DEEP UNDERGROUND CHALLENGE

OFFICIAL REVIEW REPORT

Project: SEIZMIC SYNAPSE **Author: Zehra Ozturk**

1. Project Description

According the author, this projects provides strategic earthquake waiting core integrated into city nodes, turning transit hubs into modular, expandable centers of urban resilience and readiness.

Located in the center of Izmir, near Basmane Station and close to the subway, three vertical shafts, each 56 meters deep and about 30 meters in diameter, are constructed. These facilities serve as safe spaces in case of earthquakes, functioning both as temporary shelters for citizens and as a command center for disaster management.

The shafts are connected to underground and surface railway lines, further expanding the system's capacity and allowing it to be adjusted to different levels of need.

2. Evaluation by Criteria

Criterion	Assessment
Relevance to the Deep Underground Concept	The project involves the construction of three underground structures—large-diameter shafts—built in a traditional manner with steel and concrete support elements. Therefore, it does not address the fundamental principles of the Deep Underground Concept.
Geology	The location of the project is Kulturpark, Izmir. In terms of general geological structure and morphology, the basement around İzmir consists of the "Bornova Complex," consisting of an alternation of

	Upper Cretaceous-Paleocene sandstone and shale. Basmane Station sits atop a deep sequence of soft, water-saturated Plio–Quaternary alluvial deposits, underlain by older Miocene fluvial-lacustrine sequences and the complex Bornova Mélange basement. Above that there is Neogene cover which is built by siltstones, sandstones, conglomerates, red clastics. The shallow subsurface consists of Plio–Quaternary Fill. These are continental alluvial deposits (gravelly sands, sandy silts, silty clays) typical of the urban basin fill in İzmir Central and at Kültürpark. This material is not ideal for place for facility, contructed according the deep underground concept.
Sustainability	This project does not address this topic.
Benefit to the Community	The proposal envisions a central element in for disaster management and shelters in case of earthquake, which could significantly benefit the community.
Use of Modern Technologies	This project provides an use of modern construction techniques, but not from sustainable materials.
Feasibility of Construction	The realization of this object is feasible using modern construction techniques.
Quality of the Design	The design is very detailed, provides the construction elements of the shafts, and interior elements.
Quality of the Presentation	The project consists of several posters. All submitted material clearly communicates the author's ideas and intentions.

3. Conclusions

This project does not fulfill all the requirements of the Deep Underground Challenge competition and therefore cannot be considered for the main awards.

However, it covers in great detail a modern approach to disaster management, adding new elements to existing structures to create a center of urban resilience and readiness.

From this perspective, *Seismic Synapse* is a significant project.

For this reason, the jury grants this project a Special Recognition Award.