



DESIGN PROVISIONS FOR EARTHQUAKE RESISTANCE OF STRUCTURES

May 2004

This is a true translation of the Hebrew original. In any case of discrepancy between the original Hebrew text and the English translation, the Hebrew version shall prevail.

This Amendment updates
Israel Standard SI 413 of June 1995
Corrigendum 1 of December 1998

Introduction

In the fourth line, the words "Complying with the requirements of the Standard shall provide the appropriate structural resistance as detailed below" shall be deleted and replaced by the following:
The purpose of this Standard is to provide the appropriate structural resistance as detailed below for structures covered by this Standard:

Clause 103. Definitions

103.20 Story drift

A sub-definition shall be added as follows:

103.20.1 Relative story drift

The value of the story drift divided by the story height.

103.26 Flexible story

- Lines 1, 4, 5 and 6 shall be deleted.
- The following shall be added after line 3:

Assessment of the stiffness is done by comparison of the relative story drifts.

The following definitions shall be added at the end of the clause:

103.36 Active fault

A fault that is defined and mapped by the Israel Geological Institute on the current^{(1a)(1b)} "Active faults" map as a seismic active fault.

103.37 Potentially active fault

A fault that is defined and mapped by the Israel Geological Institute on the current^(1a) "Active faults" map as a potentially seismic active fault.

Footnotes (1a) and (1b) shall be added as follows:

(1a) A current map may be seen in The Standards Institution of Israel web site, sii.org.il, in the "תקינה" (meaning "Standardization") clause and in the library of The Standards Institution of Israel.

(1b) At the time of publication of this Amendment, the "Active faults" map was in preparation.

Clause 105. Classification of structures

Footnote (3):

The second sentence in the footnote shall be deleted and replaced by the following:

The horizontal ground acceleration shall be determined as detailed in clause 202.1.

Clause 202. Site characteristics

202.1 Expected ground acceleration

The text in the clause shall be deleted and replaced by the following:

The expected ground acceleration is a forecast of the peak of the horizontal ground acceleration due to an earthquake, $a_{h,max}$, for which there is a 10% probability that a stronger acceleration will occur

at least once within a period of 50 years. The factor, Z , (whose formula is $Z = \frac{a_{h,max}}{g}$) is

determined according to the coordinates of the test location, as detailed in The Standards Institution of Israel web site^(1a). Alternatively, for sites found in the settlements given in the list in Appendix C, the factor Z can be set as noted there.

After clause 202.1, clauses 202.1a, 202.2b and 202.2c shall be added as follows:

202.1a. Active fault vicinity

A. Structures covered by this Standard shall not be located on the trace of an active fault and 15 m from both of its sides, in areas where $Z \geq 0.25$, excluding low structures not intended for residence as defined in clause 103.6. In areas where $Z \geq 0.15$, structures having an importance factor from group A or B (Table 4) and structures with large populations (at least 100 persons) shall not be erected unless an opinion has been received from a geotechnical engineer or geologist.

In the region of up to 200 m from both sides of an active fault where $Z \geq 0.15$, the construction of structures having an importance factor from group A or B and structures with large populations shall be accompanied by an opinion from a geotechnical engineer.

Every opinion shall be appended to the documents deposited with the local authority as part of fulfilling the requirements for granting a building license.

- B. Appropriate geological investigations shall be conducted for urban design in the vicinity of active faults or potentially active ones.

202.1b. Potentially active fault vicinity

Where the potential exists for an active fault even though it is not marked as an active fault on the map of faults^(1a) of the Geological Institute or where it is marked as a potentially active fault, an opinion shall be obtained from the Geological Institute of the status of the fault. If it is recommended that the fault be considered as active, the limitations given in clause 202.1a shall apply to the construction in its vicinity.

202.1c. Landslide

Construction on a slope or in its vicinity shall be checked for the seismic stability of the slope by a geotechnical engineer and whether a landslide may endanger the stability of the structure. If it is determined that the slope is unstable, appropriate actions shall be taken to ensure its stability or to avoid locating the structure on that site. The abovementioned opinion of a geotechnical engineer shall be appended to the documents deposited with the local authority as part of fulfilling the requirements for granting a building license.

Clause 203. Structural characteristics

203.3 Design limitations

The text from the eighth line to the end of the clause shall be deleted and replaced by the following:

- A multistory structure shall not be built with a flexible story (see definition 103.26) where the stiffness ratio is less than 0.65 or with a weak story (see definition 103.27) where the ratio of strengths is less than 0.65.

Clause 204. Design loads

204.2 Seismic design factor

In the definition of the symbols for formula (6), in the definition of the symbol, Z, the text in parentheses shall be deleted and replaced by the following:

(see Clause 202.1).

Clause 306. Structure with a flexible or weak story

The text in the clause shall be deleted and replaced by the following:

In such a structure, in the story above and below the flexible or weak story, the bearing elements, intended to transfer seismic forces, shall be designed for a design force increased by a rate of 0.6K.

Clause 403. Moment resisting space frame of reinforced concrete

403.4 Structures with a flexible or weak story (including structures on an open column story)

- The following shall be added in the second line after the parentheses:
and the requirements detailed in clause 306.
- The text in lines 4 and 5 shall be deleted.

Clause 602. Foundations**602.1 The structural foundation**

The sentence beginning in the third line and ending with the word "infill" shall be deleted and replaced by the following:

When it is not possible to determine that the soil and water conditions at the site prevent full or partial soil liquefaction, an appropriate test shall be conducted that also includes the sliding of topsoil (as detailed in clause 202.1c), if they are on a slope.

If a danger of liquefaction is found, the effect on the stability of the structure and its base shall be checked by a geotechnical engineer. If stability is not demonstrated, locating the structure at this site shall be avoided. The opinion of the geotechnical engineer shall be appended to the documents deposited with the local authority as part of fulfilling the requirements for granting a building license.

Appendix A – Measurements using an accelerometer

The Appendix shall be deleted and replaced by the following:

Appendix A – Measurements with an accelerometer

(normative)

In an area where $Z \geq 0.25$, in every new building of 12 or more stories and in every building where the area of the stories (for licensing) above base level exceeds 10,000 m², accessible measurement locations for three accelerometers shall be prepared (hereinafter, prepared). Their preparation shall include a niche or cabinet that can be closed, and points for communication and electrical supply, that shall be made in accordance with the instructions of the Ministry of National Infrastructures. The supply, installation and operation of the accelerometers and the ancillary equipment shall be the responsibility of the Ministry of National Infrastructures.

Appendix B – The Israeli Seismic risk map

The Appendix, including the area map, from 1995, shall be deleted. In its place, the required information is brought in The Standards Institution of Israel web site^(1a) and in Appendix C.

Appendix C, giving the list of settlements in Israel and their ground accelerations, shall be added, as follows:

Appendix C – List of settlements and their ground accelerations
(normative)

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Abbirim	0.16	35.29	33.04
Abu Ghosh	0.11	35.11	31.81
Abu Sinan	0.16	35.16	32.96
Adamit	0.15	35.21	33.08
'Adanim	0.10	34.91	32.14
Adderet	0.10	34.99	31.66
Addirim	0.20	35.27	32.55
'Adi	0.18	35.17	32.79
Adora	0.11	35.02	31.55
Afeq	0.18	35.13	32.84
Afiq	0.25	35.70	32.78
Afiqim	0.28	35.57	32.68
'Afula	0.20	35.29	32.61
'Agur	0.10	34.91	31.70
Ahawa	0.10	34.77	31.74
Ahi'ezer	0.09	34.87	31.98
Ahihud	0.16	35.17	32.91
Ahisamakh	0.09	34.91	31.93
Ahituv	0.11	34.99	32.39
Ahuzzam	0.10	34.77	31.55
'Ajar	0.26	35.63	33.27
'Akko	0.17	35.08	32.93
'Ale Zahav	0.11	35.07	32.07
Alfe Menashe	0.11	35.01	32.17
Allon haGalil	0.18	35.21	32.76
Allon Shevut	0.11	35.12	31.65
Allone Abba	0.19	35.17	32.73
Allone haBashan	0.17	35.84	33.04
Allone Yizhaq	0.12	35.00	32.51
Allonim	0.19	35.14	32.72
'Alma	0.23	35.50	33.05
Almagor	0.29	35.60	32.91
Almog	0.24	35.46	31.79
'Almon	0.15	35.29	31.83
'Alumim	0.08	34.51	31.45
Alumma	0.10	34.75	31.65
Alummot	0.27	35.55	32.71
Amazya	0.11	34.91	31.53
'Amir	0.28	35.62	33.18
Amirim	0.20	35.45	32.94
'Ammi'ad	0.27	35.54	32.93
'Ammiadav	0.12	35.14	31.75
'Ammi'oz	0.07	34.41	31.25
'Ammiqam	0.13	35.02	32.56

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Amnun	0.28	35.57	32.90
'Amqa	0.15	35.16	32.98
'Amuqqa	0.25	35.52	33.00
Ani'am	0.22	35.74	32.96
'Ara	0.14	35.08	32.50
'Arad	0.15	35.21	31.26
'Aramsha	0.15	35.23	33.09
'Ar'ara	0.14	35.10	32.50
'Ar'ara baNegev	0.11	35.01	31.16
Arbel	0.23	35.49	32.81
Argaman	0.27	35.52	32.17
Ariel	0.13	35.17	32.10
'Arraba	0.17	35.34	32.85
Arsuf	0.10	34.82	32.21
'Arugot	0.10	34.78	31.73
Asfar	0.13	35.19	31.59
Ashalim	0.08	34.70	30.97
Ashdod	0.09	34.65	31.80
Ashdot Ya'aqov	0.28	35.58	32.66
Asherat	0.16	35.15	32.97
'Asherat	0.09	34.75	31.82
Ashqelon	0.09	34.56	31.67
'Ateret	0.13	35.18	32.00
'Atlit	0.14	34.94	32.69
Aviel	0.12	35.00	32.53
Aviezer	0.10	35.02	31.68
Avigedor	0.10	34.74	31.71
Avihayil	0.10	34.87	32.35
Avital	0.20	35.31	32.56
Avivim	0.21	35.47	33.09
Avne Etan	0.20	35.77	32.83
Avne Hefez	0.12	35.08	32.29
Avshalom	0.07	34.33	31.19
Avtalyon	0.17	35.35	32.84
'Ayanot	0.09	34.77	31.92
Ayyelet haShahar	0.28	35.58	33.02
'Azarya	0.09	34.91	31.89
Azor	0.09	34.80	32.03
'Azriel	0.10	34.97	32.26
'Azriqam	0.10	34.69	31.75
Ba'ana	0.16	35.27	32.93
Bahan	0.11	35.02	32.35
Balfouriyya	0.19	35.29	32.63
Baqa el Gharbiya	0.12	35.04	32.42

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Bar giyyora	0.11	35.07	31.73
Bar Yohay	0.20	35.44	33.00
Bar'am	0.19	35.43	33.06
Baraq	0.20	35.26	32.54
Bareqet	0.10	34.94	32.02
Barqay	0.12	35.03	32.48
Barta'a	0.13	35.09	32.48
Basmat Tabun	0.19	35.15	32.74
Bat 'Ayin	0.11	35.10	31.66
Bat Hadar	0.09	34.60	31.65
Bat Hefer	0.11	35.01	32.33
Bat Shelomo	0.13	35.00	32.60
Bat Yam	0.09	34.75	32.01
Bazera	0.10	34.88	32.21
Be'er Ora	0.23	34.98	29.71
Be'er Sheva	0.09	34.79	31.25
Be'er Toviyya	0.10	34.72	31.74
Be'er Ya'aqov	0.09	34.84	31.94
Be'eri	0.07	34.49	31.42
Be'erot Yizhaq	0.09	34.91	32.04
Be'erotayim	0.11	34.98	32.32
Bedolah	0.06	34.26	31.33
Ben Ammi	0.15	35.12	33.01
Ben Shemen (Moshav)	0.09	34.92	31.95
Ben Shemen (School)	0.10	34.94	31.96
Ben Shemen (Shikhun)	0.10	34.93	31.96
Ben Zakkay	0.09	34.73	31.86
Benaya	0.09	34.75	31.84
Bene Atarot	0.09	34.91	32.02
Bene Ayish	0.09	34.76	31.79
Bene Azmon	0.06	34.25	31.32
Bene Beraq	0.09	34.83	32.08
Bene Darom	0.09	34.69	31.82
Bene Deror	0.10	34.90	32.26
Bene Re'em	0.09	34.79	31.77
Bene Yehuda	0.27	35.67	32.79
Bene Ziyon	0.10	34.87	32.22
Beqa'ot	0.24	35.45	32.24
Beqoa	0.09	34.92	31.83
Berakha	0.16	35.26	32.19
Berekhya	0.10	34.62	31.67
Beror Hayil	0.09	34.65	31.56
Berosh	0.08	34.63	31.37
Bet Alfa	0.22	35.45	32.53
Bet Arif	0.10	34.93	32.00

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Bet Arye	0.11	35.05	32.04
Bet Berl	0.10	34.93	32.20
Bet Dagan	0.09	34.83	32.00
Bet E'azaril	0.09	34.81	31.84
Bet El	0.14	35.22	31.94
Bet Ezra	0.10	34.66	31.74
Bet Gamli'el	0.09	34.76	31.86
Bet Guvrim	0.10	34.89	31.61
Bet ha'Emeq	0.16	35.14	32.97
Bet ha'Arava	0.26	35.50	31.81
Bet haGaddi	0.08	34.61	31.42
Bet haLewi	0.10	34.93	32.35
Bet Hanan	0.09	34.77	31.93
Bet Hananya	0.12	34.93	32.53
Bet haShitta	0.22	35.44	32.55
Bet Hashmonay	0.09	34.92	31.89
Bet Herut	0.10	34.87	32.38
Bet Hillel	0.27	35.60	33.21
Bet Hilqiyya	0.09	34.81	31.79
Bet Horon	0.12	35.13	31.87
Bet Jamal	0.10	34.98	31.72
Bet Jan	0.18	35.38	32.97
Bet Lehem haGelilit	0.19	35.19	32.73
Bet Me'ir	0.10	35.03	31.79
Bet Nehemya	0.10	34.95	31.98
Bet Neqofa	0.11	35.13	31.80
Bet Nir	0.10	34.87	31.65
Bet Oren	0.17	35.01	32.73
Bet Oved	0.09	34.77	31.92
Bet Qama	0.10	34.76	31.45
Bet Qeshet	0.19	35.40	32.72
Bet Rabban	0.09	34.73	31.82
Bet Rimmon	0.17	35.33	32.78
Bet She'an	0.25	35.50	32.50
Bet She'arim	0.19	35.18	32.70
Bet Shemesh	0.10	34.99	31.75
Bet Shiqma	0.10	34.62	31.64
Bet uzi'el	0.09	34.90	31.87
Bet Yannay	0.10	34.86	32.38
Bet Yehoshua	0.10	34.86	32.26
Bet Yizhaq-Sha'ar Hefer	0.10	34.89	32.34
Bet Yosef	0.27	35.55	32.56
Bet Zayd	0.19	35.12	32.70
Bet Zayit	0.12	35.16	31.78
Bet Zera	0.28	35.58	32.69
Bet Zevi	0.16	34.97	32.72
Betar Illit	0.11	35.12	31.70

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Bezetz	0.15	35.13	33.07
Biddya	0.18	35.17	32.56
Binyamina	0.12	34.95	32.52
Bir el Maksur	0.18	35.22	32.78
Biriyya	0.23	35.50	32.98
Bitan Aharon	0.10	34.87	32.36
Bitha	0.08	34.63	31.33
Bizzaron	0.09	34.73	31.80
Brukhim	0.09	34.78	31.77
Bu'eina-Nujeidat	0.18	35.36	32.81
Buq'ata	0.20	35.78	33.20
Buregeta	0.11	34.96	32.33
Bustan haGalil	0.16	35.08	32.95
Dabburiyya	0.18	35.37	32.69
Dafna	0.26	35.64	33.23
Dahi	0.19	35.34	32.62
Daliat el Karmil	0.18	35.05	32.70
Daliyya	0.16	35.08	32.59
Dalton	0.22	35.49	33.02
Dan	0.26	35.65	33.24
Daverat	0.19	35.35	32.65
Deganya "A"	0.28	35.57	32.71
Deganya "B"	0.28	35.58	32.70
Deir el Asad	0.16	35.27	32.93
Deir Hanna	0.17	35.36	32.86
Deir Rafat	0.10	34.95	31.78
Deqel	0.07	34.35	31.20
Devira	0.10	34.82	31.41
Devora	0.20	35.26	32.55
Dimona	0.11	35.03	31.07
Dishon	0.24	35.52	33.08
Dolev	0.12	35.14	31.93
Dor	0.12	34.92	32.61
Dorot	0.09	34.64	31.50
Dovev	0.18	35.41	33.05
Dugit	0.08	34.49	31.57
Efrata	0.12	35.15	31.65
'Eilabun	0.19	35.40	32.84
'Ein el Asad	0.18	35.40	32.94
'Ein es Sahla	0.14	35.12	32.49
'Ein Naquba	0.11	35.12	31.79
'Ein Qinya	0.24	35.73	33.24
'Ein Rafa	0.11	35.12	31.79
El Arian	0.15	35.12	32.50
El Rom	0.19	35.78	33.17
El'ad	0.10	34.95	32.05
El'azar	0.12	35.14	31.66
Elakhin	0.11	34.92	32.41

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Elat	0.23	34.95	29.56
Elat (Marina)	0.23	34.96	29.55
Ele Sinay	0.08	34.50	31.58
'Eli	0.16	35.27	32.07
Eli Al	0.24	35.72	32.80
Elifaz	0.22	35.01	29.80
Elifelet	0.27	35.55	32.95
Elishama	0.10	34.93	32.15
Elon	0.15	35.22	33.06
Elon More	0.19	35.33	32.23
Elot	0.23	34.96	29.58
Elqana	0.11	35.04	32.11
Elqosh	0.16	35.33	33.03
Elyaqim	0.16	35.07	32.63
Elyashiv	0.11	34.91	32.38
Emunim	0.10	34.67	31.74
'En haZeva	0.20	35.25	30.80
'En Ayyala	0.13	34.94	32.62
'En Dor	0.20	35.42	32.66
'En Gedi	0.22	35.38	31.45
'En Gev	0.28	35.64	32.78
'En haBesor	0.07	34.44	31.28
'En ha'Emeq	0.17	35.08	32.63
'En haHoresh	0.11	34.94	32.39
'En haMifraz	0.17	35.09	32.90
'En haNaziv	0.25	35.50	32.47
'En Harod	0.20	35.39	32.56
'En haSheloshah	0.07	34.40	31.35
'En haShofet	0.17	35.10	32.60
'En Hod	0.15	34.98	32.70
'En 'Iron	0.12	35.01	32.49
'En Karmel	0.14	34.95	32.68
'En Ma'ahal	0.18	35.35	32.72
'En Sarid	0.10	34.93	32.27
'En Shemer	0.12	35.01	32.46
'En Tamar	0.24	35.37	30.94
'En Wered	0.10	34.93	32.26
'En Ya'aqov	0.16	35.23	33.01
'En Yahav	0.21	35.24	30.66
'En Zetim	0.22	35.48	33.00
'En Ziwan	0.18	35.80	33.10
'En Zurim	0.10	34.72	31.69
'Enat	0.10	34.94	32.08
'Enav	0.12	35.13	32.29
Erez	0.09	34.57	31.56
Eshbal	0.17	35.30	32.88
Eshbol	0.09	34.67	31.45
Eshhar	0.17	35.30	32.88

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Eshkolot	0.10	34.90	31.39
Eshta'ol	0.10	35.01	31.78
Etan	0.10	34.75	31.57
Etanim	0.11	35.10	31.78
Even Menahem	0.16	35.29	33.07
Even Sappir	0.11	35.13	31.76
Even Shemuel	0.10	34.76	31.58
Even Yehuda	0.10	34.88	32.28
Even Yizhaq	0.15	35.08	32.56
'Evron	0.16	35.10	32.99
Eyal	0.10	34.98	32.21
'Ez Efraim	0.11	35.05	32.12
'Ezer	0.10	34.67	31.74
'Ezuz	0.07	34.47	30.79
Fassuta	0.16	35.31	33.05
Fureidis	0.13	34.95	32.60
Ga'ash	0.10	34.82	32.23
Ga'ton	0.15	35.21	33.01
Gadid	0.06	34.28	31.34
Gadish	0.19	35.24	32.56
Gadot	0.28	35.62	33.02
Gal'on	0.10	34.85	31.63
Gan haDarom	0.09	34.70	31.80
Gan Hayyim	0.10	34.91	32.20
Gan Ner	0.20	35.34	32.53
Gan Or	0.06	34.26	31.34
Gan Shelomo	0.09	34.80	31.88
Gan Shemuel	0.11	34.95	32.45
Gan Shomeron	0.12	35.00	32.46
Gan Soreq	0.09	34.75	31.94
Gan Yavne	0.09	34.70	31.78
Gan Yoshiyya	0.11	35.00	32.35
Ganne Hadar	0.09	34.85	31.87
Ganne Tal	0.07	34.30	31.37
Ganne Tiqwa	0.09	34.87	32.06
Ganne Yehuda	0.09	34.88	32.04
Ganne Yohanan	0.09	34.84	31.86
Ganne'am	0.10	34.90	32.15
Gannim	0.20	35.34	32.45
Gannot	0.09	34.83	32.02
Gannot Hadar	0.10	34.90	32.32
Gat Rimmon	0.09	34.88	32.07
Gazit	0.21	35.45	32.64
Ge'a	0.09	34.60	31.63
Ge'alya	0.09	34.76	31.89
Gedera	0.09	34.79	31.82
Gefen	0.10	34.88	31.74
Gelil Yam	0.10	34.83	32.16

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Gerofit	0.22	35.06	29.94
Gesher	0.27	35.55	32.62
Gesher haZiv	0.15	35.11	33.04
Geshur	0.25	35.71	32.82
Geulle Teman	0.11	34.90	32.39
Geullim	0.10	34.94	32.30
Geva	0.20	35.37	32.57
Geva Binyamin	0.15	35.27	31.85
Geva Karmel	0.14	34.95	32.66
Gevar'am	0.09	34.61	31.59
Gevat	0.19	35.21	32.68
Gevim	0.09	34.60	31.51
Gevulot	0.07	34.47	31.21
Gezer	0.09	34.92	31.88
Gibbeton	0.09	34.80	31.89
Gid'ona	0.20	35.36	32.55
Gilagal	0.24	35.44	32.00
Gilat	0.08	34.65	31.33
Gilon	0.16	35.23	32.90
Gimzo	0.10	34.94	31.93
Ginnaton	0.09	34.91	31.96
Ginnegar	0.19	35.26	32.66
Ginnosar	0.25	35.52	32.85
Gitta	0.16	35.25	32.97
Gittit	0.22	35.39	32.10
Giv'at Ada	0.12	35.01	32.52
Giv'at Avni	0.20	35.44	32.78
Giv'at Brenner	0.09	34.80	31.87
Giv'at Ela	0.18	35.24	32.72
Giv'at haShlosha	0.10	34.92	32.10
Giv'at Haviva	0.12	35.03	32.46
Giv'at Hayyim (Ihud)	0.11	34.94	32.40
Giv'at Hayyim (Meuhad)	0.11	34.93	32.39
Giv'at Hen	0.10	34.87	32.17
Giv'at Koah	0.10	34.94	32.03
Giv'at Nili	0.13	35.04	32.55
Giv'at Oz	0.19	35.20	32.56
Giv'at Shapira	0.10	34.88	32.36
Giv'at Shemesh	0.10	34.95	31.77
Giv'at Shemuel	0.09	34.85	32.08
Giv'at Ye'arim	0.11	35.09	31.79
Giv'at Yesha'yahu	0.10	34.94	31.67
Giv'at Yo'av	0.27	35.68	32.80
Giv'at Zeev	0.12	35.17	31.86
Giv'atayim	0.09	34.81	32.07
Giv'ati	0.10	34.68	31.73

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Givolim	0.08	34.59	31.39
Givon haHadasha	0.12	35.16	31.85
Gizo	0.10	34.94	31.80
Gonen	0.27	35.65	33.12
Goren	0.15	35.23	33.06
Gornot haGalil	0.15	35.25	33.06
Ha'Ogen	0.10	34.92	32.36
HaBonim	0.13	34.93	32.64
Had Nes	0.29	35.64	32.93
Hadar Am	0.10	34.89	32.35
Hadera	0.11	34.92	32.44
Hadid	0.10	34.93	31.97
Hafez Hayyim	0.09	34.80	31.79
Hafzi Bah	0.21	35.42	32.52
Haggay	0.12	35.08	31.50
Hagor	0.10	34.95	32.14
HaGosherim	0.27	35.62	33.22
HaHoterim	0.16	34.96	32.75
Haifa (Bat Galim)	0.18	34.98	32.83
Haifa (Karmel)	0.18	35.02	32.76
Haifa (port)	0.19	35.03	32.80
Hallamish	0.12	35.13	32.01
Haluz	0.16	35.31	32.95
HaMa'pil	0.11	34.98	32.38
Hamadya	0.26	35.52	32.52
Hamam	0.23	35.49	32.83
Hamra	0.24	35.44	32.20
Hanita	0.15	35.17	33.09
Hannaton	0.17	35.24	32.78
Hanni'el	0.10	34.95	32.33
HaOn	0.28	35.62	32.73
Har Adar	0.11	35.13	31.82
Har 'Amasa	0.12	35.10	31.34
Har Gillo	0.12	35.17	31.72
Har'el	0.10	34.95	31.81
Hararit	0.18	35.37	32.84
Harashim	0.17	35.33	32.96
Harduf	0.19	35.17	32.76
Haruzim	0.10	34.86	32.23
Hashmona'im	0.10	35.02	31.93
HaSolelim	0.18	35.24	32.75
Haspin	0.19	35.79	32.84
Havazzelet haSharon	0.10	34.86	32.36
HaYogev	0.19	35.21	32.61
Hazav	0.09	34.77	31.78
Hazerim	0.08	34.72	31.24
Hazeva	0.22	35.28	30.77

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Hazon	0.18	35.39	32.91
Hazor Ashdod	0.09	34.72	31.77
Hazor haGelilit	0.26	35.54	32.98
HaZore'im	0.24	35.50	32.75
HaZorea	0.18	35.12	32.64
Hazrot Yasaf	0.16	35.08	32.96
Helez	0.10	34.66	31.58
Hemed	0.09	34.84	32.02
Herev leEt	0.11	34.92	32.40
Hermesh	0.13	35.12	32.42
Herut	0.10	34.91	32.24
Herzliyya	0.10	34.84	32.16
Hever	0.20	35.26	32.55
Hibbat Ziyyon	0.11	34.91	32.40
Hilla	0.15	35.24	33.04
Hinnanit	0.16	35.17	32.48
Hod haSharon	0.10	34.89	32.16
Hodiyya	0.10	34.64	31.68
Hofit	0.11	34.87	32.39
Hogla	0.11	34.92	32.39
Holit	0.07	34.33	31.23
Holon	0.09	34.79	32.02
Homesh	0.14	35.19	32.31
Horshim	0.10	34.97	32.14
Hosen	0.16	35.30	33.00
Hosh'ya	0.17	35.29	32.76
Hulata	0.28	35.61	33.05
Hulda	0.09	34.88	31.83
Huqoq	0.24	35.50	32.88
Hura	0.10	34.93	31.30
Hurfeish	0.17	35.35	33.02
Husseniya	0.17	35.32	32.90
Ibdun	0.15	35.18	33.05
I'bilin	0.17	35.19	32.82
Ibtin	0.19	35.11	32.76
'Iddan	0.23	35.30	30.81
Iksal	0.18	35.32	32.68
'Illut	0.18	35.26	32.72
Ilsniyya	0.19	35.41	32.75
'Immanu'el	0.12	35.14	32.16
'Ir Ovot	0.20	35.24	30.81
'Isfiya	0.18	35.07	32.72
Itamar	0.18	35.31	32.17
Jaljulya	0.10	34.95	32.16
Jatt	0.12	35.04	32.40
Jish (Gush Halav)	0.20	35.45	33.02
Jisr ez Zarqa	0.12	34.91	32.54
Judeida-Makr	0.16	35.15	32.93

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Julis	0.16	35.18	32.94
Ka'abiyye-Tabbash	0.19	35.18	32.76
Kabri	0.15	35.15	33.02
Kabul (Kavul)	0.16	35.21	32.87
Kaddim	0.20	35.32	32.45
Kadoori	0.19	35.41	32.70
Kafr Bara	0.10	34.97	32.13
Kafr Kama	0.20	35.44	32.72
Kafr Kanna	0.18	35.34	32.74
Kafr Manda	0.17	35.26	32.81
Kafr Misr	0.20	35.42	32.64
Kafr Qari'	0.13	35.05	32.51
Kafr Qasim (Kefar Qesem)	0.10	34.97	32.11
Kafr Yasif	0.16	35.16	32.96
Kahal	0.24	35.51	32.89
Kallanit	0.20	35.45	32.88
Kammon	0.17	35.36	32.91
Kanaf	0.26	35.70	32.87
Kannot	0.09	34.75	31.80
Karkom	0.29	35.61	32.93
Karme Yosef	0.09	34.92	31.85
Karme Zur	0.11	35.10	31.61
Karmel	0.14	35.18	31.43
Karmi'el	0.16	35.29	32.92
Karmiyya	0.09	34.54	31.60
Kaukab Abu el Hija	0.17	35.25	32.83
Kefar Adummim	0.17	35.34	31.83
Kefar Ahim	0.10	34.76	31.75
Kefar Aviv	0.09	34.72	31.83
Kefar 'Avoda	0.10	34.94	32.26
Kefar Azar	0.09	34.84	32.06
Kefar 'Azza	0.08	34.53	31.48
Kefar Barukh	0.19	35.19	32.65
Kefar Bialik	0.19	35.09	32.82
Kefar Bilu	0.09	34.82	31.87
Kefar Bin Nun	0.10	34.95	31.86
Kefar Blum	0.28	35.61	33.17
Kefar Darom	0.07	34.35	31.40
Kefar 'Ezyon	0.11	35.12	31.65
Kefar Gid'on	0.19	35.29	32.64
Kefar Gil'adi	0.25	35.57	33.24
Kefar Glickson	0.12	35.00	32.51
Kefar Habad	0.09	34.85	31.99
Kefar haHoresh	0.18	35.27	32.70
Kefar haMaccabi	0.19	35.11	32.79
Kefar haNagid	0.09	34.75	31.89
Kefar Hananya	0.19	35.42	32.92

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Kefar haNassi	0.29	35.60	32.97
Kefar haNoa'ar haDati	0.19	35.10	32.74
Kefar haRo'e	0.11	34.91	32.39
Kefar Haruv	0.28	35.66	32.76
Kefar Hasidim	0.19	35.09	32.75
Kefar Hayyim	0.10	34.90	32.35
Kefar Hess	0.10	34.93	32.25
Kefar Hittim	0.24	35.50	32.80
Kefar Kisch	0.21	35.45	32.67
Kefar Malal	0.10	34.89	32.17
Kefar Masaryk	0.17	35.10	32.89
Kefar Maymon	0.08	34.54	31.43
Kefar Menahem	0.10	34.83	31.73
Kefar Monash	0.10	34.92	32.35
Kefar Mordekhay	0.09	34.76	31.83
Kefar Nahum	0.28	35.57	32.88
Kefar Neter	0.10	34.87	32.27
Kefar Pines	0.12	35.00	32.48
Kefar Rosh haNiqra	0.15	35.11	33.09
Kefar Ruppim	0.27	35.56	32.46
Kefar Rut	0.10	35.04	31.91
Kefar Sava	0.10	34.91	32.18
Kefar Shammay	0.21	35.46	32.96
Kefar Shemaryahu	0.10	34.82	32.19
Kefar Shemu'el	0.09	34.93	31.89
Kefar Silver	0.10	34.61	31.67
Kefar Sirkin	0.10	34.92	32.08
Kefar Szold	0.27	35.66	33.20
Kefar Tappuah	0.15	35.25	32.12
Kefar Tavor	0.20	35.42	32.69
Kefar Truman	0.10	34.93	31.98
Kefar Uriyya	0.10	34.94	31.79
Kefar Vitkin	0.10	34.87	32.38
Kefar Warburg	0.10	34.73	31.72
Kefar Weradim	0.16	35.27	32.99
Kefar Ya'betz	0.10	34.96	32.27
Kefar Yehezqel	0.20	35.36	32.57
Kefar Yehoshua	0.19	35.15	32.68
Kefar Yona	0.10	34.93	32.32
Kefar Zetim	0.21	35.46	32.81
KefarDaniyyel	0.10	34.93	31.93
Kelil	0.16	35.20	32.98
Kemehin	0.07	34.43	30.91
Keramim	0.10	34.92	31.33
Kerem ben Zimra	0.21	35.47	33.04
Kerem Maharal	0.14	34.99	32.64
Kerem Shalom	0.06	34.28	31.23

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Kerem Yavne - Yeshiva	0.09	34.72	31.82
Kesalon	0.10	35.05	31.77
Kibbutz Gat	0.10	34.79	31.63
Kih. Sumaiya	0.16	35.31	32.97
Kinneret (Moshava)	0.28	35.56	32.74
Kinneret (Qevuza)	0.27	35.56	32.72
Kishor	0.16	35.25	32.95
Kissufim	0.07	34.40	31.37
Kokhav haShahar	0.20	35.35	31.96
Kokhav Mikha'el	0.10	34.67	31.63
Kokhav Ya'ir	0.11	35.00	32.23
Kokhav Ya'aqov	0.14	35.24	31.88
Korazim	0.27	35.55	32.91
Kuseifa	0.12	35.10	31.25
Lahav	0.10	34.87	31.38
Lahavot haBashan	0.28	35.64	33.14
Lahavot Haviva	0.11	35.01	32.39
Lakhish	0.10	34.84	31.56
Lappid	0.10	35.03	31.92
Lappidot	0.16	35.26	32.96
Laqiya	0.10	34.87	31.32
Lavi	0.20	35.44	32.79
Lavon	0.16	35.29	32.94
Lehavim	0.10	34.82	31.37
Li On	0.10	34.93	31.68
Liman	0.15	35.11	33.06
Livnim	0.24	35.50	32.86
Lod	0.09	34.89	31.95
Lohame haGeta'ot	0.16	35.10	32.96
Lotan	0.22	35.09	29.99
Lotem	0.17	35.36	32.88
Luzit	0.10	34.89	31.68
Ma'a lot Tarshiha	0.16	35.28	33.01
Ma'agan	0.28	35.60	32.71
Ma'agan Mikha'el	0.12	34.92	32.56
Ma'ale Adummim	0.15	35.30	31.78
Ma'ale 'Amos	0.13	35.23	31.60
Ma'ale Efrayim	0.22	35.40	32.07
Ma'ale Gamla	0.27	35.69	32.89
Ma'ale Gilbo'a	0.22	35.42	32.48
Ma'ale haHamisha	0.11	35.11	31.82
Ma'ale Levona	0.15	35.24	32.05
Ma'ale Mikhmas	0.16	35.31	31.88
Ma'ale Shomeron	0.11	35.07	32.17
Ma'anit	0.12	35.03	32.46
Ma'as	0.09	34.89	32.06
Ma'barot	0.10	34.90	32.36

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Mabbu'im	0.09	34.66	31.45
Madjal Shams	0.24	35.77	33.27
Ma'galim	0.08	34.59	31.40
Magen	0.07	34.43	31.30
Magen Sha'ul	0.20	35.30	32.52
Maggal	0.11	35.03	32.39
Maghar	0.18	35.40	32.89
Magshimim	0.09	34.90	32.04
Mahanayim	0.28	35.57	32.99
Mahesya	0.10	35.00	31.75
Majd el Kurum (Bet Kerem)	0.16	35.24	32.92
Makkabbim – Re'ut	0.10	35.02	31.89
Malkiyya	0.24	35.51	33.10
Manof	0.17	35.24	32.85
Manot	0.15	35.19	33.04
Manshiya Zebda	0.19	35.19	32.71
Ma'on	0.13	35.16	31.41
Ma'ona	0.16	35.26	33.02
Ma'or	0.11	35.00	32.43
Ma'oz Hayyim	0.27	35.55	32.49
Margaliyyot	0.24	35.54	33.21
Mas'ada	0.22	35.76	33.23
Mash'abbe Sade	0.08	34.78	31.00
Mash'en	0.10	34.62	31.66
Mash-had	0.18	35.32	32.74
Maslul	0.08	34.59	31.32
Massad	0.19	35.42	32.84
Massada	0.28	35.59	32.68
Massu'a	0.26	35.49	32.11
Massu'ot Yizhaq	0.10	34.69	31.70
Matan	0.10	34.97	32.16
Matta'	0.11	35.06	31.72
Mattat	0.17	35.36	33.04
Mattityahu	0.10	35.04	31.93
Mavqi'im	0.09	34.57	31.62
Ma'yan Barukh	0.26	35.61	33.24
Ma'yan Zevi	0.12	34.94	32.57
Mazkeret Batya	0.09	34.84	31.85
Mazliah	0.09	34.87	31.91
Mazor	0.10	34.93	32.05
Mazra'a	0.16	35.10	32.98
Mazzuva	0.15	35.15	33.06
Me 'Ammi	0.16	35.15	32.50
Me'awiya	0.15	35.10	32.53
Mefallesim	0.08	34.56	31.50
Megadim	0.15	34.95	32.73
Megiddo	0.19	35.18	32.58

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Mehola	0.26	35.51	32.37
Me'ir Shefeya	0.13	34.97	32.59
Meisir	0.12	35.04	32.44
Mekhora	0.23	35.42	32.17
Mele'a	0.19	35.24	32.56
Mele'a	0.16	35.26	33.03
Melilot	0.08	34.60	31.39
Menahemya	0.28	35.55	32.66
Menara	0.25	35.54	33.20
Menuha	0.10	34.78	31.66
Merav	0.22	35.42	32.45
Merhavya (Moshav)	0.20	35.32	32.61
Merhavya (Qibbuz)	0.20	35.30	32.59
Merkaz Shapira	0.10	34.71	31.70
Merom Golan	0.19	35.78	33.13
Meron	0.20	35.44	32.98
Meshar	0.09	34.75	31.82
Mesillat Ziyon	0.10	35.01	31.80
Mesillot	0.23	35.47	32.50
Metar	0.11	34.94	31.33
Metav	0.20	35.30	32.55
Metulla	0.25	35.58	33.28
Mevasseret Ziyon	0.12	35.16	31.80
Mevo Betar	0.11	35.11	31.72
Mevo Dotan	0.15	35.17	32.42
Mevo Hamma	0.28	35.65	32.74
Mevo Horon	0.10	35.04	31.85
Mevo modi'im	0.10	34.99	31.93
Mevo'ot haHermon	0.27	35.57	33.12
Mezadot Yehuda	0.12	35.10	31.37
Mezar	0.12	35.05	32.44
Mezer	0.23	35.73	32.77
Midrakh 'Oz	0.18	35.16	32.59
Midresher Ruppim	0.10	34.91	32.34
Migdal	0.24	35.50	32.84
Migdal ha'Emeq	0.19	35.24	32.67
Migdal 'Oz	0.12	35.14	31.64
Migdal Tefen	0.16	35.28	32.98
Migdalim	0.20	35.34	32.09
Mikhamanim	0.17	35.33	32.91
Mikhmoret	0.11	34.87	32.41
Misgav	0.16	35.26	32.86
Misgav 'Am	0.24	35.55	33.25
Misgav Dov	0.09	34.74	31.82
Mishmar Ayyalon	0.10	34.94	31.87
Mishmar Dawid	0.09	34.90	31.82
Mishmar ha'Emeq	0.18	35.14	32.61
Mishmar haNegev	0.09	34.72	31.37

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Mishmar haSharon	0.10	34.90	32.36
Mishmar haShiv'a	0.09	34.82	32.01
Mishmar haYarden	0.28	35.60	33.00
Mishmarot	0.12	34.98	32.49
Mishmeret	0.10	34.92	32.23
Mivtahim	0.07	34.41	31.24
Mizpa	0.25	35.51	32.79
Mizpe Aviv	0.17	35.20	32.84
Mizpe Netofa	0.18	35.38	32.80
Mizpe Ramon	0.11	34.80	30.61
Mizpe Shalem	0.22	35.40	31.57
Mizpe Yeriho	0.19	35.39	31.81
Mizra'	0.19	35.29	32.65
Modi'in	0.10	35.01	31.90
Moledet	0.21	35.44	32.59
Morag	0.06	34.29	31.31
Moran	0.18	35.39	32.92
Moreshet	0.17	35.23	32.83
Moza 'Illit	0.12	35.16	31.79
Muqeibila	0.20	35.29	32.52
Musheirifa	0.17	35.16	32.55
Musmus	0.17	35.16	32.54
Na'ale	0.11	35.07	31.96
Na'an	0.09	34.86	31.88
Nahal Hemedat	0.27	35.53	32.25
Nahal 'Irit	0.20	35.34	32.34
Nahal 'Oz	0.08	34.50	31.47
Nahala	0.10	34.79	31.66
Nahalal	0.19	35.20	32.69
Nahali'el	0.12	35.14	31.97
Naham	0.10	35.00	31.77
Nahariyya	0.16	35.09	33.01
Nahf	0.17	35.32	32.94
Nahsholim	0.12	34.92	32.61
Nahshon	0.10	34.96	31.83
Nahshonim	0.10	34.95	32.06
Nataf	0.11	35.07	31.83
Natur	0.22	35.75	32.85
Na'ura	0.19	35.39	32.62
Nazerat	0.18	35.30	32.70
Nazerat 'Illit	0.18	35.32	32.71
Negba	0.10	34.68	31.66
Nehalim	0.10	34.91	32.06
Nehora	0.10	34.70	31.62
Nehusha	0.10	34.95	31.63
Nein (Na'im)	0.19	35.35	32.63
Ne'ot Golan	0.26	35.69	32.79
Ne'ot haKikkar	0.24	35.38	30.93

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Ne'ot Mordekhay	0.28	35.59	33.16
Nes 'Ammim	0.16	35.12	32.97
Nes Harim	0.11	35.06	31.74
Nes Ziyona	0.09	34.80	31.93
Nesher	0.19	35.05	32.76
Nesmiya	0.09	34.78	31.76
Neta'im	0.09	34.77	31.94
Netanya	0.10	34.85	32.32
Netiv ha'Asara	0.09	34.54	31.57
Netiv haGedud	0.25	35.45	31.99
Netiv haLamed He	0.10	34.98	31.69
Netivha Shayyara	0.15	35.13	32.99
Netivot	0.08	34.59	31.42
Netu'a	0.16	35.32	33.07
Ne'urim	0.10	34.86	32.37
Nevatim	0.09	34.88	31.22
Newe Ativ	0.24	35.74	33.26
Newe Daniyyel	0.12	35.15	31.68
Newe Deqlim	0.06	34.28	31.35
Newe Efrayim	0.09	34.87	32.02
Newe Etan	0.26	35.53	32.49
Newe Harif	0.21	35.04	30.04
Newe Ilan	0.11	35.08	31.81
Newe Mikhael	0.10	35.01	31.67
Newe Mivtah	0.09	34.74	31.81
Newe Shalom	0.10	34.98	31.82
Newe Ur	0.27	35.55	32.59
Newe Yam	0.14	34.94	32.66
Newe Yamin	0.10	34.94	32.17
Newe Yaraq	0.10	34.92	32.13
Newe Ziv	0.15	35.18	33.03
Newe Zohar	0.23	35.36	31.15
Nezarim	0.07	34.41	31.48
Nezer Hazzani	0.07	34.32	31.38
Nezer Sereni	0.09	34.82	31.92
Nir 'Am	0.09	34.58	31.52
Nir 'Aqiva	0.09	34.64	31.47
Nir Banim	0.10	34.75	31.67
Nir Dawid-Tel Amal	0.23	35.45	32.50
Nir Eliyyahu	0.10	34.95	32.20
Nir 'Ezyon	0.16	34.99	32.70
Nir Gallim	0.09	34.68	31.83
Nir Hen	0.10	34.71	31.61
Nir Moshe	0.09	34.63	31.48
Nir 'Oz	0.07	34.40	31.31
Nir Yafe	0.20	35.24	32.57
Nir Yisra'el	0.10	34.64	31.69
Nir Yizhaq	0.07	34.36	31.24

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Nir Zevi	0.09	34.86	31.95
Niran	0.25	35.45	31.97
Nirim	0.07	34.39	31.34
Nirit	0.10	34.98	32.15
Nisanit	0.08	34.53	31.55
Nizan	0.10	34.63	31.74
Nizzane 'Oz	0.11	35.00	32.31
Nizzane Sinay	0.07	34.40	30.90
Nizzanim	0.10	34.63	31.72
No'am	0.10	34.79	31.57
Nofekh	0.10	34.92	32.04
Nofim	0.12	35.10	32.15
Nofit	0.19	35.15	32.76
Nogah	0.10	34.69	31.62
No'omi	0.26	35.47	31.91
Noqedim	0.14	35.25	31.65
Nordiyya	0.10	34.90	32.31
Nov	0.20	35.78	32.83
Nurit	0.20	35.36	32.54
Odem	0.22	35.75	33.20
Ofaqim	0.08	34.62	31.31
'Ofarim	0.11	35.05	32.02
'Ofer	0.13	34.98	32.62
'Ofra	0.15	35.26	31.96
Ohad	0.07	34.45	31.24
'Olesh	0.11	34.98	32.33
Omen	0.19	35.24	32.56
'Omer	0.09	34.85	31.26
Omez	0.11	34.99	32.37
Or Aqiva	0.11	34.92	32.51
Or haGanuz	0.20	35.45	33.00
Or haNer	0.09	34.60	31.56
Or Yehuda	0.09	34.87	32.02
Ora	0.12	35.15	31.75
Oranim	0.19	35.11	32.71
Oranit	0.10	34.99	32.13
Orot	0.10	34.73	31.74
Ortal	0.20	35.76	33.09
'Otni'el	0.12	35.03	31.44
'Ozem	0.10	34.70	31.64
Pa'ame Tashaz	0.09	34.69	31.44
Palmahim	0.09	34.71	31.93
Paran	0.20	35.15	30.36
Pardes Hanna-Karkur	0.12	34.97	32.48
Pardesiyya	0.10	34.91	32.30
Parod	0.19	35.43	32.93
Pattish	0.08	34.56	31.33

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Pedaya	0.09	34.88	31.86
Pedu'el	0.11	35.05	32.06
Peduyim	0.08	34.61	31.33
Pelekh	0.16	35.23	32.93
Pene Hever	0.13	35.17	31.49
Peqi'in (Buqei'a)	0.17	35.33	32.98
Peqi'in Hadasha	0.17	35.32	32.98
Perazon	0.20	35.31	32.55
Peri Gan	0.07	34.35	31.22
Pesagot	0.14	35.23	31.90
Petah Tiqwa	0.09	34.89	32.08
Petahya	0.09	34.89	31.87
Peza'el	0.24	35.44	32.04
Porat	0.10	34.95	32.28
Poriyya (Kefar 'Avoda)	0.27	35.55	32.72
Poriyya (Newe 'Oved)	0.27	35.54	32.75
Poriyya Illit	0.27	35.55	32.73
Qaddarim	0.22	35.47	32.90
Qadima	0.10	34.91	32.28
Qalansuwa	0.11	34.98	32.29
Qalya	0.24	35.47	31.75
Qarne Shomeron	0.12	35.10	32.17
Qatana	0.11	35.11	31.83
Qatif	0.07	34.31	31.37
Qazir-Harish	0.13	35.09	32.48
Qazrin	0.26	35.69	32.99
Qedar	0.15	35.30	31.75
Qedma	0.10	34.77	31.70
Qedomim	0.13	35.16	32.21
Qela'	0.24	35.71	33.16
Qelahim	0.09	34.68	31.45
Qesarya	0.11	34.90	32.52
Qeshet	0.18	35.81	32.98
Qetura	0.22	35.06	29.97
Qevuzat Yavne	0.09	34.72	31.81
Qezi'ot	0.07	34.46	30.87
Qidmat Zvi	0.24	35.70	33.03
Qidron	0.09	34.79	31.81
Qiryat 'Anavim	0.11	35.12	31.81
Qiryat Arba'	0.12	35.11	31.53
Qiryat Ata	0.18	35.12	32.81
Qiryat Bialik	0.19	35.09	32.83
Qiryat 'Eqron	0.09	34.82	31.86
Qiryat Gat	0.10	34.77	31.61
Qiryat Hayyim	0.19	35.07	32.81
Qiryat Mal'akhi	0.10	34.75	31.73

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Qiryat Motzkin	0.18	35.08	32.84
Qiryat Netafim	0.12	35.11	32.12
Qiryat Ono	0.09	34.86	32.05
Qiryat Shemona	0.27	35.58	33.21
Qiryat Shemona – הרים	0.26	35.56	33.20
Qiryat Tiv'on	0.19	35.13	32.72
Qiryat Yam	0.18	35.07	32.85
Qiryat Ye'arim	0.11	35.10	31.80
Qomemiyut	0.10	34.73	31.66
Qoranit	0.17	35.25	32.84
Ra'ananna	0.10	34.87	32.18
Rafiah Yam	0.06	34.23	31.32
Rahat	0.09	34.75	31.39
Ram on	0.19	35.26	32.53
Rama	0.18	35.37	32.94
Ramat Dawid	0.19	35.20	32.68
Ramat Efal	0.09	34.83	32.04
Ramat Gan	0.09	34.82	32.07
Ramat ha Sharon	0.09	34.84	32.14
Ramat haKovesh	0.10	34.94	32.22
Ramat haShofet	0.16	35.09	32.61
Ramat Magshimim	0.18	35.81	32.85
Ramat Pinkas	0.09	34.84	32.03
Ramat Rahel	0.13	35.22	31.74
Ramat Razi'el	0.11	35.07	31.77
Ramat Yishay	0.19	35.17	32.70
Ramat Yohanan	0.19	35.13	32.79
Ramat Zevi	0.20	35.42	32.59
Ramla	0.09	34.87	31.93
Ramot	0.28	35.66	32.85
Ramot haShavim	0.10	34.88	32.16
Ramot Me'ir	0.09	34.85	31.87
Ramot Menashe	0.15	35.06	32.60
Ramot Naftali	0.27	35.55	33.10
Rannen	0.08	34.60	31.34
Raqqefet	0.16	35.26	32.86
Ravid	0.21	35.46	32.85
Regavim	0.13	35.03	32.53
Regba	0.16	35.10	32.98
Rehan	0.14	35.13	32.47
Rehov	0.25	35.49	32.45
Rehovot	0.09	34.81	31.89
Re'im	0.07	34.46	31.39
Reina	0.18	35.32	32.72
Rekhasim	0.19	35.10	32.75
Reshafim	0.24	35.48	32.48
Retamim	0.08	34.69	31.05

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Revadim	0.09	34.81	31.77
Revivim	0.08	34.72	31.04
Rewaha	0.10	34.73	31.65
Rihaniya	0.22	35.49	33.05
Rihiya	0.24	35.47	32.45
Rimmonim	0.19	35.34	31.94
Rinnatya	0.10	34.93	32.04
Rishon le Ziyon	0.09	34.81	31.96
Rishpon	0.10	34.83	32.20
Ro'i	0.26	35.49	32.25
Rosh ha'Ayin	0.10	34.95	32.10
Rosh Pinna	0.26	35.54	32.97
Rosh Zurim	0.11	35.13	31.67
Ruhama	0.09	34.70	31.50
Rumat Heib	0.17	35.30	32.78
Rummana	0.17	35.31	32.79
Sa'ad	0.08	34.55	31.47
Sa'ar	0.15	35.11	33.03
Sahknin	0.17	35.29	32.87
Sajur	0.17	35.34	32.94
Salim	0.19	35.20	32.54
Sal'it	0.11	35.05	32.24
Sallama	0.18	35.37	32.89
Samar	0.22	35.02	29.83
Sanur	0.14	35.20	32.34
Sappir	0.19	35.18	30.62
Sarid	0.19	35.22	32.67
Sasa	0.18	35.39	33.03
Savyon	0.09	34.88	32.05
Sede Avraham	0.07	34.34	31.21
Sede Boqer	0.09	34.79	30.87
Sede Dawid	0.10	34.68	31.58
Sede Eli'ezer	0.27	35.56	33.05
Sede Eliyyahu	0.26	35.51	32.44
Sede Hemed	0.10	34.94	32.16
Sede Ilan	0.19	35.42	32.75
Sede Moshe	0.10	34.80	31.61
Sede Nahum	0.24	35.48	32.52
Sede Nehemya	0.28	35.62	33.19
Sede Nizzan	0.07	34.42	31.23
Sede Terumot	0.24	35.48	32.44
Sede 'Uziyyahu	0.10	34.68	31.76
Sede Warburg	0.10	34.91	32.20
Sede Ya'aqov	0.19	35.14	32.70
Sede Yizhaq	0.11	34.99	32.40
Sede Yo'av	0.10	34.68	31.65
Sede Zevi	0.09	34.71	31.45
Sederot	0.09	34.59	31.52

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Sedot Mikha	0.10	34.92	31.72
Sedot Yam	0.11	34.89	32.49
Segev	0.16	35.25	32.87
Segula	0.10	34.78	31.67
Senir	0.25	35.68	33.24
Sha'ab	0.16	35.24	32.89
Sha'al	0.23	35.72	33.12
Sha'alvim	0.10	34.98	31.87
Sha'ar Efrayim	0.11	35.00	32.29
Sha'ar haAmaqim	0.19	35.11	32.72
Sha'ar haGolan	0.28	35.61	32.69
Sha'ar Menashe	0.12	35.01	32.45
Sha'are Tiqwa	0.11	35.03	32.13
Shadmot	0.27	35.53	32.35
Shadmot Devora	0.20	35.44	32.70
Shafir	0.10	34.73	31.70
Shahar	0.10	34.72	31.62
Shaharut	0.20	35.00	29.90
Shalwa	0.10	34.77	31.56
Shamerat	0.16	35.09	32.95
Shamir	0.27	35.66	33.16
Shaqed	0.16	35.17	32.47
Sharona	0.22	35.47	32.73
Sharsheret	0.08	34.60	31.40
Shave Shomeron	0.13	35.18	32.26
Shave Ziyon	0.16	35.08	32.98
She'ar Yashuv	0.26	35.65	33.23
Shedema	0.09	34.74	31.83
Shefar'am	0.18	35.17	32.81
Shefayim	0.10	34.82	32.22
Shefer	0.20	35.44	32.94
Sheiks Dannun	0.15	35.15	32.99
Shekhanya	0.17	35.25	32.85
Shelome	0.15	35.15	33.07
Sheluhot	0.24	35.48	32.47
Sheqef	0.11	34.93	31.51
Shetula	0.16	35.31	33.09
Shetulim	0.10	34.68	31.77
Shezor	0.17	35.35	32.93
Shibbolim	0.08	34.61	31.39
Shibli – Umm el Ghanam	0.19	35.39	32.68
Shilat	0.10	35.01	31.92
Shilla	0.17	35.29	32.05
Shim'a	0.11	35.00	31.38
Shittim	0.18	35.02	30.18
Shivta	0.08	34.63	30.88
Shizzafon	0.20	35.03	30.05

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Sho'eva	0.11	35.08	31.80
Shoham	0.10	34.94	32.00
Shomera	0.15	35.28	33.08
Shomeriyya	0.10	34.88	31.43
Shoqeda	0.08	34.52	31.42
Shorashim	0.16	35.26	32.89
Shoresh	0.11	35.06	31.80
Shoshannat ha'Amaqim	0.10	34.86	32.35
Shoval	0.09	34.74	31.41
Shuva	0.08	34.54	31.45
Sifsufa	0.20	35.44	33.01
Sitriyya	0.09	34.84	31.89
Sufa	0.07	34.34	31.24
Sulam	0.19	35.34	32.61
Suseya	0.13	35.11	31.39
Taiyiba	0.11	35.01	32.27
Taiyiba (baEmek)	0.21	35.44	32.60
Tal El	0.16	35.17	32.92
Tal Or	0.07	34.50	31.35
Tal Shahr	0.09	34.90	31.80
Talme Bilu	0.09	34.64	31.44
Talme El'azar	0.11	34.97	32.45
Talme Eliyyahu	0.07	34.43	31.23
Talme Yafe	0.09	34.61	31.62
Talme Yehi'el	0.10	34.76	31.75
Talme Yosef	0.07	34.36	31.20
Talmon	0.12	35.13	31.94
Tamra	0.17	35.20	32.85
Tamra (Yizre'el)	0.20	35.40	32.63
Ta'oz	0.10	34.97	31.80
Te'ashur	0.08	34.64	31.37
Tefahot	0.19	35.42	32.87
Tel 'Adashim	0.19	35.30	32.66
Tel Aviv-Yafo	0.09	34.78	32.07
Tel Hai	0.26	35.58	33.23
Tel Mond	0.10	34.92	32.26
Tel Qazir	0.28	35.62	32.70
Tel Sheva'	0.09	34.86	31.25
Tel Te'omim	0.25	35.50	32.44
Tel Yizhaq	0.10	34.87	32.25
Tel Yosef	0.21	35.40	32.56
Telalim	0.08	34.77	30.99
Telalim	0.10	34.67	31.56
Telem	0.11	35.03	31.56
Tene	0.11	34.96	31.38
Teqoa'	0.13	35.23	31.65
Tequma	0.08	34.58	31.45

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Terum	0.10	34.98	31.78
Teverya (Tiberias)	0.26	35.53	32.80
Tid-har	0.08	34.63	31.38
Tifrah	0.08	34.68	31.32
Timmorim	0.10	34.76	31.72
Timrat	0.19	35.23	32.70
Tira	0.10	34.95	32.24
Tirat Karmel	0.17	34.97	32.76
Tirat Yehuda	0.10	34.94	32.01
Tirat Zvi	0.27	35.53	32.42
Tirosh	0.10	34.89	31.75
Tnuvot	0.10	34.96	32.31
Tomer	0.24	35.44	32.02
Tuba-Zangariya	0.28	35.59	32.97
Tur'an (Tir'an)	0.18	35.38	32.77
Tushiyya	0.08	34.54	31.43
Tuval	0.16	35.24	32.93
Udim	0.10	34.85	32.27
Umm el Fahm	0.16	35.15	32.52
Umm el Qutuf	0.13	35.06	32.47
Urim	0.07	34.52	31.30
Usha	0.19	35.11	32.79
'Uza	0.10	34.76	31.59
'Uzeir	0.17	35.33	32.79
Wardon	0.10	34.78	31.66
Wered haGalil	0.27	35.55	32.90
Wered Yeriho	0.22	35.43	31.83
Ya'ad	0.16	35.24	32.88
Ya'alon	0.21	35.04	30.05
Ya'ara	0.15	35.19	33.07
Yad Binyamin	0.09	34.82	31.80
Yad Hanna	0.11	35.01	32.33
Yad haShemona	0.11	35.09	31.81
Yad Mordekhay	0.09	34.56	31.59
Yad Natan	0.10	34.70	31.65
Yad Rambam	0.09	34.90	31.90
Ya'el	0.20	35.31	32.55
Yafia	0.19	35.27	32.68
Yafit	0.26	35.47	32.06
Yagel	0.09	34.88	31.99
Yagur	0.19	35.08	32.74
Yahel	0.22	35.13	30.08
Yakhini	0.09	34.60	31.48
Yanuh-Jatt	0.16	35.24	32.98
Yanun	0.10	34.78	31.74
Yanuv	0.10	34.95	32.31
Yaqqir	0.12	35.12	32.15
Yaqum	0.10	34.84	32.25

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Yardena	0.27	35.57	32.57
Yarhiv	0.10	34.97	32.15
Yarqona	0.10	34.90	32.14
Yashresh	0.09	34.85	31.92
Yas'ur	0.16	35.17	32.90
Yated	0.07	34.33	31.20
Yavne	0.09	34.74	31.88
Yavne'el	0.24	35.50	32.71
Yavor	0.16	35.18	32.90
Yaziz	0.09	34.86	31.86
Ye'af	0.10	34.97	32.27
Yedida	0.11	35.11	31.82
Yedidya	0.10	34.90	32.34
Yehi'am	0.16	35.22	32.99
Yehud	0.09	34.89	32.03
Yeroham	0.10	34.93	30.99
Yerushalayim (East Jerusalem)	0.13	35.23	31.78
Yerushalayim (West Jerusalem)	0.12	35.17	31.77
Yesha'	0.07	34.40	31.25
Yesodot	0.09	34.86	31.82
Yesud haMa'ala	0.28	35.59	33.05
Yevul	0.07	34.32	31.19
Yif'at	0.19	35.22	32.68
Yiftah	0.27	35.55	33.13
Yirka	0.16	35.21	32.95
Yir'on	0.20	35.45	33.08
Yish'i	0.10	34.96	31.75
Yitav	0.23	35.42	31.95
Yizhar	0.15	35.24	32.18
Yizre'el	0.20	35.32	32.56
Yodefast	0.17	35.27	32.84
Yonatan	0.19	35.79	32.94
Yoqne'am - Moshava	0.18	35.12	32.66
Yoqne'am 'Illit	0.18	35.10	32.66
Yoshivya	0.08	34.61	31.44
Yotvata	0.22	35.06	29.89
Yuval	0.26	35.60	33.25
Yuvallim	0.16	35.27	32.88

Name of settlement	Soil acceleration -Z (g)	Geographic coordinates	
		longitude	latitude
Zafirim	0.10	34.94	31.66
Zafriyya	0.09	34.85	32.00
Zalafa	0.18	35.18	32.55
Zanoah	0.10	35.00	31.73
Zar'it (Kefar Rosenwald)	0.15	35.30	33.10
Zarzir	0.19	35.21	32.73
Zavdi'el	0.10	34.76	31.66
Ze'elim	0.07	34.53	31.20
Zefat	0.23	35.50	32.96
Zekharya	0.10	34.94	31.71
Zelafon	0.10	34.93	31.81
Zemer	0.11	35.03	32.37
Zendala	0.20	35.32	32.52
Zerahya	0.10	34.75	31.68
Zeru'a	0.09	34.62	31.46
Zerufa	0.14	34.95	32.65
Zetan	0.09	34.89	31.97
Zeviyya	0.17	35.33	32.89
Zikhron Ya'aqov	0.12	34.95	32.57
Zimrat	0.08	34.55	31.45
Zippori	0.18	35.28	32.75
Ziqim	0.09	34.52	31.61
Ziv'on	0.19	35.42	33.03
Zofar	0.21	35.18	30.56
Zofit	0.10	34.92	32.19
Zofiyya	0.09	34.74	31.86
Zohar	0.10	34.69	31.60
Zohar	0.07	34.42	31.24
Zor'a	0.10	34.97	31.76
Zoran	0.10	34.94	32.29
Zova	0.11	35.12	31.78
Zufin	0.11	35.01	32.20
Zukai Yam	0.10	34.86	32.36
Zur Hadassa	0.11	35.10	31.72
Zur Moshe	0.10	34.91	32.30
Zur Natan	0.11	35.01	32.24
Zur Yig'al	0.10	34.99	32.22
Zuri'el	0.16	35.31	33.01
Zurit	0.16	35.25	32.90