Station Description Sheet

TST_196

1. GENERAL INFORMATION

Photo 1: Outside view of the hosting building

Photo 2: The TST_196 sensor

Station Code: TST_196
Network: Euroseis
Instrumentation: Check the up-to-date EUROSEISTEST stations history file at http://euroseisdb.civil.auth.gr/stations
Power supply: AC
Housing: in a 196m deep borehole at the center of the valley

2. GEOGRAPHICAL INFORMATION / GEOMORPHOLOGY

Figure 1: Location map of TST_196 station

Location: in the Mygdonian basin
Elevation (from sea level): -196.0 m
Station coordinates: 23.2906^{0}E / 40.6638^{0}N
Projection system: WGS84
Site morphology: Valley center

3. GEOLOGICAL INFORMATION

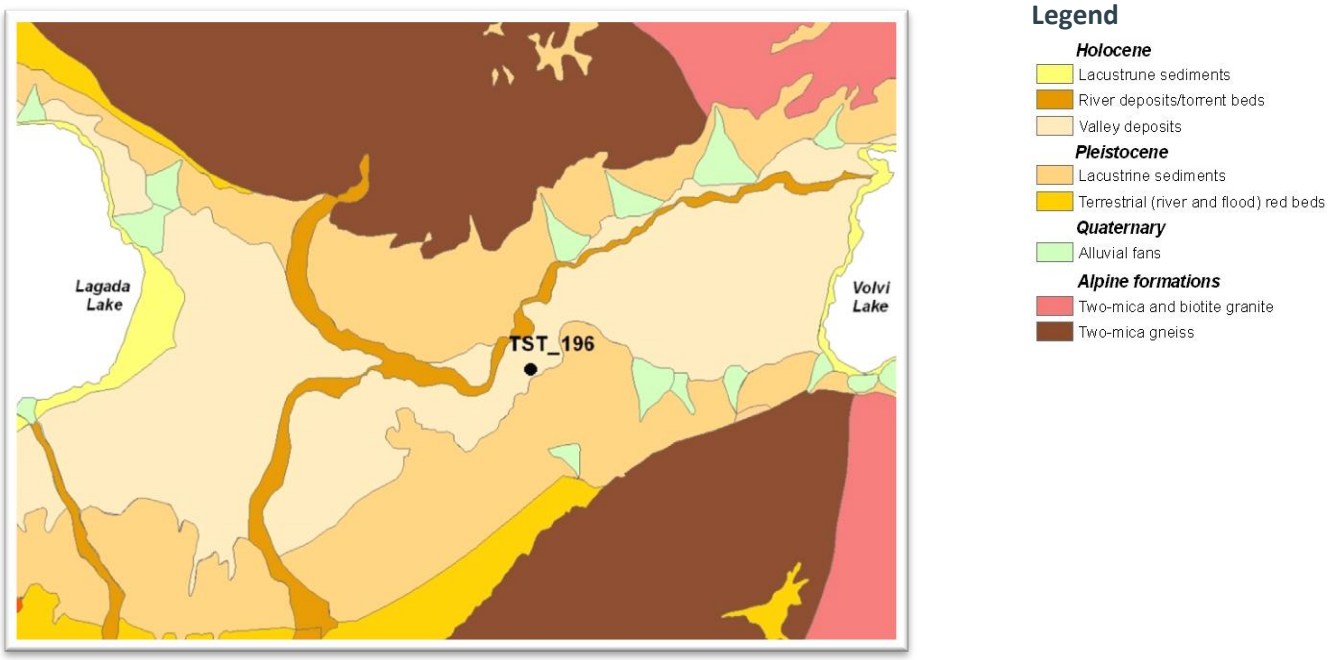

Figure 2: Geological map of the central Mygdonian basin

Surface geology (from geological map): on two-mica gneiss
Reference for geological map: Geological map of Greece - Scale 1:50000, Map Sheets of "Thermi" and "Zagliverion", (IGME, 1978)
Boreholes (with core description) in the proximity of the station: not known.

4. GEOTECHNICAL SITE CHARACTERIZATION

Geotechnical site characterization data for station TST_196 include:

1. Sampling borehole (EUROSEISTEST Project Reports, 1993-1995).
2. Normal Penetration test (EUROSEISTEST Project Reports, 1993-1995).
3. Cone penetration test (EUROSEISRISK project reports, 2002 – 2005).
4. Laboratory tests (G-γ-D curves, etc.) (EUROSEISTEST Project Reports, 1993-1995).

Data are available in ascii format in:
http://euroseisdb.civil.auth.gr/uploads/station/geotechnical/23/Site_characterization_geotechnical_TST_196.txt

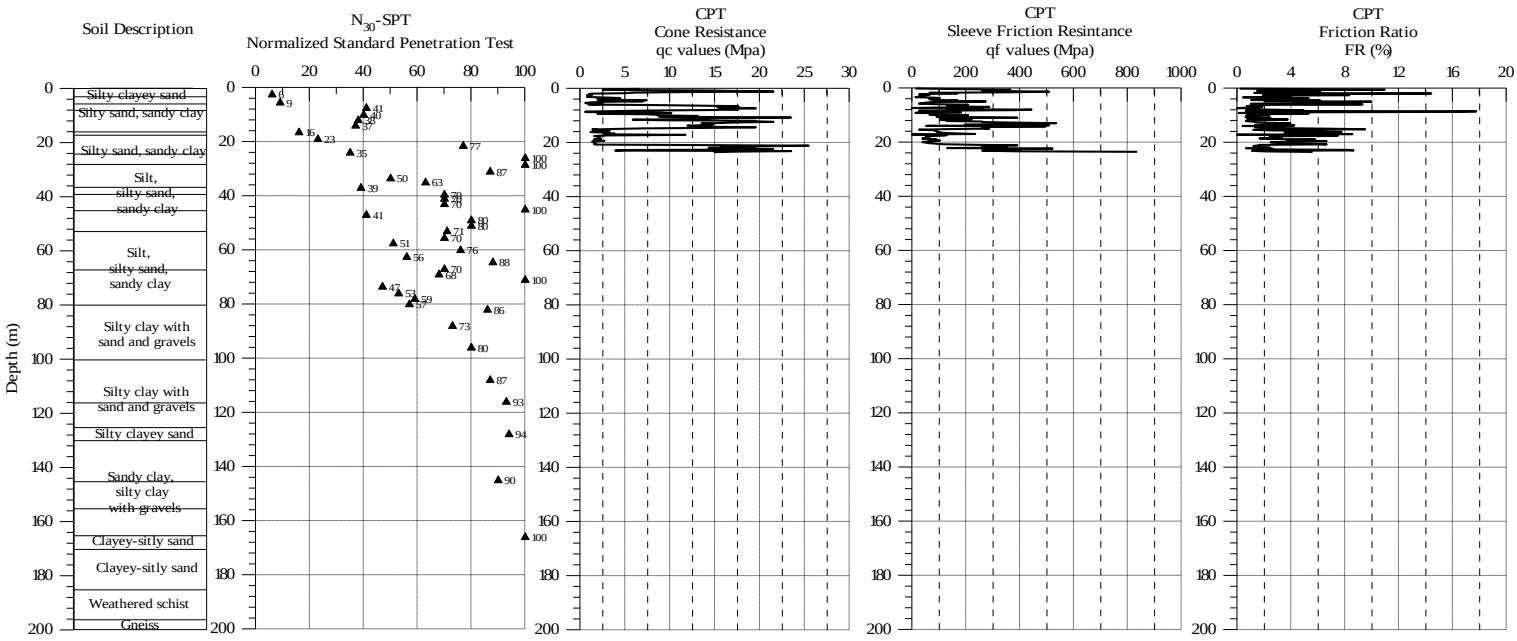

Figure 3: Geotechnical data at station TST_196.

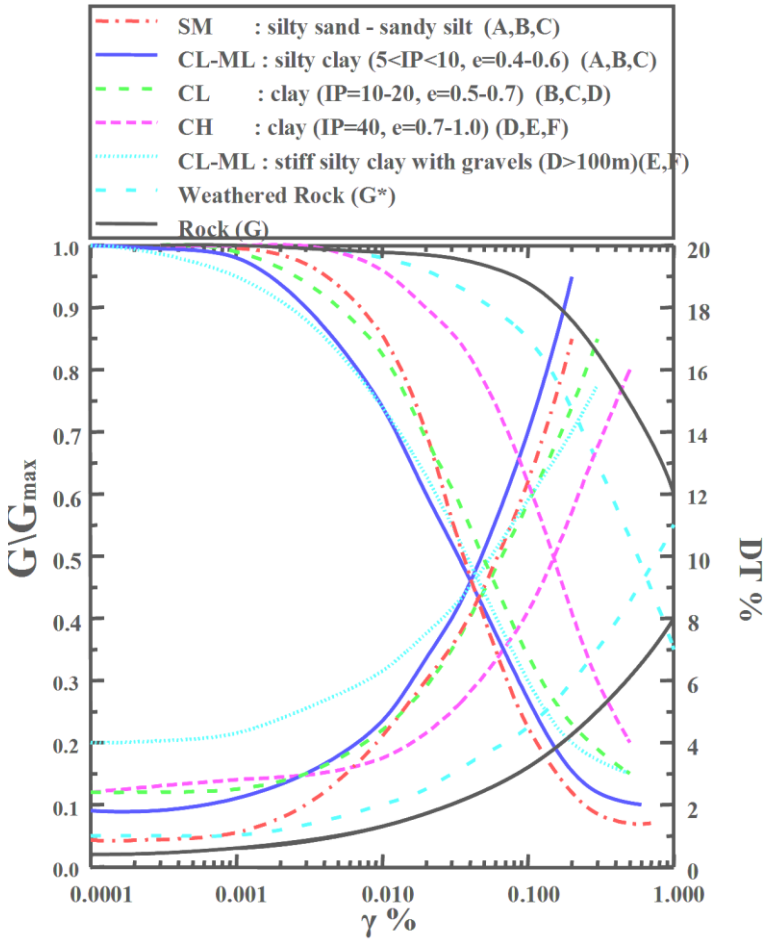

Figure 4: Mean G/Go-γ-D curves from resonant column and cyclic triaxial tests for all geotechnical formations occur at station TST_196. The curves describe the shear modulus degradation with the shear strain and the respective internal damping increase.

5. GEOPHYSICAL SITE CHARACTERIZATION

Geophysical site characterization data for station TST_196 include:

1. Shear wave velocity values (Vs) determined by Surface Wave Inversion method (Raptakis et al., 2000).
2. Compression wave velocity (Vp) determined by Surface Wave Inversion method (Raptakis et al., 2000).
3. Quality factor (Qs) determined by Surface Wave Attenuation Analysis (Raptakis et al., 2000).

Data are available in ascii format in:
http://euroseisdb.civil.auth.gr/uploads/station/geophysical/23/Site_characterization_geophysical_TST_196.txt

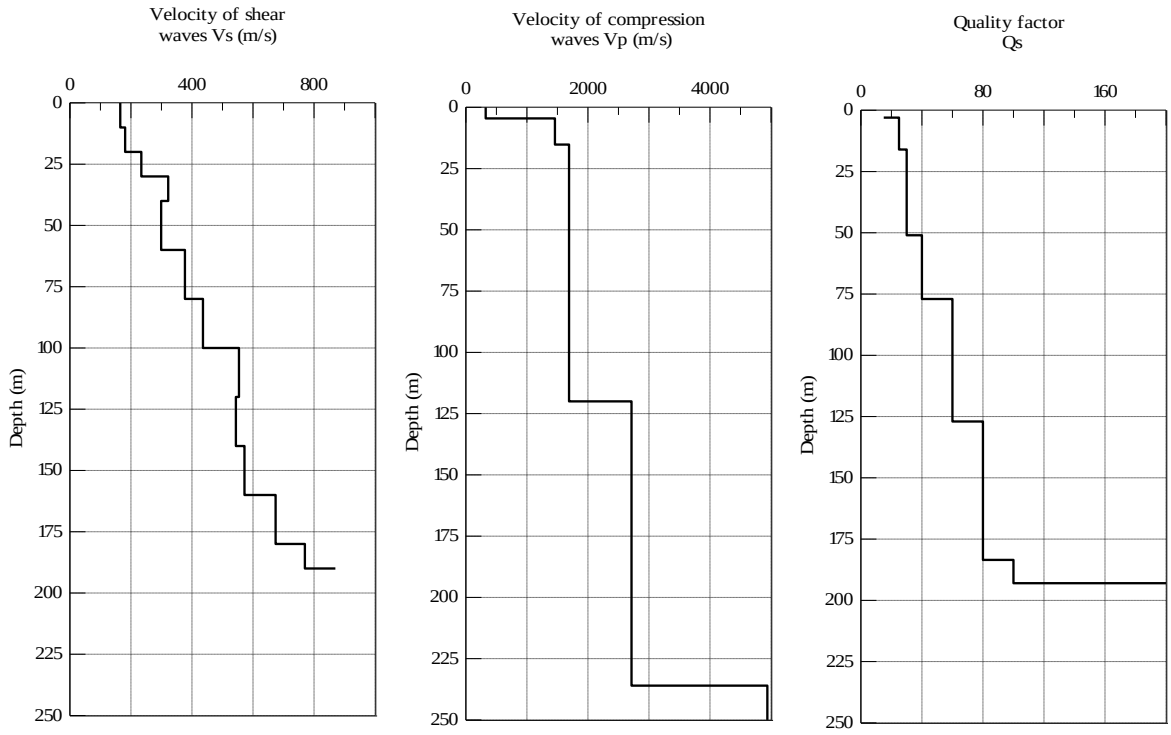

Figure 5: Shear and compression wave velocity and Quality factor values at station TST_196

6. SITE RESPONSE

The reader is referred to available site response information at the surface (station TST):
http://euroseisdb.civil.auth.gr/uploads/station/response/18/Site_response_TST.txt

7. REFERENCES

EUROSEISTEST Project Reports, 1993–1995. *(Available in PDF upon request)*

EUROSEISRISK Project Reports, 2002–2005. *(Available in PDF upon request)*

IGME, 1978. Geological map of Greece - Scale 1:50.000. Map Sheets of "Thermi" and "Zagliverion".

Raptakis D, Theodulidis N, Pitilakis K., 1998. Data Analysis of the EURO-SEISTEST Strong Motion Array in Volvi (Greece): Standard and Horizontal-to-Vertical Spectral Ratio Techniques. Earthquake Spectra, Vol. 14(1), pp. 203-223.

Raptakis D., F.J. Chávez-García, K. Makra and K. Pitilakis, 2000. Site effects at Euroseistest Part I. Determination of the valley structure and confrontation of observations with 1D analysis, Soil Dynamics and Earthquake Engineering, Vol. 19, pp. 1-22.