



INFRASTRUCTURE DEPARTMENT

Brochure

The Department

Infrastructure plays a key role in economic development and the people's quality of life. That is why their design, implementation, maintenance, and care is now more vital than ever to keep the country moving.

ITS works with clients by providing comprehensive services and concrete solutions for all kinds of challenges, thanks to the technical know-how and years of experience in the infrastructure sector.

The team offers and develops engineering services ranging from feasibility studies through to final and executive designs to implement functional infrastructure with the aim of improving the socio-economic conditions of the territory, ensuring its functionality and compatibility with the environment and landscape.

ITS develops services in the field of transportation infrastructure and network services, applying international environmental sustainability protocols. These include the Envision protocol, the first rating system for designing and implement sustainable infrastructure.



Services

ITS develops services starting with socio-economic screening of the territory, analysis of existing infrastructure and planning of possible developments-working in collaboration with clients and public agencies-in order to arrive at the design having identified the most effective solutions with respect to the complexity of the context, paying particular attention to: functionality of the work, socio-economic sustainability, operation and maintenance costs, environmental and landscape enhancement.

01 Planning and designing

- Planning and technical and economic feasibility studies
- Final, executive design
- Construction and detailed design
- Project verification for validation purposes
- Accompanying public debate

03 Construction and site management

- Construction Management
- Time and cost monitoring and control
- Operations management, construction accounting, global management of surveying, staking and tracking
- Structural and technical-functional inspections
- Technical-administrative inspections

05 Occupational safety and environ-

- Safety coordination during the design phase
- Safety coordination during the execution phase
- Risk assessment
- Construction site study
- Work scheduling

02 Project Management

- Economic and financial planning
- Time monitoring and control
- Integration and coordination of specialized services
- Assistance to the RUP and contracting stations

04 Functionality and Maintenance

- Drafting maintenance plans
- Monitoring during operation
- Work files and manuals
- Monitoring and management of maintenance and construction sites using integrated information systems

06 BIM - Building Information Modeling

- Model creations
- Management and coordination and modeling activities
- Code checking
- ACDat platform management



Our Projects

Portogruaro variant road

Upgrading work on the 1st Lot and construction of the 2nd and 4th Lots (1st and 2nd phases)

The variant route develops for about 12.5 km, bypassing the urban settlement of Portogruaro to the north, with connections by intersection at staggered levels to Treviso, with the road to Pordenone and to Udine.

The route of the 1st and 2nd Lot is spread over about 3 km and includes within its roads in detected, n.3 viaducts on mixed steel and concrete structure, n.1 roundabout and n.1 overpassing.

The n.4 Lot is developed over a length of about 5 km and inside there are several major works of art, including n.3 viaducts in a mixed structure, n.3 junctions, n.2 underpasses and n.1 overpass, as well as roads in detected.



Location:	Veneto, ITALY
Client:	ANAS Spa
Year:	2018 - 2019
Services amount:	4 Million €
Categories:	V.02, S.03, S.04, S.05, D.04, IA.03
Services provided:	Final and executive design, safety coordination during the design phase

New road and underpasses at S. Artemio

New road connecting to the headquarter of the province of Treviso, obtained from the former psychiatric hospital of S. Artemio

The assignment concerns the executive design of the works of “New Road connection to the S. Artemio - II° half” contracted with an open integrated tender procedure, and relating to the construction of a vehicular underpass in Via Ghirlanda (having a section of 13.0 x 5.2 m), a pedestrian underpass (having a section of 3.0 x 2.7 m) and the completion of the new link to the Provincial Road for a length of 1.2 km.

The study of the underpass construction system was particularly attentive to the geotechnical situation of the site, characterized by a gravel subsoil with a flowing aquifer just below the countryside plan, the presence of the Venice-Udine double railway line and the delicacy of the existing environmental and landscape balance.



Location:	Veneto, ITALY
Client:	Province of Treviso
Year:	2008 - 2009
Services amount:	4.3 Million€
Categories:	V.02, S.03, S.05, D.04, AI.03
Services provided:	Executive design for integrated tendering and safety coordination during the design phase. Assistance to the company during construction

“Alemagna” road between km 49+600 and km 53+570

Performance and functional improvement in reparation for the Milan – Cortina 2026 Olympic Games

For the start of the “Cortina 2021” Alpine Ski World Championship, ANAS Spa, in agreement with the Ministry of Infrastructure and Transport, has launched an initiative aimed at solving the largest number of critical points of mobility present along the “Alemagna” road, in the stretch between Pian de Vedoia and Cortina.

At the Longarone section, the goals of the interventions are the resolution of the functional deficiency of the crossing towards Vald Zoldana, at the southern entrance of Longarone, and the safety and geometric and performance adjustment of the section of the main road between junction and the Termin tunnel at north of the town of Castellavazzo. Among the main works of art designed, 3 new bridges with a mixed steel and AC section, the seismic adaptation of two existing bridges, and the adaptation of a railway overpass to the Conegliano-Calalzo line.

The road and structural design were carried out with a BIM methodology, starting from the LIDAR survey of the entire route.



Location:	Veneto, ITALY
Client:	ANAS Spa
Year:	2019
Services amount:	16.9 Million €
Categories:	S.03, S.04, S.05 V.02
Services provided:	Technical-economic feasibility study, executive design, safety coordination during the design phase

“Ripa” road

Safety improvement of Ripa Road in the Province of La Spezia – Lots 2,3 and 4 by construction of rockfall tunnel

The Ripa Road presents itself with a half-coastal section, very busy and subject to rockfall and hydro-geological disruptions. The planned intervention made it possible to fully reopen and secure the viability.

The major work that characterizes the assignment is a rockfall tunnel with a development of 158 meters. The work is accompanied by interventions for the arrangement of the slopes and the installation of rockfall barriers. The sizing of the works against the rockfall was conducted using the 2D analysis for the calculation of the impact energy and bounce heights of the boulders.



Location:	Liguria, ITALY
Client:	I.R.E. S.p.A.
Year:	2018 - 2020
Services amount:	3.3 Million €
Categories:	V.02, S.03, S.05, D.04, IA.03
Services provided:	Final and executive design, safety coordination during the design phase, site supervision, operational direction, safety coordination during execution

Variant road of “Delle Mire”

Connection between the highway, Vittorio Veneto South exit, and the “Alemagna” road

For the following executive project, all the boards required by the Procurement Code were produced, for a total of 110 papers and 25 reports. The studies conducted involved 100% of the works planned and then implemented. Numerous study activities have been integrated, already partly conducted in the final, such as the study of traffic, the integration of acoustic impact monitoring and evaluation, the plan of integrative geological and geognostic surveys and risk analysis in the tunnel.



Location:	Veneto, ITALY
Client:	Province of Treviso
Year:	2010 - 2012
Services amount:	5 Million €
Categories:	V.02, S.03, S.05, S.04, D.0, AI.03
Services provided:	Executive design and safety coordination during the design phase

New connecting road to Villorba

New road connecting the municipal Via della Cartiera to the settlement of San Sisto in the Municipality of Villorba

The intervention concerns the construction of the direct connection between the "Pontebbana" road, the "Postumia" road and the highway at Treviso North for a length of 3.8 km. The intervention has achieved the objective of improving viability in the northern quadrant of the toll booth by simplifying its accessibility. The work consists of a "ring road" bypassing to the north settlement of Catena di Villorba with a length of about 1.6 km between "via della Cartiera" and the "Postumia" road and a coplanar developed in parallel to the highway, with the end at Treviso North gate with a length of about 2.2 km, for a total of about 3.8 km. The road platform is typing D "sliding city" at one lane per direction of travel of 9.5 m width. The intervention includes the constructions of 3 roundabout intersections, an artificial tunnel with a railway underpass, a highway underpass, the extension of a highway underpass, and two other road underpasses.



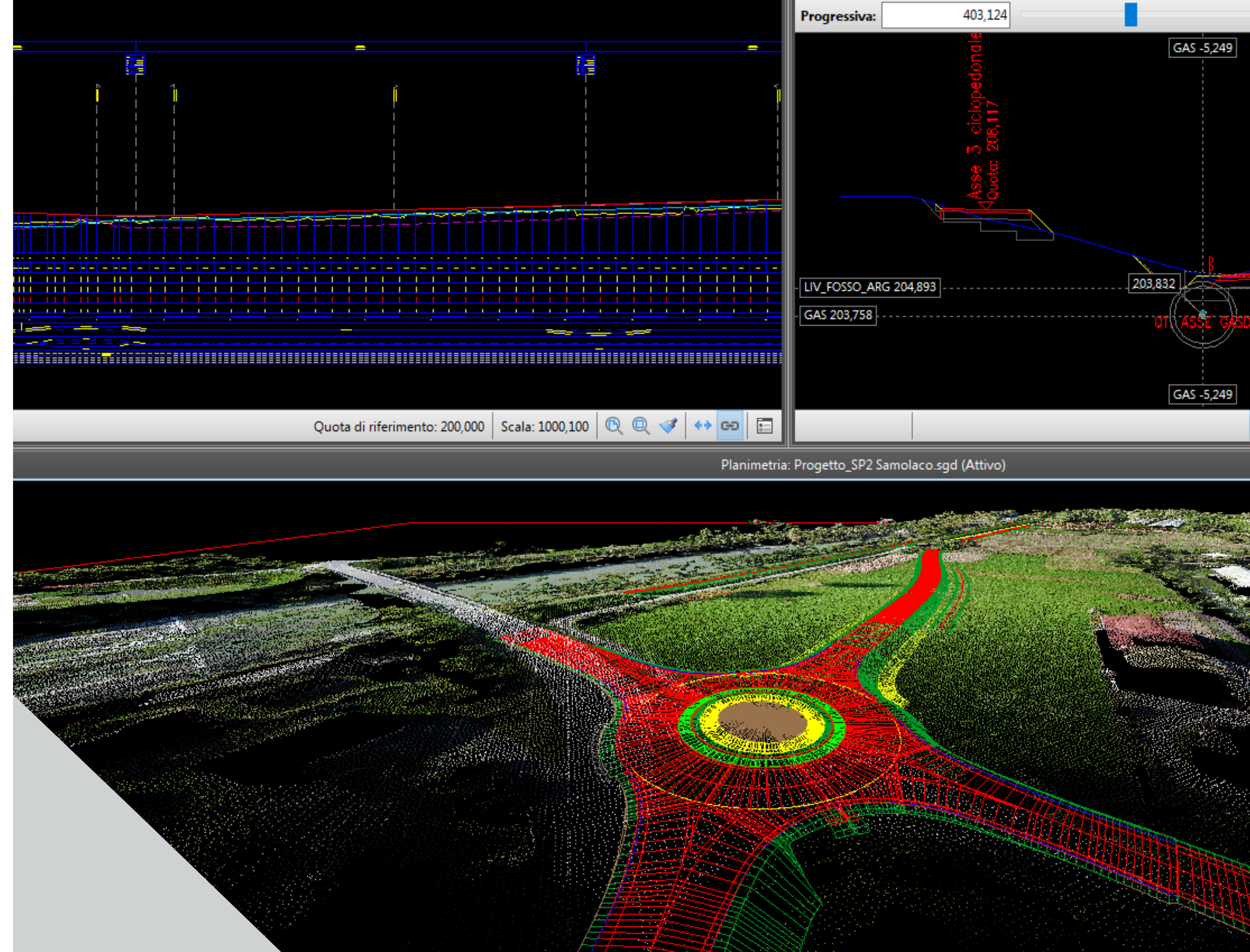
Location:	Veneto, ITALY
Client:	Province of Treviso and Municipality of Villorba
Year:	2009 - 2011
Services amount:	11.9 Million €
Categories:	V.02, S.05, S.03, D.04, IA.03
Services provided:	Operational structure management and safety coordination during execution

Variant road of “Trivulzia”

Variant road of “Trivulzia”

The construction of the new axis is aimed at improving road safety, with the reduction of traffic crossing the Municipality of Samolaco, in Valchiavenna.

The intervention concerns the construction of a new roadway with a length of about 3 km, with connection to the existing provincial roadway by means of two roundabout intersections. The road platform is characterized by an F2 section. The project has been subjected to a Regional VIA verification procedure. The road design was drawn up based on a LIDAR survey and return of the point cloud and DTM. The modeling of the new infrastructure was carried out by means of a BIM process, through which it was possible to evaluate in detail the minimum distance with respect to the MP gas pipeline and AT power line.



Location:	Lombardy, ITALY
Client:	Province of Sondrio
Year:	2019 - 2022
Services amount:	5.2 Million €
Categories:	V.02, S.05, S.03, D.04, IA.03
Services provided:	Final and executive design, safety coordination during design

Irno and Cristoforo viaducts

Improvement of the safety conditions of the Irno and Cristoforo viaducts at km 54+850 of the Salerno bypass section

The construction of the new axis is aimed at improving road safety, with the reduction of traffic crossing the Municipality of Samolaco, in Valchiavenna.

The intervention involves the complete cortical rehabilitation of some piles, of all the pulvini, and complete remaking of the anchor curb of the road barrier. In addition to the replacement of the safety barriers, the intervention involves the refurbishment of the expansion joints, and the installation works of the platform waters.

Considering the volumes of the traffic passing through the intervention road, the design of the construction site, the staging of the interventions and the management of the construction sites and temporary works were particularly delicate.



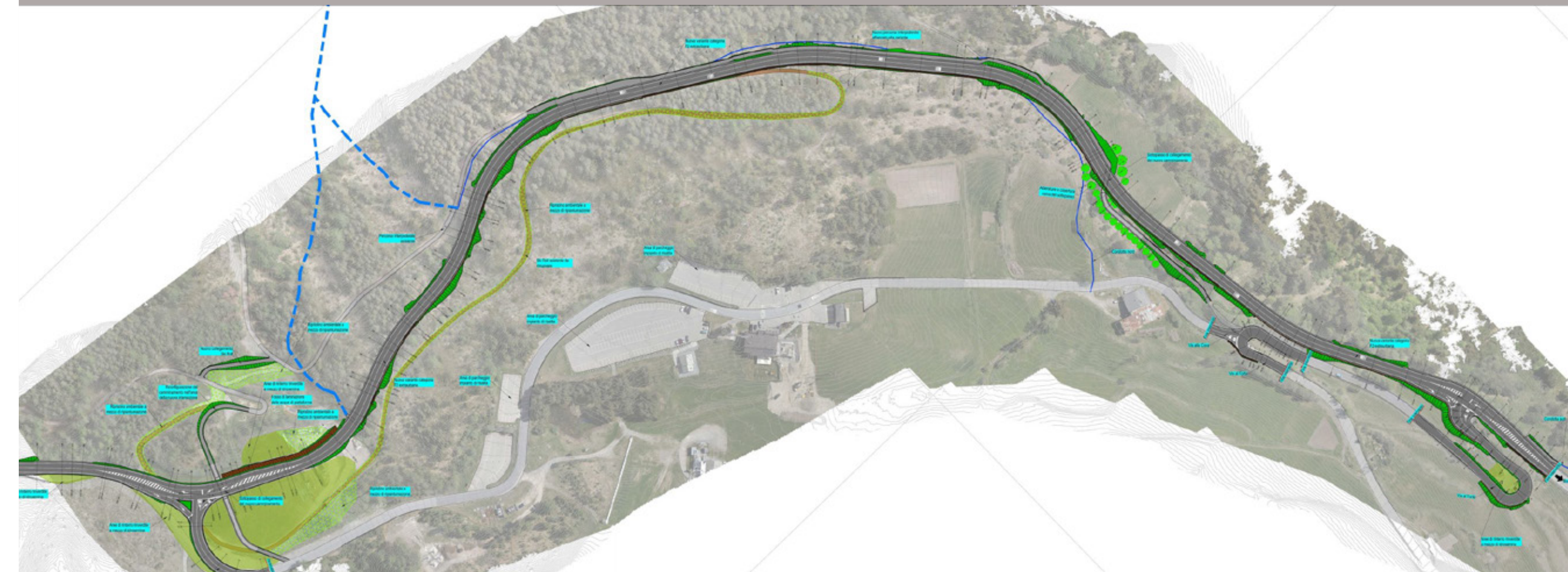
Location:	Campania, ITALY
Client:	ANAS Spa
Year:	2014
Services amount:	6.7 Million €
Categories:	V.02, S.03, D.04
Services provided:	Final and executive design, safety coordination during design

Variant of “Motte di Oga”

Summit section in the municipalities of Valdisotto and Valdidentro

The construction of the new axis is aimed at improving road safety, with the reduction of traffic crossing the Municipality of Samolaco, in Valchiavenna.

The aims to create an alternative route to reach Livigno, which excludes the crossing of the town of Bormio and the hamlet of Premadio di Valdidentro, a situation that has always been the cause of the significant traffic. The variant road is about 1200 m long, the road platform is a type “F2 secondary suburban road”. The mountainous context in which is inserted has necessarily conditioned the design choices and the need to carry out significant support works, by gravity or with Berliners pulling. Particular attention has been given to the plan-altimeter definition of the track, to keep excavations and earth movements to a minimum. The design was carried out using the BIM methodology, starting from LIDAR survey of the terrain and determination of the DTM of the terrain.

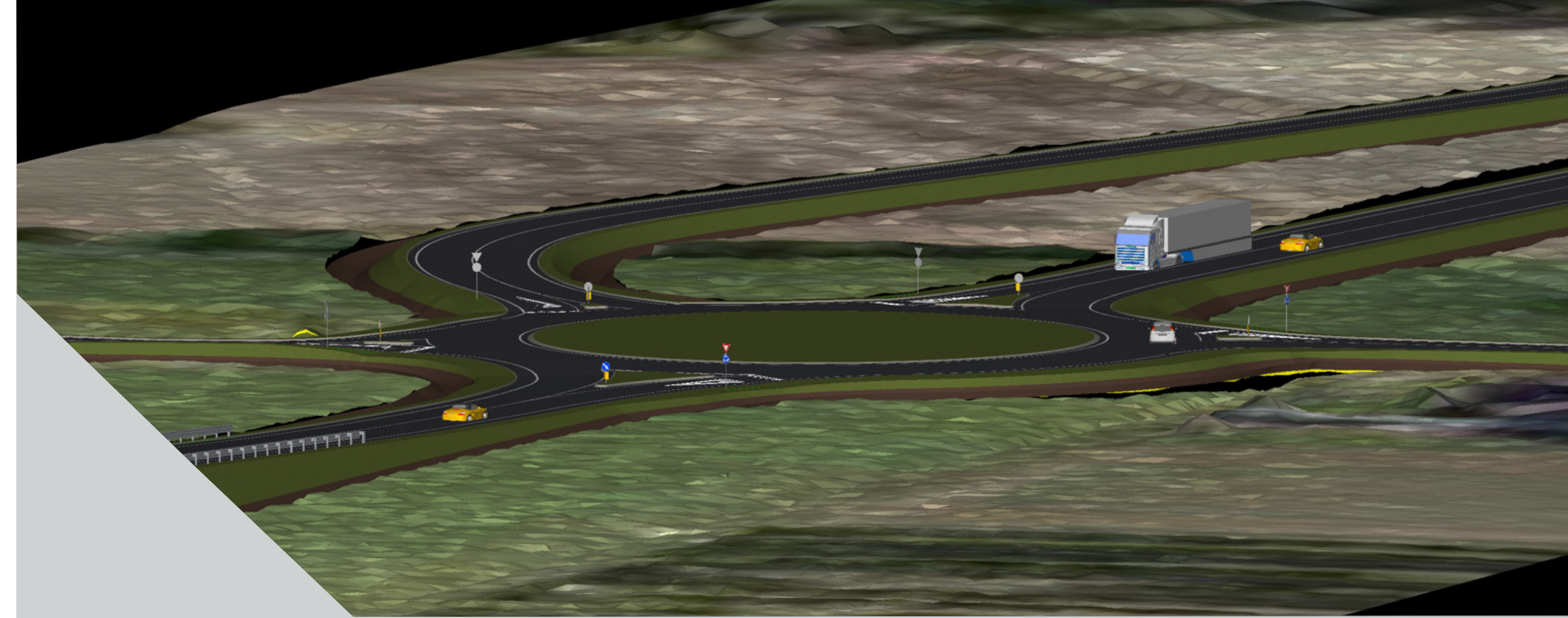
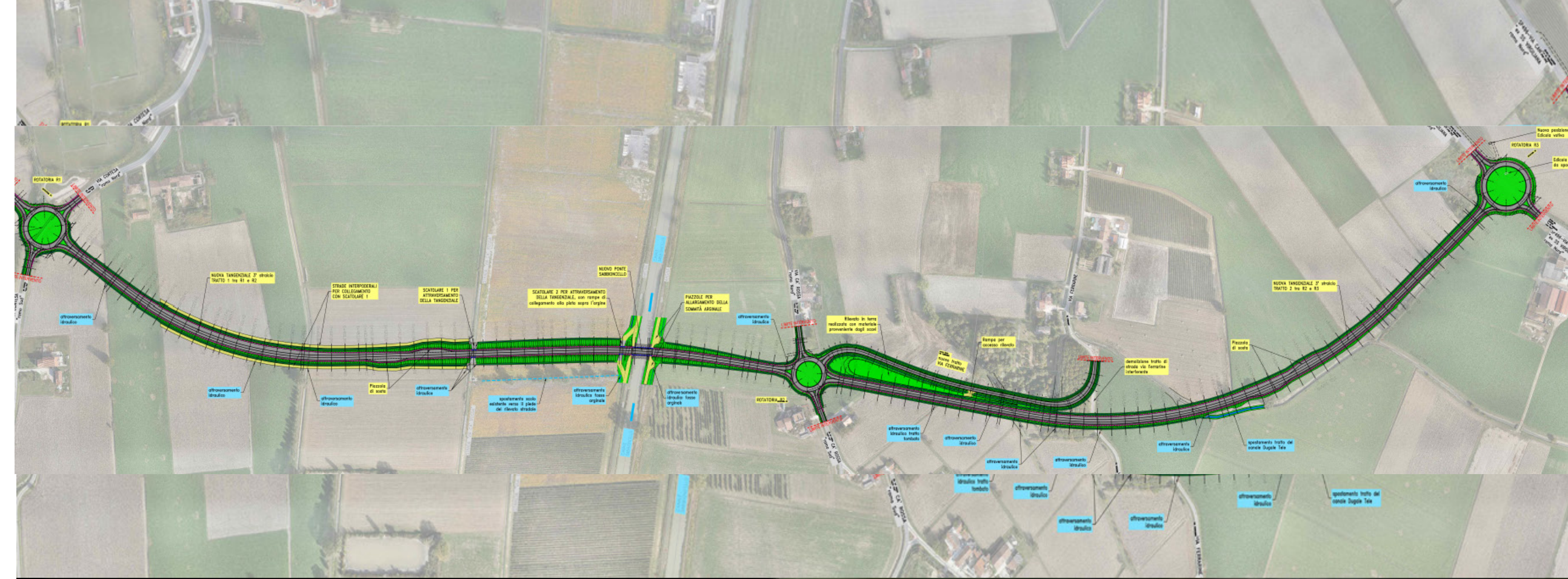


Location:	Lombardy, ITALY
Client:	Province of Sondrio
Year:	2022 - Ongoing
Services amount:	8.8 Million €
Categories:	V.02, S.03, S.05, S.04
Services provided:	Final and executive design, safety coordination during design, EIA (Environmental Impact Assessment) screening

Southern bypass of “Quistello”

Completion of the “Southern Bypass of Quistello” system in the province of Mantua

From the road point of view, in continuity with the previous excerpts already realized, the project foresees the construction of a road with C2 geometry “secondary Extra Urban Road”, with a total length of about 2.3 km. The new road is connected to the existing one through the construction of 3 roundabouts with a diameter of 50 meters. To give continuity to the connections between agricultural land and inter-farm roads, it has been planned to build an underpass road, consisting of a c.a. box with such dimensions as to allow the transit of agricultural vehicles such as combine harvesters. The in-depth study of the development of the inter-farm roads has made it possible to resolve all the interfaces present and ensure full accessibility to agricultural funds. The road design was drawn up based on a LIDAR survey and return of point cloud and DTM. The modeling of the new infrastructure was performed using the BIM process.



Location:	Lombardy, ITALY
Client:	Province of Mantua
Year:	2021 - Ongoing
Services amount:	6.5 Million €
Categories:	V.02, S.04
Services provided:	Final and executive design, safety coordination during design, geotechnical and seismic investigation

Ski Area Rumerlo network road

New access to the ski areas of Rumerlo and Piè Tofana - plan for the interventions for the CORTINA 2021 Ski World Championship

The intervention mainly concerns the construction of a bypass road to the Rumerlo finish area, to allow the modification of the latter according to requests of the FIS (International Ski Federation).

The bypass consists of the construction of a stretch of a road with a total length of about 640 m with a platform with a width of 6.0 m. In addition to the road, the project includes the construction of the FINISH AREA, the arrival area of the two racetracks identified as the "Stratofana" (women) and "Vertigine" (men) tracks for which a single finish area is planned in Rumerlo. The new arrival is equipped with all the technical infrastructure, media spaces, reception areas for spectators, security services, transit, and parking areas.



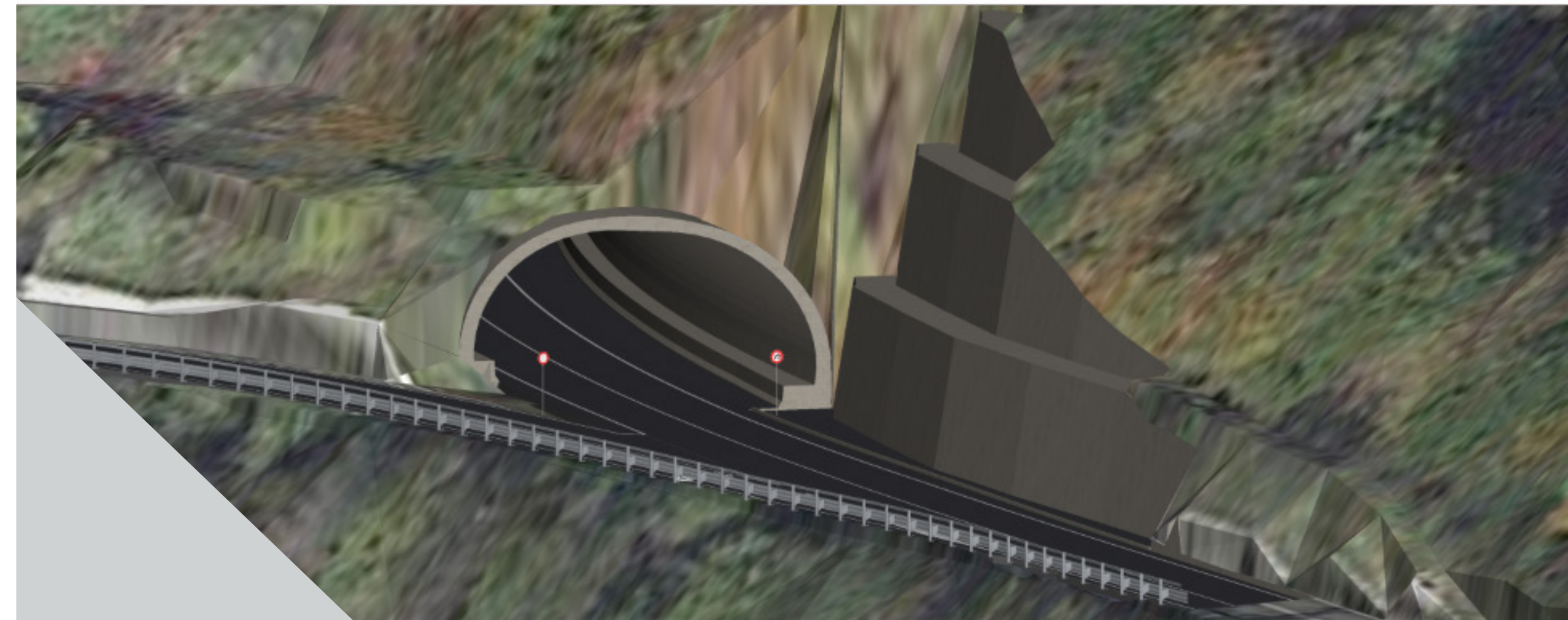
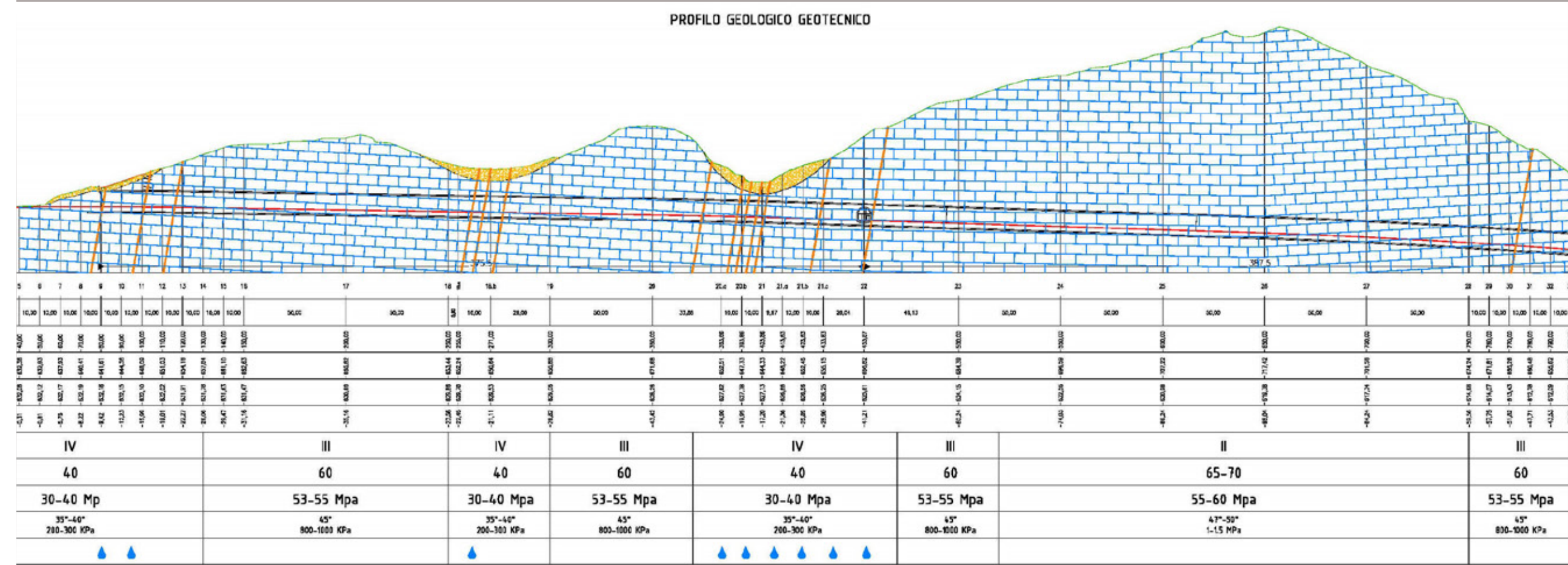
Location:	Veneto, ITALY
Client:	Cortina 2021 Foundation-Ministry of the Infrastructure and Transport
Year:	2019
Services amount:	4.8 Million €
Categories:	V.03, S.03, S.04, S.05, D.04, P.02, IA.01
Services provided:	Technical and economic feasibility design, final and executive design, safety coordination during design

Soffranco Tunnel

New tunnel at Soffranco along “della Val di Zoldo e Val Cellina” road

The project aimed at solving the imminent critical issues on the stretch of the road, characterized by high tortuous track, poor visibility, reduced roadway, absence of parking spaces and exposed to hydro geological and avalanche risk.

To this end, it is planned to build a natural tunnel with a length of about 800 m. The road platform has geometry classifiable as C2, secondary suburban road. The road route is verified for project speed of 80 km/h. In the development of the project, particular attention was given to the mountain context in which the work is inserted, finding solutions that were compatible from a landscape and environmental point of view.



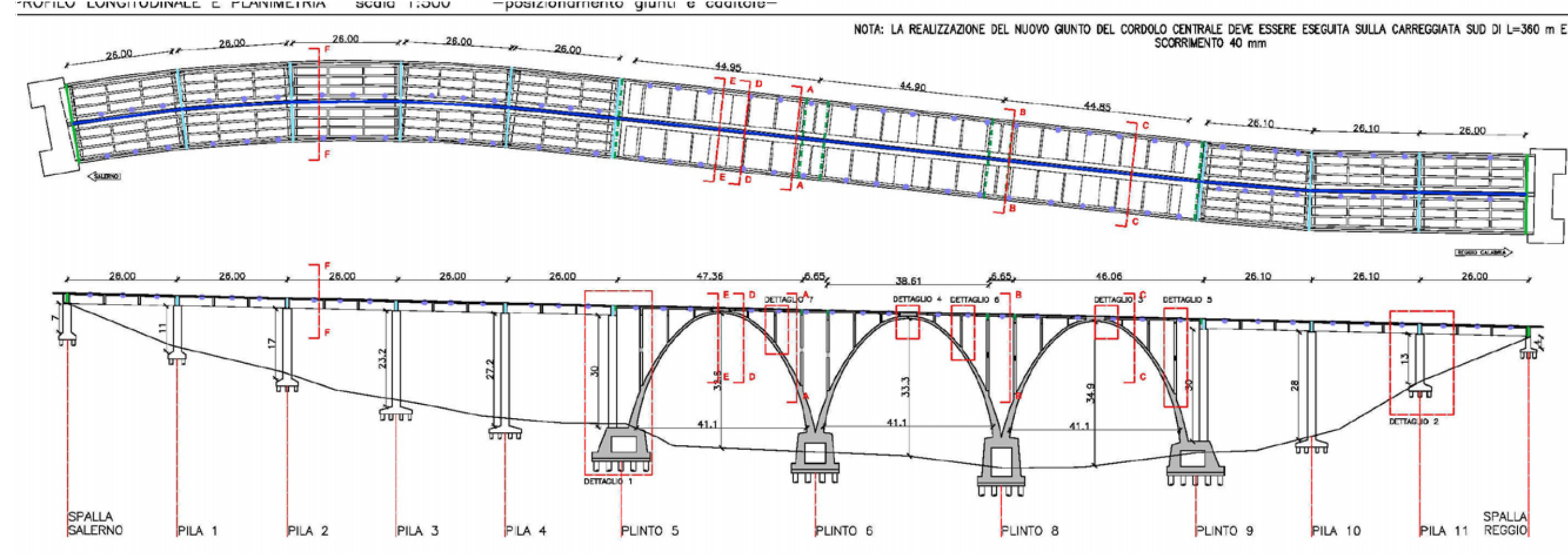
- Location:** Veneto, ITALY
- Client:** Veneto Strade Spa
- Year:** 2020
- Services amount:** 26 Million €
- Categories:** V.02, S.03, S.05, D.04
- Services provided:** Structural design, specialist reports and final design services, executive design and safety coordination during design

Salerno-Reggio Calabria highway

Extraordinary maintenance work on the highway from km 433+765 to km 442+077 between Campo Calabro and Santa Caterina

The design involved extraordinary maintenance works for the upgrading of the existing highway section.

The section under intervention includes no.7 viaducts, no.3 tunnels and some minor works minor (retaining walls, minor overpasses, bridges, manholes). Specifically, the interventions involved: resurfacing of the road pavement; resurfacing safety barriers and road signs; hydraulic works for water regulation platform; rehabilitation of deteriorated reinforced concrete works; remaking of expansion joints expansion on viaducts; waterproofing of viaduct deck; green works and environmental mitigation; junction lighting system; upgrading to the current regulations of tunnel lighting systems.



Location:	Campania, ITALY
Client:	ANAS Spa
Year:	2015
Services amount:	79.4 Million €
Categories:	V.03, S.03, S.04, D.04, E.17, IA.03
Services provided:	Final and executive design and safety coordination during design

ANAS Framework Agreement

DG 03-17 Three-year agreement for design services related to scheduled maintenance

The Framework Agreement concerns the executive design to the extraordinary maintenance work of bridges, viaducts and tunnels, in relation to Lot 2 ANAS-North East, including the compartments of Veneto, Friuli Venezia Giulia and Emilia Romagna.



Location:	Veneto - Emilia Romagna - Friuli Venezia Giulia, ITALY
Client:	ANAS Spa
Year:	2018 - 2023
Services amount:	50 Million €
Categories:	V.03, S.03, S.04, S.05, D.04
Services provided:	Final and executive design and safety coordination during execution

RFI Spa Framework Agreement

Services of completion of the preliminary projects for the arrangement of the Piraineto Trapani line via Milo-Alcamo

As part of the framework design agreement, the preliminary design for the upgrading of the Piraineto-Trapani line, via Milo, was developed.

Line disused for several years due to the stations of Calatafimi, Segesta Tempio, as well as the construction of two underpasses in Trapani and Segesta.

Overall, the intervention concerns about 47 km of railway line.



Location:	Sicily, ITALY
Client:	RFI Spa
Year:	2016
Services amount:	84.3 Million €
Categories:	V.03, S.03, S.04, S.05, D.04
Services provided:	Preliminary design

RFI Spa Framework Agreement

Operational directorates territorial infrastructure of Ancona e Bari

The framework agreement concerns technical and economic feasibility design services, final, executive, investigations surveys, including all special and ancillary services, of the work relating to the railway headquarters and its civil works, its tunnels, buildings and related RFI Spa facilities.



Location:	Marche - Apulia, ITALY
Client:	RFI Spa
Year:	2022 - Ongoing
Services amount:	-
Categories:	V.03, S.03, S.04, S.05, D.04
Services provided:	-



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