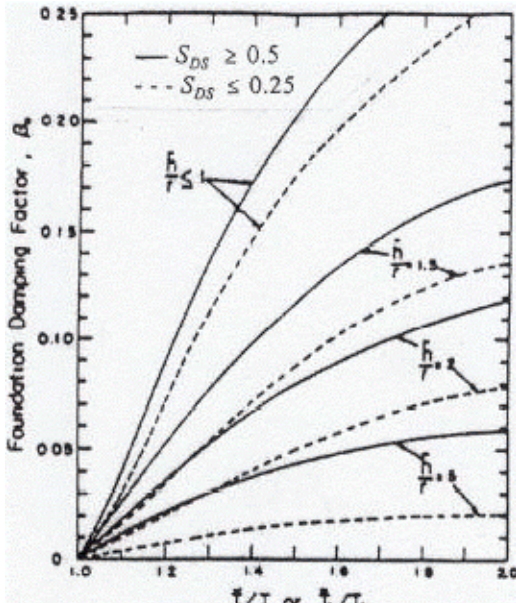


Errata

2000 Edition NEHRP RECOMMENDED PROVISIONS FOR SEISMIC REGULATIONS FOR NEW BUILDINGS AND OTHER STRUCTURES

Part 1: Provisions (FEMA 368)

March 1, 2002

Section	Page	Correction
5.8.2.1.1	88/89	<p>Add the following to the legend at the top of page 89 after I_0:</p> <p>"$_2$ = dynamic foundation stiffness modifier for rocking (see Commentary)</p>
5.8.2.1.2	90	<p>Change legend for S_{DS} in Figure 5.8.2.1.2 as shown below:</p>  <p>FIGURE 5.8.2.1.2 Foundation damping factor.</p>
5.8.3.1	91	<p>Change "\bar{K}" to "\bar{k}" in very last sentence.</p>

6.2.10.1	112	Under Exception 1, delete the following: “or 0.5 inch (13mm); whichever is greater,”
6.2.10.2	112	In the last sentence on the page replace the reference “SMACNA Restraint” with “AAMA 501.4”
6.3.8	115	In the last sentence replace “... C_a is equal to or greater than 0.15.” with “... S_{DS} is equal to or greater than 0.33.”
6.3.15	122	In the last sentence, delete “CISCA Recs for Zones 3-4” and replace with “IEE344”.
7.5.4.4	131	In equation 7.5.4.4-3, replace “0.12 sh_c ” with “0.3 sh_c ” .
8.4.1.1	134	<p>Replace the entire existing Section 8.4.1.1 with the following:</p> <p>8.4.1.1: Revise Sec. 7.3b of AISC Seismic to read as follows: “All welds used in primary members and connections of the seismic-force-resisting system shall be made with filler metal capable of producing welds that conform to the following:</p> <ol style="list-style-type: none"> 1. For structures in which the steel frame is normally enclosed and maintained at a temperature of 50⁰ F or higher, minimum Charpy V-notch toughness of 20 ft-lb at 0⁰ F, using AWS A5 classification methods, and minimum Charpy V-notch toughness of 40 ft-lb at 70⁰ F, under a range of welding conditions in accordance with FEMA 353, <i>Recommended Specifications and Quality Assurance Guidelines for Moment Resisting Steel Frames for Seismic Applications</i>. 2. For structures with service temperatures lower than 50⁰ F, minimum Charpy V-notch toughness of 20 ft-lb at 0⁰ F, using AWS A5 classification methods, and minimum Charpy V-notch toughness of 40 ft-lb at 20⁰ F above the lowest anticipated service temperature, under a range of welding conditions in accordance with FEMA 353, <i>Recommended Specifications and Quality Assurance Guidelines for Moment Resisting Steel Frames for Seismic Applications</i>.”
9.2.5.2.6	159	Replace “ $R_3 = 0.4$ for post installed anchors.” with “ $R_3 = 1.4$ for post installed anchors.”
9.6.3.2	166	<p>The first exception should read:</p> <p>Exception: “In detached one- and two- family dwellings three stories or less in height, the projection of the footing beyond the face of the supported member shall be permitted to exceed the footing thickness.”</p>
9.7.1.2	167	In the second line, change “ <i>spacial</i> ” to “ <i>special</i> .”

11.1.2	175	<p>Replace Sec. 11.1.2 to include the expanded reference titles of ACI 530 and 530.1 as follows:</p> <p>“11.1.2 Reference Documents: The designation and title of documents cited in this chapter are listed in this section.</p> <p>ACI 318 American Concrete Institute (ACI), <i>Building Code Requirements for Structural Concrete</i>, excluding Appendix A, 1999</p> <p>ACI 530/ASCE 5/ American Concrete Institute (ACI), Building TMS 402 Code Requirements for Masonry Structures, 1999</p> <p>ACI 530.1/ASCE 6/American Concrete Institute (ACI), <i>Specifications for Masonry Structures</i>, 1999</p> <p>Compliance with specific provisions of ACI 530/ASCE 5/TMS 402 is mandatory where required by this chapter.”</p>
11.2.1	180	Expand the reference titles in two places for ACI 530.1 to read: “ACI 530.1/ASCE 6/TMS 602”
11.3.2	180	Expand the reference title for ACI 530.1 to read: “ACI 530.1/ASCE 6/TMS 602”
11.3.7.5	182	Expand the reference title for ACI 530 in the last sentence to read: “ACI 530/ASCE 5/TMS 402”
11.3.10.5.2	185	Replace the second sentence, “For grouted <i>stack bond</i> masonry, tension parallel to the bed <i>joints</i> for in-plane bending shall be assumed to be resisted only by the continuous grout core section.” with “For grouted <i>stack bond</i> masonry, in-plane flexural tension parallel to the bed <i>joints</i> for in-plane bending shall be assumed to be resisted only by the continuous horizontally grout cross section.”
11.6.3.5	196	<p>Replace Equation (11.6.3.5-1) with the following:</p> $\Phi P_n = \Phi A_n f'_n \left[1 - \left(\frac{h}{140r} \right)^2 \right] \quad \text{for } h/r < 99$
11.7.31	197	Replace “ $M/Vd_v < 0.25$.” with “ $M/Vd_v \leq 0.25$.” and place it before equation (11.7.3.1-2).
11.7.31	198	At the top of the page replace “ $M/Vd_v < 1.00$.” with “ $M/Vd_v \leq 1.00$.”
11.7.31	198	In the last sentence of the section replace “ $V_m (max) =$ ” with “ $V_n (max) =$ ”.
11.9.3	200	In the last sentence of paragraph “c” replace “84 tie diameters.” with “48 tie diameters.”
11.12.2.1	207	Expand the reference titles in two places for ACI 530 to read: “ACI 530/ASCE 5/TMS 402”

11.12.3.1	207	Expand the reference title for ACI 530 to read: “ACI 530/ASCE 5/TMS 402”
12.1.2.3	209-210	Change “Natioanal” to “National” in the titles of PS 20 and PS2.
12.3.4	211	After the sentence reading, “Shear wall and diaphragm boundary elements.... tension and compression forces,” add the following sentences: “Continuity of wall top plates or provision for transfer of induced axial load forces is required. When offsets occur in the wall line, portions of the shear wall on each side of the offset shall be considered as separate shear walls.”
12.4.1.1	213	In the first Exception replace the reference “12.4.3.5” with “12.4.1.5”
12.4.1.3	214	In the second paragraph add a period at the end of the second line.
12.4.1.5	215	In the second paragraph add a period after the last sentence.
12.4.2.4	216	Under Bolt size replace the “2” with “½” in the first row.
12.4.2.6	216	At the end of the first paragraph replace “ Tables 12.4.2-6a and 12.4.2-6b” with “Tables 12.4.3-2a and 12.4.3-2b”.
12.4.2.6	216	At the end of the second paragraph replace “ Tables 12.4.2-6a and b.” with “Tables 12.4.3-2a and b.”
12.4.3.1	217	At the paragraph titled Unadjusted factored shear resistance replace “Tables 12.4.2-6a and b” with “Tables 12.4.3-2a and b” in both the first line and the last line.
12.4.3.2	217	In the first line replace “Sec. 12.4.4.” with “Sec. 12.4.3.”
12.4.3.2	217	In paragraph b replace “ set fort in Tables 12.4.2-6a and 12.4.2-6b” with “set forth in Tables 12.4.3-2a and 12.4.3-2b”.
12.4.3.3.3	218	Replace “Table 12.4.4-1” with “Table 12.4.3-1” in two locations.
12.4.3.4.1	218	At the end of the paragraph replace “ Tables 12.4.2-6a and 12.4.2-6b” with “Tables 12.4.3-2a and 12.4.3-2b”.
12.4.3.4.2	218	In the legend below the equation delete “ h = shear wall height (ft, mm/1000),”.
12.4.3.4.2	219	In the legend for C_o below the equation on page 218 replace “Table 12.4.4-1” with “Table 12.4.3-1”.
12.4.3.4.3	219	Replace “Sec. 12.4.4.4.1” with “Sec. 12.4.3.4.1”.
12.4.3.4.3	219	Replace “Sec. 12.4.4.4.2” with “Sec. 12.4.3.4.2”.
12.4.3.4.4	219	In the legend for C_o below the equation replace “Table 12.4.4-1” with “Table 12.4.3-1”.

12.4.3.4.4	219	In the legend for GL_i below the equation add “perforated” before “shear wall segments”.
Notes for Table 12.4.3-2a	235	<p>Replace footnote b with the following:</p> <p>All panel edges backed with 2-inch nominal or wider framing. Panels installed either horizontally or vertically. Space nails at 6 in. on center along intermediate framing members for 3/8-in. panels installed with strong axis parallel to studs spaced 24 in. on center and 12 in. on center for other conditions and panel thicknesses. For framing members of other species set forth in Ref. 12-1, Table 12A, with the range of specific gravity (SG) noted, allowable shear values shall be calculated for all panel grades by multiplying the values from the table above for nail size and actual panel grade by the following factor: Specific Gravity Adjustment Factor = $(1 - (0.5 - SG))$, Where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.</p>
Notes for Table 12.4.3-2b	237	<p>Replace footnote b with the following:</p> <p>All panel edges backed with 38 mm nominal or wider framing. Panels installed either horizontally or vertically. Space nails at 150 mm on center along intermediate framing members for 9 mm panels installed with strong axis parallel to studs spaced 610 mm on center and 305 mm on center for other conditions and panel thicknesses. For framing members of other species set forth in Ref. 12-1, Table 12A, with the range of specific gravity (SG) noted, allowable shear values shall be calculated for all panel grades by multiplying the values from the table above for nail size and actual panel grade by the following factor: Specific Gravity Adjustment Factor = $(1 - (0.5 - SG))$, Where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.</p>
13.9.2.3	256	At the beginning of item 4., replace “ $30S_{DI}B_D/S_{DS}$ ” with “ $30S_{DI}/B_DS_{DS}$ ”.
13.9.4	258	In item 2. and 3. replace “ $30S_{DI}B_D/S_{DS}$ ” with “ $30S_{DI}/B_DS_{DS}$ ”.

14.5.1	294	<p>Replace item 2 with the following:</p> <p>2. For nonbuilding systems that have an R value provided in Table 14.5.2.1, the minimum specified value in Eq. 5.4.1.1-3 shall be replaced by:</p> $C_S = 0.14 S_{DS} I \quad (14.5.1-1)$ <p>and the minimum value specified in Eq. 5.4.1.1-4 shall be replaced by:</p> $C_S = 0.8 S_I I/R \quad (14.5.1-2)$
14.5.3	298	In the first sentence, replace the first reference to “Sec. 5.4.3” with “Sec. 5.3.”
14.7.3.2	302	Paragraph c. replace the sentence, “For tanks and vessels not covered by an approved national standard, the vertical seismic force shall be defined as 67 percent of the equivalent lateral force.” with “For tanks and vessels not covered by an approved national standard, the vertical seismic force shall be based on a vertical ground acceleration defined as 67 percent of the design horizontal ground acceleration.”
14.7.3.6.1.5	308	In the last sentence of the first paragraph under a., replace “base shear” with “base friction”.
14.7.3.6.1.5	308	In the first sentence of the second paragraph under a., replace “ V ” with “ W ”.

14.7.3.7.1	310	<p>Replace the series of equations under Eq. 14.7.3.7.1 with the following:</p> <p>For $T_i < T_s$</p> $V_i = \frac{S_{DS} I}{1.4 R} W_i \quad (14.7.3.7.1)$ <p>For $T_s < T_i < 4.0$ sec.</p> $V_i = \frac{S_{DS} I}{1.4 R} \frac{T_s}{T_i} W_i$ <p>For $T_s < T_c < 4.0$ sec.</p> $V_c = 1.5 \frac{S_{DS} I}{1.4 R} \frac{T_s}{T_c} W_c$ <p>For T_c of 4.0 sec. or greater,</p> $V_c = \frac{6 S_{DS} I}{1.4 R} \frac{T_s}{T_c^2} W_c$
14A.2.2	323	In the definition of C_S , replace the reference to “Sec. 1.4.2.2” with “Sec. 4.1.2.5.”
14A.2.2	324	In the first paragraph of the last sentence, replace “Sec. 14.2.1” with “Sec.5.4.3”.
14A.2.2	324	In the second paragraph, delete the last phrase, “ and recommended practices specified in Sec. 14.1.9”.
14A.3.2	324	In the definition of C_S , replace the reference to “Sec. 4.2.2” with “Sec. 4.1.2.5.”
14A.3.2	324	In the first paragraph of the section, replace “....and analysis shall be performed per Sec. 14.2.1 of the <i>Provisions</i> .” with “....and analysis shall be performed per Sec. 5.4.3 of the <i>Provisions</i> .”
14A.3.2	324	In the last paragraph of the page, replace “(see Sec. 14.1.2 of the <i>Provisions</i>)” with “(see Sec. 14.4 of the <i>Provisions</i>)”

14A.3.2	325	At the top of the page delete the last phrase of the first paragraph, “recommended practices specified in Sec. 14.1.9.” and replace with “the appropriate section of the recommended practices specified in Chapter 3.
Appendix B	354	Under Technical Subcommittee 5, MASONRY STRUCTURES, add “Vilas Mujumdar, Concrete Masonry Association of California and Nevada, Citrus Heights, California”
Appendix B	358	Under Technical Subcommittee 9, QUALITY ASSURANCE Chair, add “ Charles Spitz, Architect/Planner/Code Consultant, Wall, New Jersey (January 1998 to January 1999)”