Station Description Sheet

GRB

1. GENERAL INFORMATION

Station Code: GRB
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 greenhouse close to Profitis village

2. GEOGRAPHICAL INFORMATION / GEOMORPHOLOGY

Figure 1: Location map of GRB station

Location: in the Mygdonian basin
Elevation (from sea level): 55 m
Station coordinates: 23.28917^{0}E / 40.67083^{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 Holocene river deposits/torrent beds
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 GRB include:

1. Sampling borehole (EUROSEISTEST Project Reports, 1993-1995).
2. Normal Penetration Test (EUROSEISTEST Project Reports, 1993-1995).
3. Cone Penetration Test (EUROSEISTEST Project Reports, 1993-1995).
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/ 9/Site_characterization_geotechnical_GRB.txt

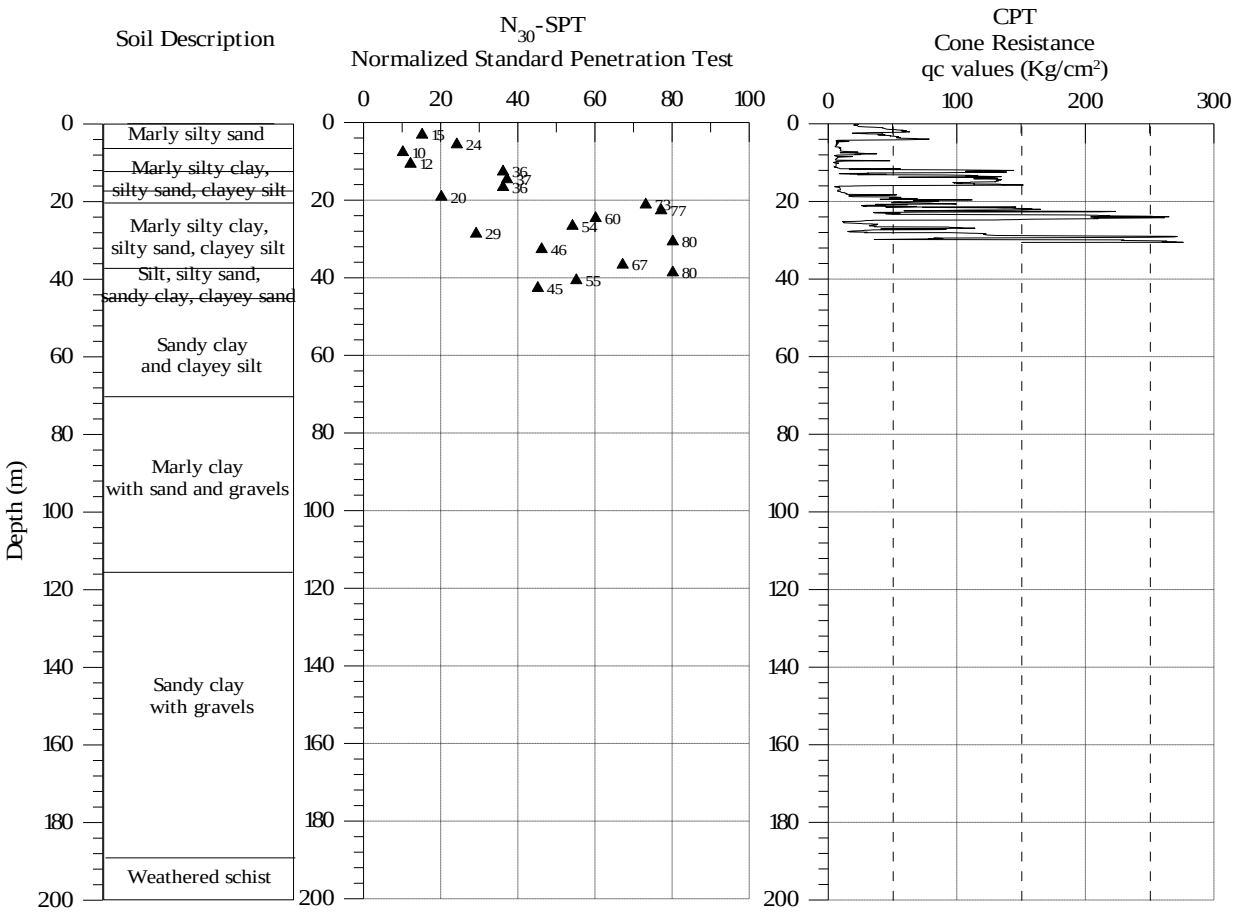

Figure 3: Geotechnical data at station GRB

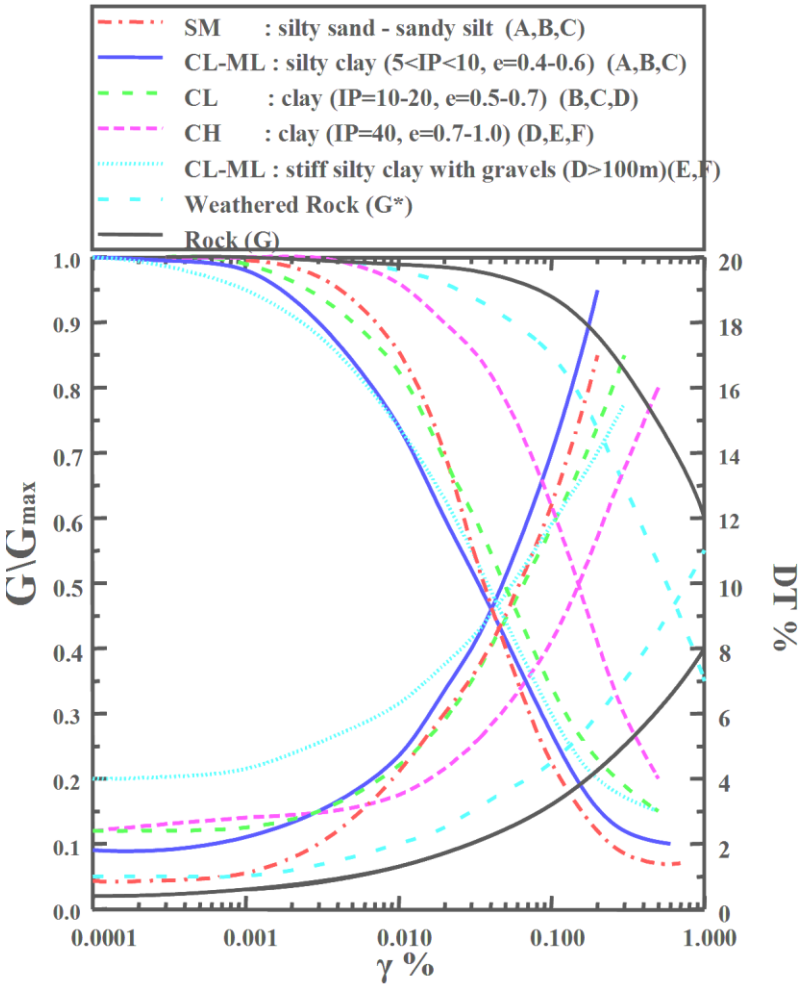

Figure 4: Mean G/Go-γ-D curves from resonant column and cyclic triaxial tests for all geotechnical formations occur at station GRB. The curves describe the shear modulus degradation with the shear strain and the respective internal damping increase.

5. GEOPHYSICAL SITE CHARACTERIZATION

Geophysical site characterization data for station GRB include:

1. Shear wave velocity values (Vs) / determined by Surface Wave Inversion method (Raptakis et al., 2000).
2. Compression wave velocity values (Vp) / determined by Surface Wave Inversion method (Raptakis et al., 2000).

Data are available in ascii format in:
http://euroseisdb.civil.auth.gr/uploads/station/geophysical/ 9/Site_characterization_geophysical_GRB.txt

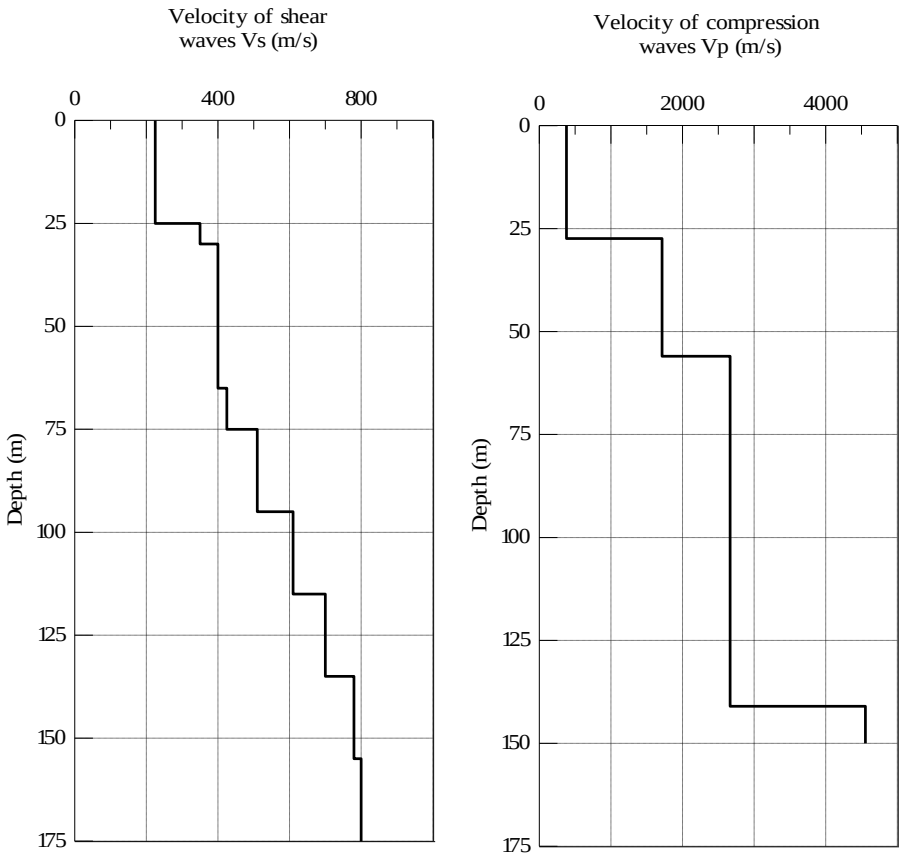

Figure 5: Shear and compression wave velocity values at station GRB

6. SITE RESPONSE

Site response data for station GRB include:

1. Standard Spectral Ratio technique (SSR) / applied on the whole part of earthquakes recorded in the permanent station GRB (Raptakis et al., 1998)

Data are available in ascii format in:
http://euroseisdb.civil.auth.gr/uploads/station/response/9/Site_response_GRB.txt

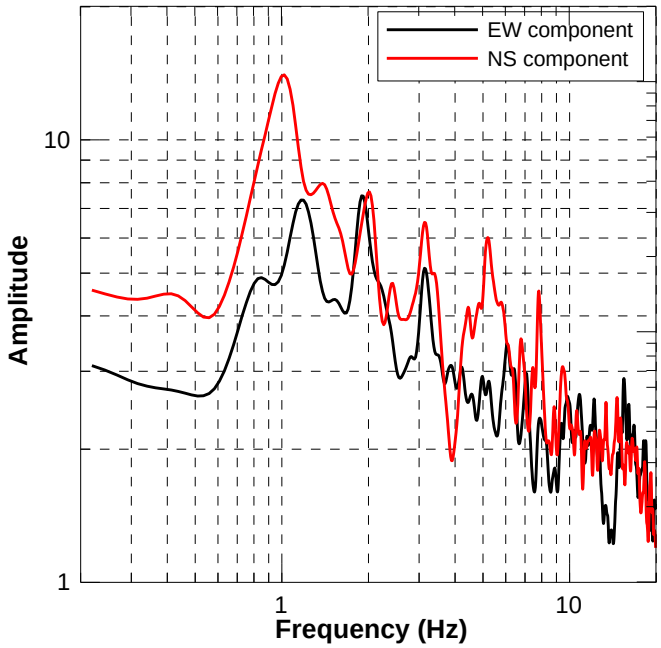

Figure 6: Standard Spectral Ratios (SSR) for the two horizontal components at station GRB. Ratios are based on the whole part of earthquakes recorded in the permanent station GRB

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.