is depicted by the dotted line. Existing highways are shown by double solid lines.*

of industrial development, but also in terms of general revitalization and a better name for Italy abroad.

The bridge will encourage tourism. It will promote a consistent development of tourism, re-launching the historic-artistic vocation of places that are unique in the world, for their natural beauty, or their place in our historical and cultural patrimony.

In this respect, the strong attraction that the building of this bridge will have on people, will also have a palpable effect on the increase in tourism, right from the beginning of the construction, as was noted during the building of the Humber Bridge in England, the Great Belt in Denmark, and the Akashi Kaikyo in Japan.

### The bridge can finance itself

The cost of building the bridge is estimated at 4,300 billion lire, besides L 2,200 billion necessary for connecting to the