

Geoguide 1 – Guide to Retaining Wall Design**Second Edition****AMENDMENT NO.: GG1/01/2020****BACKGROUND**

This amendment sheet incorporates updates of the latest version of General Specification for Civil Engineering Works and the reference to the latest edition of Geoguides and Geospecs.

The amendments are given below.

AMENDMENTS**SECTION 1****INTRODUCTION**

(a) Section 1.2.2 **In paragraph 1, line 5, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

SECTION 2**DESIGN CONSIDERATIONS**

(a) Section 2.3 **In paragraph 1, line 3, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

In paragraph 4, line 5, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.

In paragraph 5, line 3, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.

SECTION 3**CONSTRUCTION CONSIDERATIONS IN DESIGN**

(a) Section 3.2.2 **In paragraph 8, line 2, delete ‘GEO, 2002’ and substitute ‘GEO, 2017b’.**

(b) Section 3.7 **In paragraph 2, line 6, delete ‘GEO, 2002’ and substitute ‘GEO, 2017b’.**

SECTION 4**VERIFICATION OF SAFETY AND SERVICEABILITY**

(a) Section 4.6 **In paragraph 2, line 3, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

SECTION 5**GEOTECHNICAL PARAMETERS**

(a) Section 5.5.3 **In paragraph 3, line 4, delete ‘GEO, 2001’ and substitute ‘GEO, 2017c’.**

In paragraph 3, line 5, delete ‘GEO, 2002’ and substitute ‘GEO, 2017b’.

(b) Section 5.5.4 **In paragraph 7, line 2, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

(c) Section 5.5.7 **In paragraph 1, line 7, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

(d) Section 5.7.1 **In paragraph 2, line 12, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

(e) Section 5.8.1 **In paragraph 1, line 3, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

In paragraph 1, line 5, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.

(f) Section 5.10 **In paragraph 1, line 6, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

SECTION 8 **EFFECTS OF WATER**

(a) Section 8.2.2 **In paragraph 2, line 5, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

SECTION 9 **GRAVITY RETAINING WALLS**

(a) Section 9.1 **In paragraph 1, line 5, delete ‘GEO, 2002’ and substitute ‘GEO, 2017b’.**

(b) Section 9.5.3 **In paragraph 6, line 3, delete ‘GEO, 2002’ and substitute ‘GEO, 2017b’.**

SECTION 11 **CANTILEVER RETAINING WALLS**

(a) Section 11.2.3 **In paragraph 6, line 4, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

In paragraph 7, line 4, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.

In paragraph 18, line 2, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.

(b) Section 11.2.4 **In paragraph 2, line 8, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

(c) Section 11.3.1 **In paragraph 3, line 4, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

(d) Section 11.3.2 **In paragraph 9, line 1, delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

SECTION 12 **SUPERVISION AND MONITORING**

(a) Section 12.4.3 **In paragraph 2, line 6, delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

REFERENCES

(a) **Add the following new references:**

GEO (2017a). *Guide to Rock and Soil Descriptions (Geoguide 3) (Continuously Updated E-Version released on 29 August 2017)*. Geotechnical Engineering Office, Civil Engineering and Development Department, HKSAR Government, 171 p.

GEO (2017b). *Guide to Reinforced Fill Structure and Slope Design (Geoguide 6) (Continuously Updated E-Version released on 29 August 2017)*. Geotechnical Engineering Office, Civil Engineering and Development Department, HKSAR Government, 218 p.

GEO (2017c). *Model Specification for Soil Testing (Geospec 3) (Continuously Updated E-Version released on 29 August 2017)*. Geotechnical Engineering Office, Civil Engineering and Development Department, HKSAR Government, 324 p.

GEO (2017d). *Guide to Site Investigation (Geoguide 2) (Continuously Updated E-Version released on 18 December 2017)*. Geotechnical Engineering Office, Civil Engineering and Development Department, HKSAR Government, 349 p.

(b) Delete the following references:

GCO (1987). *Guide to Site Investigation (Geoguide 2)*. Geotechnical Control Office, Hong Kong, 362 p.

GCO (1988). *Guide to Rock and Soil Descriptions (Geoguide 3)*. Geotechnical Control Office, Hong Kong, 189 p.

GEO (2001). *Model Specification for Soil Testing (Geospec 3)*. Geotechnical Engineering Office, Hong Kong, 340 p.

GEO (2002). *Guide to Reinforced Fill Structure and Slope Design (Geoguide 6)*. Geotechnical Engineering Office, Hong Kong, 239 p.

TABLES

(a) Table 2 **In Note (1), delete ‘source’ and substitute ‘type’.**

In Note (5), delete ‘GEO, 2002’ and substitute ‘GEO, 2017b’.

(b) Table 3 **Replaced Table 3 by the new one as enclosed in Appendix I of this amendment sheet.**

(c) Table 4 **In Note (1), delete ‘GEO, 2002’ and substitute ‘GEO, 2017b’.**

(d) Table 8 **In Note (5), delete ‘GCO, 1987’ and substitute ‘GEO, 2017d’.**

(e) Table 11 **In Note (3), delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

(f) Table 12 **In Note (3), delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

(g) Table 15 **In Note (3), delete ‘GCO, 1988’ and substitute ‘GEO, 2017a’.**

APPENDIX A**DESIGN OF RETAINING WALL SPREAD FOUNDATIONS**

(a) Section A.1 **In paragraph 1, line 5, delete ‘GCO, 1987’ and substitute ‘GEO, 2017’.**

(b) Section A.5 **Add the following new reference:**

GEO (2017). *Guide to Site Investigation (Geoguide 2) (Continuously Updated E-Version released on 18 December 2017)*. Geotechnical Engineering Office, Civil Engineering and Development Department, HKSAR Government, 349 p.

Delete the following reference:

GCO (1987). *Guide to Site Investigation (Geoguide 2)*. Geotechnical Control Office, Hong Kong, 362 p.

APPENDIX I
NEW TABLE

Table 3 – Recommended Minimum Frequencies of Compaction Control Tests on Backfill Placed Behind Retaining Walls

| Size of Area of Backfill in Batch ⁽¹⁾ (m ²) | Number of Tests per Batch = (a) + (b) | |
|---|---------------------------------------|--|
| | (a) | (b) |
| 0 – 100 | 3 | - |
| > 100 - 500 | 1 | Two for each 100m ² or part thereof |
| > 500 | 6 | One for each 100m ² or part thereof |

Notes: (1) A batch is any quantify of fill material which is from the same type and has similar properties, and which is deposited in a single layer behind the retaining wall.

(2) Compaction control tests should be included in performance specifications to check whether the compacted backfill conforms to the specified level of compaction. The tests should include the determination of insitu densities and moisture contents from which values of relative degree of compaction can be calculated.

(3) Particular requirements for reinforced fill structures are given in Geoguide 6 (GEO, 2017b).