

## 14.0 Acronyms and Abbreviations

µg	microgram
µT	microtesla
AASHTO	American Association of State Highway and Transportation Officials
AB	(California) Assembly Bill
ac	acre(s)
ac	alternating current
ACE	Altamont Commuter Express
ACGIH	American Conference of Government Industrial Hygienists, Inc.
ACHP	Advisory Council on Historic Preservation
ACS	U.S. American Community Survey
ADA	Americans with Disabilities Act
ADRP	archaeological data recovery program
ADT	average daily traffic
Ag-MM	Agricultural Lands Mitigation Measure
AMP	Airport Master Plan
ANSI	American National Standards Institute
APE	Area of Potential Effects
APS	alternate planning strategy
APLIC	Avian Power Line Interaction Committee
APN	Assessor's Parcel Number
APCD	air pollution control district
APTA	American Public Transportation Association
AQMD	air quality management district
AQ-MM	Air Quality Mitigation Measure
AREMA	American Railway Engineers and Maintenance-of-Way Association
Arch-MM	Archaeological Resources Mitigation Measure
ARRA	American Recovery and Reinvestment Act of 2009
ASR	Archaeological Survey Report
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
ATC	automatic train control

ATCM	Airborne Toxic Control Measures
ATP	Archaeological Treatment Plan
Authority	California High-Speed Rail Authority
BAAQMD	Bay Area Air Quality Management District
BACT	best available control technology
BART	Bay Area Rapid Transit
BAT	best available technology
Bay Area	San Francisco Bay Area
Bay Area to Central Valley Program EIR/EIS	<i>2008 Bay Area to Central Valley High-Speed Train Final Program Environmental Impact Report/Environmental Impact Statement</i>
BCC	Birds of Conservation Concern
BCT	best (conventional pollutant) control technology
BETP	Built Environment Treatment Plan
bgs	below ground surface
Bio-MM	Biological Resources and Wetlands Mitigation Measure
BIOS	Biogeographic Information and Observation System
BLM	Bureau of Land Management
BMP	best management practice
BNSF	Burlington Northern Santa Fe Railway
BPS	best practices standards
BRAC	Defense Base Realignment and Closure
BRMP	Biological Resources Management Plan
Btu	British thermal unit
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAC	County Agricultural Commissioner
CAFB	Castle Air Force Base
CAFE	Corporate Average Fuel Economy
cal	calibrated
Cal Fire	California Department of Forestry and Fire Protection
CalEPA	California Environmental Protection Agency

CALPIA	California Prison Industry Authority
CalRecycle	Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAS	Climate Adaptation Strategy
CASQA	California Stormwater Quality Association
CBOC	California Burrowing Owl Consortium
CBOE	California Board of Equalization
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCWF	Central California Women’s Facility
CDCR	California Department of Corrections and Rehabilitation
CDFA	California Department of Food and Agriculture
CDFG	California Department of Fish and Game
CDMG	California Department of Conservation Division of Mines and Geology
CDOF	California Department of Finance
CDSM	cement deep soil mixing
CEC	California Energy Commission
CEDD	California Employment Development Department
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH <sub>4</sub>	methane
CHRIS	California Historical Resource Information System
CIDH	cast-in-drill hole
CIMIS	California Irrigation Management Information System
CIWMB	California Integrated Waste Management Board
cm	centimeter

CMA	Congestion Management Agencies
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
COG	Council of Governments
CPUC	California Public Utilities Commission
CR	County Road
CRHR	California Register of Historical Resources
CRM	crash energy management
CSHP	Construction safety and health plan
CSUF	California State University Fresno
CTS	California tiger salamander
CUPA	Certified Unified Program Agency
CVFPB	Central Valley Flood Protection Board
CVFPP	Central Valley Flood Protection Plan
CVP	Central Valley Project
CWA	Clean Water Act
CWD	Chowchilla Water District
D/B	design-build
dB	decibel
dBA	decibel, A-weighted
dc	direct-current
DEM	Digital Elevation Model
DO	design option
DOC	Department of Conservation
DOGGR	Division of Oil, Gas, and Geothermal Resources
DOT	Department of Transportation
DPM	diesel particulate matter
DSOD	Division of Safety of Dams
DTSC	California Environmental Protection Agency, Department of Toxic

	Substances Control
DWR	Department of Water Resources
EB	eastbound
ECA	Essential Connectivity Area
EDMS	Emission and Dispersion Modeling System
EDR	Environmental Data Resources, Inc.
EF	electric field
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
ELF	extremely low frequency
EMC	electromagnetic compatibility
EMCPP	Electromagnetic Compatibility Program Plan
EMF	electric and magnetic fields
EMF/EMI-MM	Electromagnetic Fields/Electromagnetic Interference Mitigation Measure
EMFAC	(California) Emission Factors Model
EMI	electromagnetic interference
EMU	electric multiple unit
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act of 1973
ESRP	Endangered Species Recovery Program
ESU	evolutionary significant unit
F.R.	<i>Federal Register</i>
FAA	Federal Aviation Administration
FARRC	Fresno Area Residents for Rail Consolidation
FAT	Fresno Yosemite International Airport
FAX	Fresno Area Express
FCC	Federal Communications Commission
FCWCA	Madera County Flood Control and Water Conservation Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration

FIRM	Flood Insurance Rate Map
FLSPs	Fire/life safety programs
FMFCD	Fresno Metropolitan Flood Control District
FMMP	Farmland Mapping and Monitoring Program
FPPA	Farmland Protection Policy Act
FRA	Federal Railroad Administration
FSZ	Farmland Security Zone
ft	feet or foot
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
g	acceleration due to gravity
G	gauss
GAMAQI	(California) Guide for Assessing and Mitigating Air Quality Impacts
<b>GBN</b>	<b>ground bounce noise</b>
GC	general conformity
GC threshold	general conformity de minimis applicability threshold
GHG	greenhouse gas
GHz	gigahertz
GIS	geographic information system
GWh	gigawatt hour
GWP	Global Warming Potential
H.P.	Historic Place
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscape Survey
HASR	Historic Architectural Survey Report
hazmat	hazardous material
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
HFE	hydrofluorinated ether
Hist-MM	Historic Architectural Resources Mitigation Measure
HMF	heavy maintenance facility

HMMH	Harris Miller Miller & Hanson, Inc.
HMMP	Habitat Mitigation and Monitoring Plan
HMW-MM	Hazardous Materials and Wastes Mitigation Measure
HP	Heritage Property
HPSR	Historic Property Survey Report
HSC	Health and Safety Code
HSR	Historic Structure Report
HST	high-speed train
HU	hydrologic unit
HUC	Hydrologic Union [Unit] Code
Hz	hertz
IBC	International Building Code
ICC	International Code Council
ICE	InterCity Express
ICES	International Committee on Electromagnetic Safety
ICNIRP	International Commission on Non-Ionizing Radiation Protection
<b>ICS</b>	<b>Initial Construction Segment</b>
ID	Irrigation District
IEEE	Institute of Electronic and Electrical Engineers
in/sec	inch per second
<b>IOS</b>	<b>Initial Operation Section</b>
ISO	International Organization for Standardization
kHz	kilohertz
km	kilometers
kV	kilovolt
kV/m	kilovolts per meter
KVP	key viewpoint
LAX	Los Angeles International Airport
L <sub>dn</sub>	day-night average sound level
LEDPA	Least Environmentally Damaging Practicable Alternative
LEED	Leadership in Energy and Environmental Design
L <sub>eq</sub>	equivalent sound level
L <sub>eq</sub> (h)	equivalent noise level for an hour of noise sensitivity

LESA	Land Evaluation and Site Assessment
LID	Low-impact development
L <sub>max</sub>	loudest 1 second of noise over a measurement period
LOS	level of service
LUST	leaking underground storage tank
LWCF	Land and Water Conservation Fund
m/s	Meter per second
m <sup>3</sup>	cubic meter
MBTA	Migratory Bird Treaty Act
MCAG	Merced County Association of Governments
MCE	Merced Municipal/Macready Field
MCTC	Madera County Transportation Commission
ME	Moderate Effect
ME/SI	Moderate Effect/Significant Impact
MEP	maximum extent practicable
MF	magnetic field
mG	milliGauss
mgd	million gallons per day
MICR	maximum individual cancer risk
MM	mitigation measure
MMBtu	million British thermal units
MMcf	million cubic feet
MMRP	Mitigation, Monitoring, and Reporting Program
MMT	million metric tons
MMT CO <sub>2</sub> e	million metric tons of CO <sub>2</sub> equivalent
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPE	maximum permissible exposure
mph	miles per hour
MPO	metropolitan planning organization
MRI	magnetic resonance imaging
MS4	municipal separate storm sewer system
MSAT	mobile source air toxic



MSE	Mechanically Stabilized Earth
MT	metric ton
MTA	Metropolitan Transportation Authority
MW	megawatt
mW/cm <sup>2</sup>	milliWatts per square centimeter
N&V	noise and vibration
N&V-MM	Noise and Vibration Mitigation Measure
N <sub>2</sub> O	nitrous oxide
N/A	not available
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NAL	numeric action level
NASA	National Aeronautics and Space Administration
NAVD 88	North American Vertical Datum of 1988
NB	northbound
NCCP	Natural Communities Conservation Plan
NCES	National Center for Education Statistics
NCRP	National Council on Radiation Protection
n.d.	no date
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NEWI	North East Wales Institute
NF <sub>3</sub>	nitrogen trifluoride
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NI	No Impact
NIEHS	National Institute of Environmental Health Sciences
NMFS	National Marine Fisheries Service
NO	nitric oxide

NO/NI	No Effect/No Impact
NO <sub>2</sub>	nitrogen dioxide
NOA	naturally occurring asbestos; notice of availability
NOC	notice of completion
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	noise-sensitive area
NWI	National Wetlands Inventory
O&M	operations and maintenance
O <sub>3</sub>	ozone
OCC	Operations Control Center
OCS	overhead catenary system
OET	Office of Engineering and Technology
OHP	Office of Historic Preservation
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PAH	polynuclear aromatic hydrocarbon
PCC	Portland Cement Concrete
PEC	Potential Environmental Concern
PEMC	Palustrine Emergent Seasonally Flooded
PFC	perfluorocarbon
PFO	palustrine forested
PG&E	Pacific Gas and Electric Company
PHA	preliminary hazard analysis
PM	particulate matter
PM <sub>10</sub>	particulate matter smaller than or equal to 10 microns in diameter
PM <sub>2.5</sub>	particulate matter smaller than or equal to 2.5 microns in diameter

Policy Council	San Joaquin Valley Regional Planning Agency Policy Council
PP-MM	Parks, Recreation, and Open Space Mitigation Measure
ppm	parts per million
PPV	peak particle velocity
PRM	paleontological resources monitor
PRMMP	Paleontological Resource Monitoring and Mitigation Plan
PRM	Paleontological resources monitor
Program EIR/EIS	Program Environmental Impact Report/ Environmental Impact Statement
PRS	paleontological resources specialist
PTC	Positive Train Control
PTO	Permit to Operate
PUE-MM	Public Utilities and Energy Mitigation Measure
RCD	Resource Conservation District
RF	radio frequency
RFI	radio frequency interference
RFPs	requests for proposals
RIMS	Regional Input-Output Modeling System
RMP	Regional Management Plan
RMS	root-mean-square
ROG	reactive organic gase
ROWD	Report of Waste Discharge
RPA	Rule of Particular Applicability
RRP	restoration and revegetation plan
RTAC	Regional Targets Advisory Committee
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
S&S-MM	Safety and Security Mitigation Measure
SB	(California) Senate Bill; southbound
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Community Strategy

SE	Significant Effect
SEGA	Southeast Growth Area
SEL	sound exposure level
SEMS	Standardized Emergency Management System
SF <sub>6</sub>	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SFO	San Francisco International Airport
SHPO	State Historic Preservation Office
SI	Significant Impact
SIP	state implementation plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLIC	spills, leaks, investigations and cleanup
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO-MM	Socioeconomics, Communities, and Environmental Justice Mitigation Measure
SO <sub>2</sub>	sulfur dioxide
SOI	Secretary of the Interior
SO <sub>x</sub>	sulfur oxides
SPCC	Spill Prevention, Control, and Countermeasures
SPRR	Southern Pacific Railroad
SR	State Route
SSC	Species of Special Concern
SSPP	system safety program plan
Statewide Program EIR/EIS	<i>2005 Final Program Environmental Impact Report/Environmental Impact Statement for the Proposed California High-Speed Train System</i>
STIP	State Transportation Implementation Program
SVP	Society of Vertebrate Paleontology
SWPP	stormwater pollution prevention
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
T	tesla
TAC	toxic air contaminant

TCE	temporary construction easement
TCP	traditional cultural property
TDA	tire-derived aggregate
TEA-21	Transportation Equity Act for the 21st Century
TGV	Train à Grande Vitesse
THPO	Tribal Historic Preservation Officer
TLV	threshold limit value
TMDL	total maximum daily load
TOD	transit-oriented development
TOG	total organic gas
TPSS	traction power substation
TR	transportation
TR-MM	Transportation Mitigation Measure
TVA	threat and vulnerability assessment
TWG	technical working group
U.S.C.	United States Code
UCD	University of California at Davis
Uniform Relocation Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
UPRR	Union Pacific Railroad
URBEMIS	Urban Emissions Model
USA	Underground Service Alert
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
V/C	volume to capacity ratio
VdB	vibration velocity level
VELB	valley elderberry longhorn beetle
<b>VERA</b>	<b>Voluntary Emission Reduction Agreement</b>
VMT	vehicle miles traveled
VOC	volatile organic compound

VQ-MM	Aesthetics and Visual Resources Mitigation Measure
VSA	vibration-sensitive area
VSPW	Valley State Prison for Women
WB	westbound
WPT	western pond turtle
WR-MM	Hydrology and Water Resources Mitigation Measure
WRAPP	Wetland and Riparian Area Protection Policy
WRCC	Western Regional Climate Center
WST	western spadefoot toad
WWTP	wastewater treatment plant
YARTS	Yosemite Area Regional Transportation System