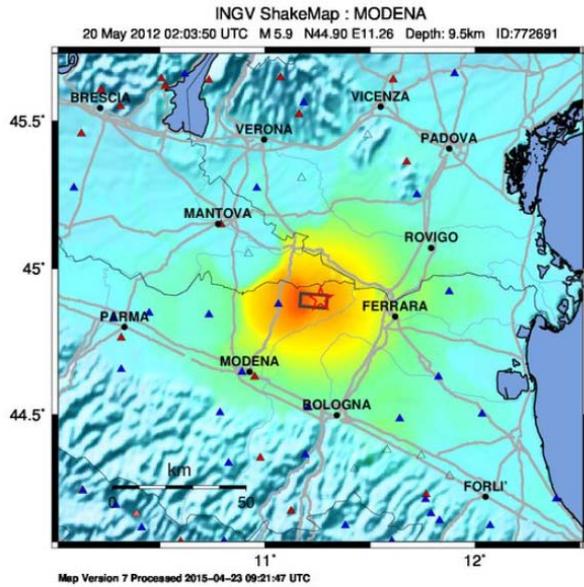


Appendix

Report on earthquake-induced failures of rural buildings aimed at future preservation strategies

Marco Bovo, Alberto Barbaresi, Daniele Torreggiani, Patrizia Tassinari

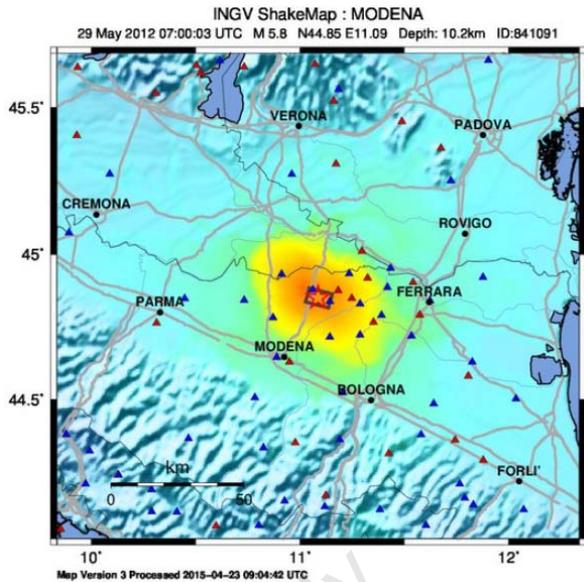
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Map Version 7 Processed 2015-04-23 09:21:47 UTC

PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Vary strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

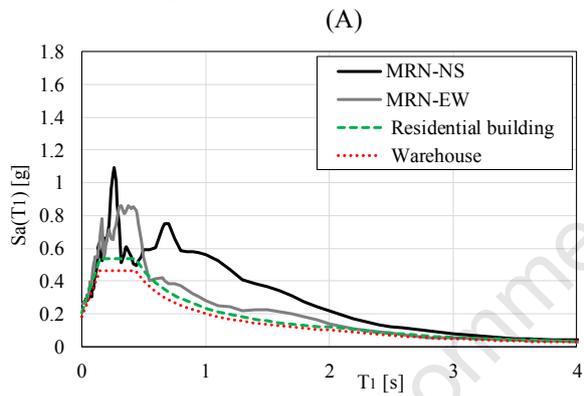
Scale based upon Worden et al. (2012)



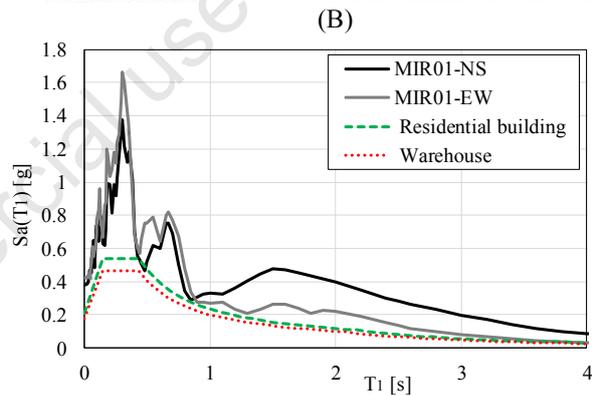
Map Version 3 Processed 2015-04-23 09:04:42 UTC

PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Vary strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)

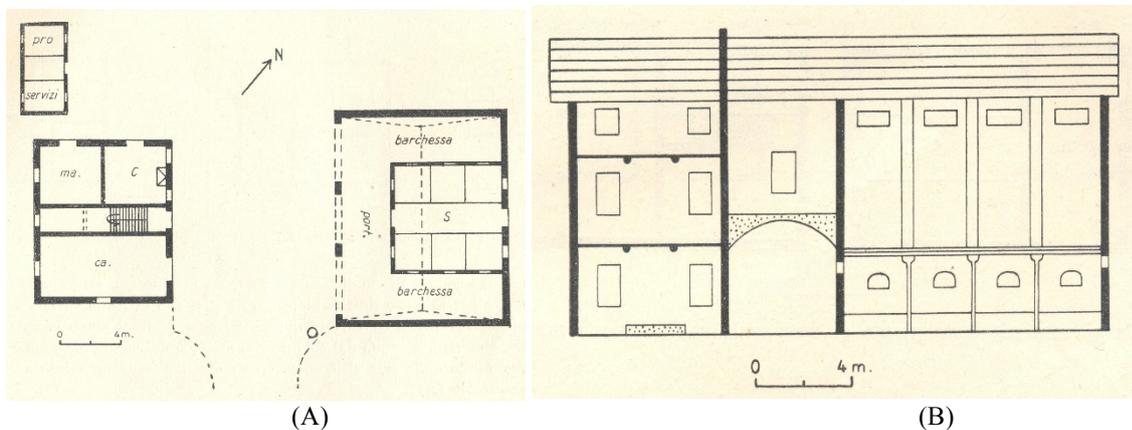


(C)



(D)

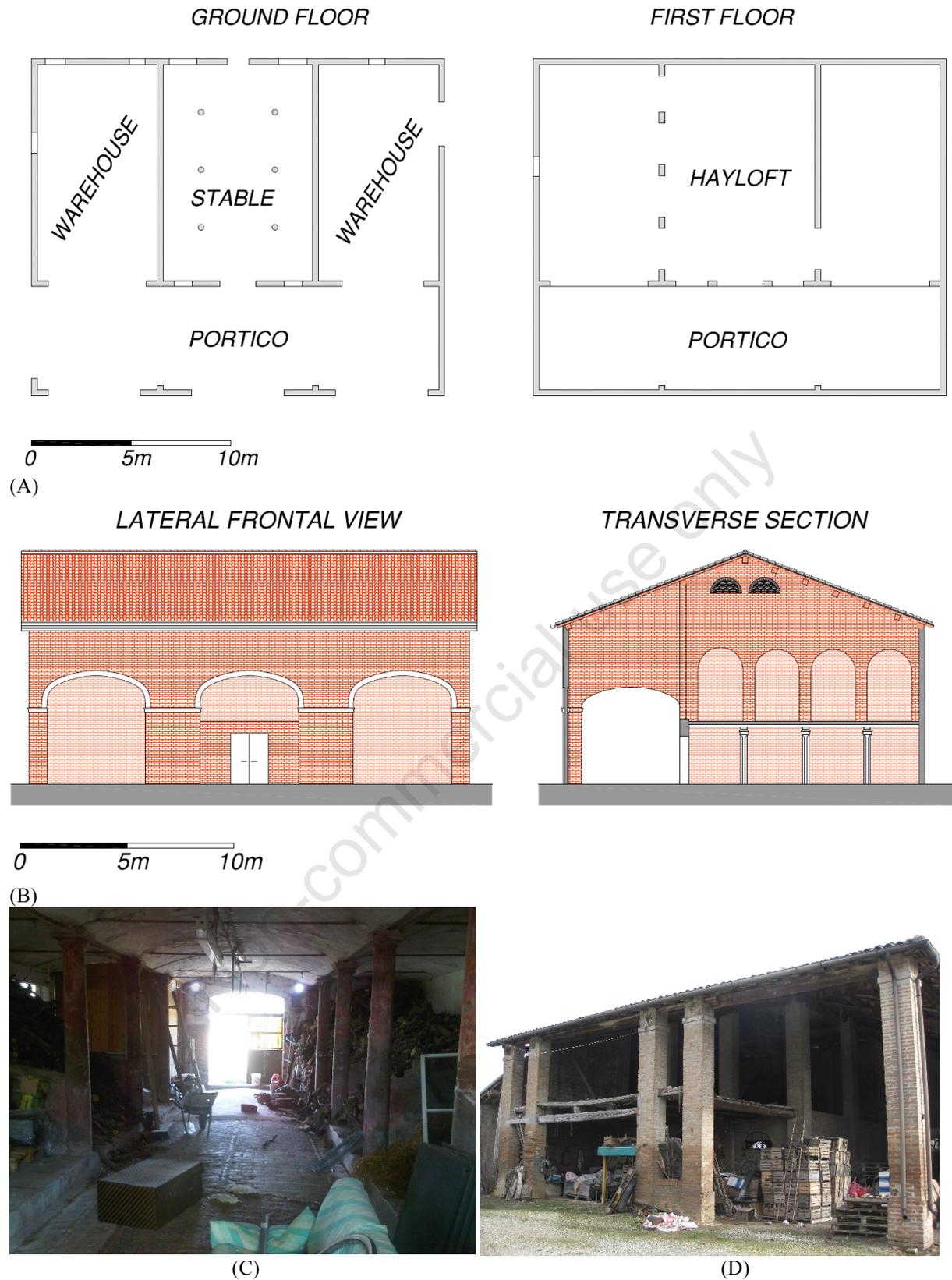
Appendix Figure 1. Shake map of main shocks of the Emilia sequence for (A) May 20th and (B) May 29th earthquake respectively. Elastic acceleration response spectra of the records of the main shocks for (C) May 20th and (D) May 29th and comparison with the current response spectra to adopt for new design of residential building and warehouse following the prescription of the Italian code for the life safety limit states.



(A)

(B)

Appendix Figure 2. (A) Plan view of typical rural courtyard in the area of Modena and (B) frontal view of typical dwelling with *porta morta* element as extracted by Ortolani (1953).



Appendix Figure 3. Typical stable-hayloft building (bldg. #1). (A) Plan view of ground and first floor; (B) Lateral view and transverse section; (C) Inner view of stable volume; (D) External view of a portico of a stable-hayloft supported by masonry columns (bldg. #18).