

LIST OF ACRONYMS AND ABBREVIATIONS

Acronyms

ACI	American Concrete Institute
AHJ	authority having jurisdiction
AISC	American Institute of Steel Construction
ANS	American Nuclear Society
ANSI	American National Standards Institute
ASCE	American Society of Civil Engineers
ASOS	automated surface observing system
AWS	American Welding Society
BOCA	Building Officials and Code Administrators
BTS	box-type system
CAPE	convective available potential energy
CDC	U.S. Centers for Disease Control and Prevention
CIP	cast-in-place
CMAS	Commercial Mobile Alert System
CMU	concrete masonry unit
COV	coefficient of variation
DHS	U.S. Department of Homeland Security
DHS IP	DHS Office of Infrastructure Protection
DHS S&T	DHS Science and Technology Directorate
DI	damage indicator
DOD	degree of damage
DOE	U.S. Department of Energy
DR	damage ratio
DW	damage width
EAS	Emergency Alert System
EDE	Empire District Electric
EF Scale	Enhanced Fujita Scale
EM	emergency manager

EOC	emergency operations center
EPDM	ethylene propylene diene monomer
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
F Scale	Fujita Scale
FY	fiscal year
GIS	geographic information system
IBC	International Building Code
ICC	International Code Council
ICU	intensive care unit
IRC	International Residential Code
MAW	Missouri American Water Company
MCD	Mesoscale Convective Discussion
MDHSS	Missouri Department of Health and Senior Services
MGE	Missouri Gas Energy
MOB	medical office building
MRH	mean roof height
MRI	mean recurrence interval
MSSU	Missouri Southern State University
MWFRS	main wind–force resisting system
NBC	National Building Code
NCST	National Construction Safety Team
NEMA	National Emergency Management Association
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NRC	U.S. Nuclear Regulatory Commission
NSF	National Science Foundation
NWR	NOAA weather radio
NWS	National Weather Service
OFCM	Office of the Federal Coordinator for Meteorological Services and Supporting Research
OSTP	Office of Science and Technology Policy

PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PE	physical education
PEMB	pre-engineered metal building
PSDA	post-storm data acquisition
QRT	quick response team
RC	reinforced concrete
RG	Regulatory Guide
RMW	radius of maximum wind
SDI	Steel Deck Institute
SEAKM	Structural Engineers Association of Kansas and Missouri
SF	steel frame
SJI	Steel Joist Institute
SJRMC	St. John's Regional Medical Center
SPC	Storm Prediction Center
TBO	tire and battery operation
TMS	The Masonry Society
TO.W	tornado warning
URM	unreinforced masonry
UTC	Coordinated Universal Time
WFO	weather forecast office

Abbreviations

ft	foot
ft ²	square foot
in.	inch
J/kg	joules per kilogram
kg	kilogram
kip	a force equal to 1,000 pounds
km	kilometer
km ²	square kilometer
lb	pound

lb/ft ²	pounds per square foot
m	meter
mb	millibar
min	minute
mph	miles per hour
m/s	meters per second
Pa	pascal
plf	pounds per linear foot
psf	pounds per square foot
s	second

METRIC CONVERSION TABLE

To convert from	to	Multiply by
AREA AND SECOND MOMENT OF AREA		
square foot (ft ²)	square meter (m ²)	9.290 304 E-02
square inch (in. ²)	square meter (m ²)	6.4516 E-04
FORCE		
kilogram-force (kgf)	newton (N)	9.806 65 E+00
kilopond (kilogram-force) (kp)	newton (N)	9.806 65 E+00
kip (1 kip=1,000 lbf)	newton (N)	4.448 222 E+03
kip (1 kip=1,000 lbf)	kilonewton (kN)	4.448 222 E+00
pound-force (lbf)	newton (N)	4.448 222 E+00
FORCE DIVIDED BY LENGTH		
pound-force per foot (lbf/ft)	newton per meter (N/m)	1.459 390 E+01
pound-force per inch (lbf/in.)	newton per meter (N/m)	1.751 268 E+02
LENGTH		
foot (ft)	meter (m)	3.048 E-01
inch (in)	meter (m)	2.54 E-02
MASS and MOMENT OF INERTIA		
kilogram-force second squared per meter (kgf · s ² /m)	kilogram (kg)	9.806 65 E+00
pound foot squared (lb · ft ²)	kilogram meter squared (kg · m ²)	4.214 011 E-02
pound inch squared (lb · in. ²)	kilogram meter squared (kg · m ²)	2.926 397 E-04

To convert from	to	Multiply by
PRESSURE or STRESS (FORCE DIVIDED BY AREA)		
kilogram–force per square centimeter (kgf/cm ²)	pascal (Pa)	9.806 65 E+04
kilogram–force per square meter (kgf/m ²)	pascal (Pa)	9.806 65 E+00
kilogram–force per square millimeter (kgf/mm ²)	pascal (Pa)	9.806 65 E+06
kip per square inch (ksi) (kip/in. ²)	pascal (Pa)	6.894 757 E+06
kip per square inch (ksi) (kip/in. ²)	kilopascal (kPa)	6.894 757 E+03
pound–force per square foot (lbf/ft ²)	pascal (Pa)	4.788 026 E+01
pound–force per square inch (psi) (lbf/in. ²)	pascal (Pa)	6.894 757 E+03
pound–force per square inch (psi) (lbf/in. ²)	kilopascal (kPa)	6.894 757 E+00
psi (pound–force per square inch) (lbf/in. ²)	pascal (Pa)	6.894 757 E+03
psi (pound–force per square inch) (lbf/in. ²)	kilopascal (kPa)	6.894 757 E+00
VELOCITY (includes SPEED)		
foot per second (ft/s)	meter per second (m/s)	3.048 E–01
kilometer per hour (km/h)	meter per second (m/s)	2.777 778 E–01
mile per hour (mi/h)	kilometer per hour (km/h)	1.609 344 E+00
mile per minute (mi/min)	meter per second (m/s)	2.682 24 E+01