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National Railway Administration of the People's Republic of China



IRSC 2025

*Advancing Railway Safety through
Innovations and Collaborations*

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Anaklia Deep Sea Port

Kawa BAHA

Regional Lead, Infrastructure + Energy,

Central Asia

SMEC / SJ Group

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Background and Context

- Anaklia Deep Sea Port: Georgia's first deep-water maritime terminal.
- Vision: Transform Georgia into a key logistics hub on the Black Sea.
- This 18 km railway link ensures direct port connectivity with national and regional transport networks.





Strategic Importance

- Supports national logistics and trade goals.
- Encourages modal shift from road to rail.
- Designed for long-term scalability and sustainability.



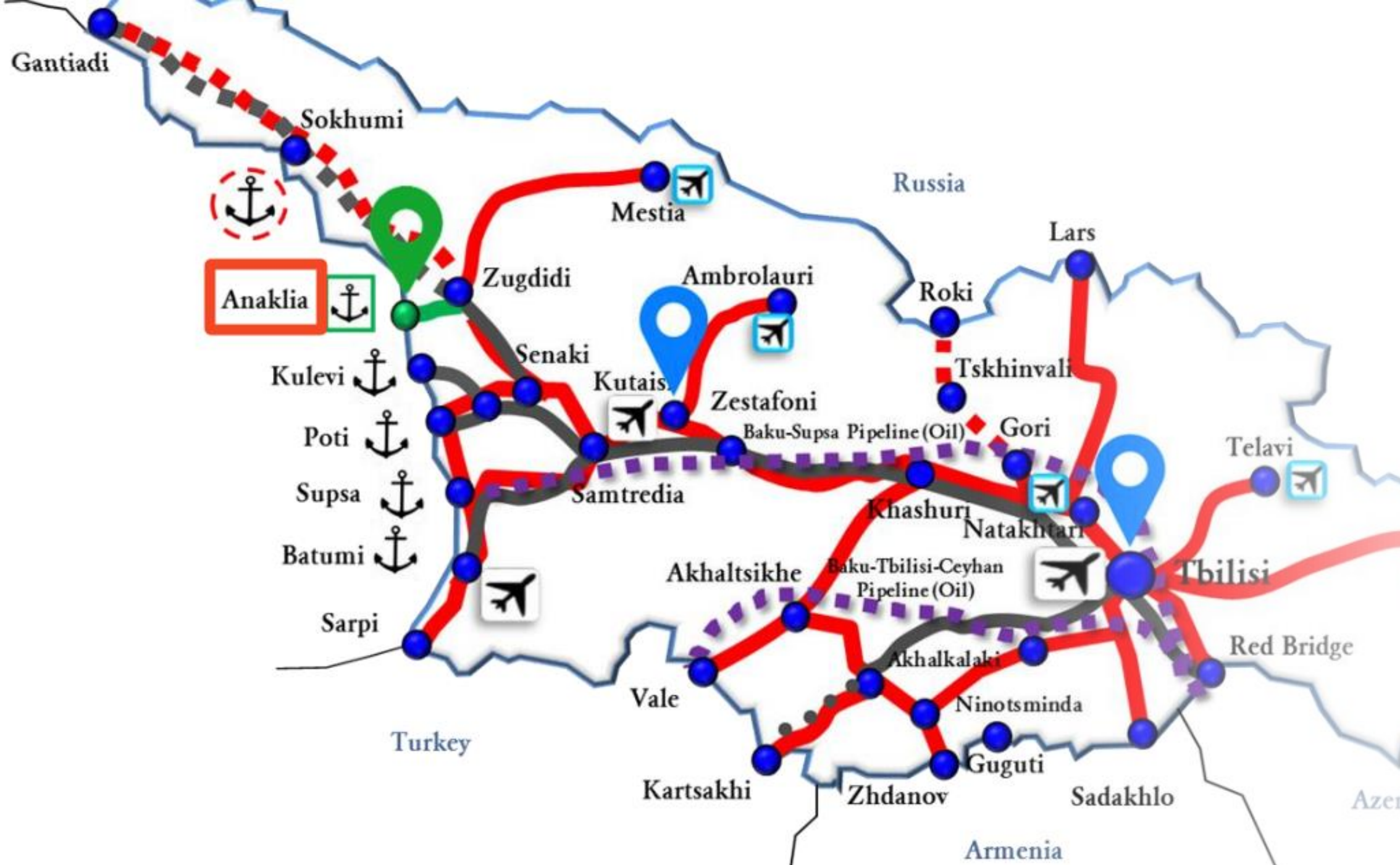
Project Objective

- Prepare detailed design for 18 km electrified railway line.
- Ensure integration with Georgian Rail network.
- Implement international safety and environmental standards.
- Design for seismic and hydrological resilience.

Methodology and Approach

- Conducted topographic, geological, and hydrological studies.
- Evaluated three route alternatives.
- Final alignment selected based on terrain, cost, and freight forecast.
- Environmental and social studies aligned with EBRD standards.





Key Technical Features

- 1520 mm CIS gauge, single electrified track with double-tracking potential.
- R65 rails, reinforced concrete sleepers.
- 80 km/h max freight speed.
- 3.3 kV DC catenary system.
- Fiber-optic telecoms and modern signaling.

Main Road Network	Pipelines (Oil)	Sea Ports (Temporarily Closed)	Railway connection to Anaklia Dep Sea Port (Project)
Railway	International Airports	Anaklia Deep Sea Port (Project)	Tbilisi and Kutaisi Logistics Centers (Project)
Baku-Tbilisi-Kars Railway (Project)	Domestic Airports		
Railway (Temporarily Closed)	Sea Ports		
Road (Temporarily Closed)			



Engineering and Resilience

- Addressed seismic and flood risks of Kolkheti Plain.
- Elevated embankments, resilient bridges, and culverts.
- Designed operational buildings (station, depots, inspection units) with HVAC, safety, and electrical systems.

Environmental and Social Planning

- Full Environmental Impact Assessment and Resettlement Action Plan.
- Compliance with EBRD standards.
- Emphasis on ecosystem protection and fair land acquisition.



Deliverables and Milestones

- Comprehensive investigations and design packages.
- Draft RAP and EIA.
- Architectural and MEP designs.
- BOQ, specifications, and tender documents.
- Implementation divided into three lots for phased execution.



Integration and Innovation

- Integration of signaling and telecom systems.
- Modular architecture for easy future expansion.
- Designs anticipate climate adaptation and resilience.



Results and Impact

- Combines engineering precision with sustainability.
- Aligns with Georgia's infrastructure strategy.
- Enables efficient, low-emission trade flows through the Caucasus.



Conclusion

- A visionary yet practical infrastructure project.
- Georgia's logistics role in Eurasia.
- Strengthens connects people, economies, and opportunities.

Acknowledgements

- Government of Georgia and Georgian Railway.
- SMEC design teams in Astana and Tbilisi.
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Thank you for your attention!



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