

Colorado Department of Transportation Staff Bridge Bridge Detail Manual	Chapter: Appendix A Effective: June 30, 2024 Supersedes: June 18, 2021
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Appendix A – Abbreviations & Acronyms

A.1 Abbreviations & Acronyms

The use of abbreviations and acronyms is generally discouraged unless required due to time or space limitations. If more than one abbreviation is shown in this appendix, the first abbreviation is required although the others have been used in the past. Italicized items in this list are for information only based on historic plans and are not acceptable for current use. This list may not be inclusive. Where special abbreviations are used, a descriptive tabulation may be necessary and is allowed in the plan drawings. Please refer to M Standard M-100-2 for current requirements

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
@	at
&	and
[channel (steel)
ϕ, ∅	Diameter
° ' "	Degrees, Minutes, Seconds
' "	Feet, inches
#	pound or number
3R	Resurfacing, Restoration, Rehabilitation
8UN	8 thread series (screw thread)
ⓔ	Epoxy Coated Rebar
Ⓝ	Non-Epoxy Coated Rebar
ⓧⓧ	Girder Label
≤	Less than or Equal to
≥	Greater than or Equal to
⊠	Square
±, +/-	Denotes an approximate or unknown variance/tolerance/uncertainty usually with a dimension. The last digit written down in a measurement is the 1 st digit with some uncertainty
A	
AAC	Aluminum Arch Culvert
AADT	Annual Average Daily Traffic
AAN	American Association of Nurserymen
AAR	Association of American Railroads (functions of the Communications and Signal Division merged into AREMA)
AASHO	American Association of State Highway Officials (defunct 1973, now known as AASHTO)
AASHTO	American Association of State Highway and Transportation Officials

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
ABS	Acrylonitrile-Butadiene-Styrene Pipe
Abt, <i>Abt.</i>	About
Abut, <i>Abut.</i>	Abutment
ACI	American Concrete Institute
ACM	Asbestos Containing Materials
ADA	Americans with Disabilities Act
Adj, <i>ADJ.</i>	Adjust
ADT	Average Daily Traffic
AE	Architect-Engineer, Architecture, Engineering
AEC	Architecture, Engineering and Construction
AESC	American Engineering Standards Committee (defunct, now known as ANSI)
AGA	American Gas Association
AGC	Associated General Contractors of America
AQCM	Air Quality Congestion Mitigation
AH, <i>A.H., Ah.</i>	Ahead
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
Alt, <i>Alt.</i>	Alternate
AMPP	Association for Materials Protection and Performance
ANSI	American National Standards Institute, Inc. (formerly USASI, ASA and AESC)
APCA	American Portland Cement Alliance
API	American Petroleum Institute
APL	Approved Products List
Approx, <i>Approx.</i>	Approximate
APWA	American Public Works Association
AQCC	Air Quality Control Commission
ARA	American Railway Association (merged into Association of American Railroads)
ARBBA	American Railway Bridge and Building Association (merged into AREMA)
ARE	Additional Requested Element (Design/Build Terminology)
AREA	American Railway Engineering Association (merged into AREMA)
AREMA	American Railway Engineering & Maintenance-of-Way Association
ARTBA	American Road and Transportation Builders Association

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
AS, A.S.	Ahead Station
ASA	American Standards Association (defunct, now known as ANSI)
ASBI	American Segmental Bridge Institute
ASCE	American Society of Civil Engineers
ASD	Allowable Stress Design
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASOP	American Society of Photogrammetry
ASSE	American Society of Sanitary Engineering, American Society of Safety Engineers
Asst, Asst.	Assistant
ASTM	American Society for Testing and Materials
ATSSA	American Traffic Safety Services Association
AUTS	Actual Ultimate Tensile Strength
Ave, Ave.	Avenue
AWG	American Wire Gauge
AWPA	American Wood Protection Association, formerly American Wood Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
B	
Bk to Bk	Back to Back
BEI, <i>B.E.I.</i>	By Equal Increments
BM, <i>B.M.</i>	Bench mark
BPF, <i>B.P.F.</i>	Blows Per Foot
B/	Bottom of
BAFO	Best and Final Offer
Bbl, <i>Bbl.</i>	Barrels
BC, <i>B.C.</i>	Bolt Circle
Beg.	Begin
BF, <i>B.F.</i>	Backface
BFBW, <i>B.F.B.W.</i>	Backface of Backwall
Bk, <i>B.K., Bk.</i>	Back
Bldg, <i>Bldg.</i>	Building
BLM	Bureau of Land Management

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
Bldv, <i>Bldv.</i>	Boulevard
BM ₁	Quantities of Structure Backfill (Class 1) without Shoring
BM ₂	Quantities of Structure Backfill (Class 1) with Shoring
BMP	Best Management Practice
Bms, <i>Bms.</i>	Beams
BNSF	Burlington Northern & Santa Fe Railroad
Bott, <i>Bott., Bot.</i>	Bottom
BP	Maximum Required Allowable Bearing Pressure
BPO	Business Programs Office (CDOT)
BR, <i>Br.</i>	Bridge On-System Program, Bridge
Brg, <i>Brg.</i>	Bearing
BRO	Bridge Off-System Program
BS, <i>B.S.</i>	Back Station
BT, <i>B.T.</i>	Beginning of Transition
Btm, <i>Btm.</i>	Bottom
Btwn, <i>Btwn.</i>	Between
C	
C&G	Curb and Gutter
CRS, <i>C.R.S.</i>	Colorado Revised Statutes, as amended. "43-1-225, C.R.S." means "§ 225, Article 1 of Title 43, C.R.S., as amended."
CA	Concrete Arch
CAC	Concrete Arch Culvert
CAD	Computer Aided Design or Computer Aided Drafting
CADD	Computer Aided Design and Drafting
CatEx	Categorical Exclusion
CBC	Concrete Box Culvert
CBG	Concrete Box Girder
CBGC	Concrete Box Girder Continuous
CBGCP	Concrete Box Girder Continuous Prestressed
CBGP	Concrete Box Girder Prestressed
CBGS	Concrete Box Girder Segmented
CCA	Colorado Contractors Association
CCI	Construction Cost Index
CCR	Code of Colorado Regulations, as amended
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CDTPG	Concrete Double-Tee Prestressed Girder
CE	Construction Engineering
CF, <i>Cu. Ft.</i>	Cubic Feet
CFR	Code of Federal Regulations

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
CFS, <i>C.F.S.</i>	Cubic Feet Per Second
CG, <i>CG.</i>	Center of Gravity
CHP	Colorado Highway Patrol
CI, <i>Cl.</i>	Cast Iron, Concrete on Rolled I-Beam
CIC	Concrete on Rolled I-Beam Continuous
CICK	Concrete on Rolled I-Beam Continuous & Composite
CICKP	Concrete on Rolled I-Beam Continuous & Composite Prestressed
CIK	Concrete on Rolled I-Beam Composite
CIKP	Concrete on Rolled I-Beam Composite Prestressed
CIOG, <i>C.I.O.G.</i>	Cast Iron Ogee (Washer)
CIP, <i>C.I.P.</i>	Cast-in-Place, <i>Cost in Place</i>
Clr, <i>CL., Clr.</i>	Clear
cm, <i>cm.</i>	Centimeters
CM, <i>CM.</i>	Corrugated Metal
CMAQ	Congestion Mitigation Air Quality
CMO	Contract Modification Order
CMP, <i>C.M.P.</i>	Corrugated Metal Pipe
CMS	Changeable Message Sign
CMU	Concrete Masonry Unit
COFRS	Colorado Financial Reporting System
Col, <i>Col.</i>	Column
Comp, <i>Comp.</i>	Composite
Conn, Con, <i>Conn., Con.</i>	Connection
Conc, <i>Conc.</i>	Concrete
Const, <i>Const.</i>	Construction
Cont, <i>Cont.</i>	Continuous
Corr, <i>Corr.</i>	Corrugated
Cov, <i>Cov.</i>	Cover
CP	Colorado Procedure
CPE	Corrugated Polyethylene Pipe
CPG	Concrete Prestressed Girder (Precast)
CPGC	Concrete Prestressed Girder Continuous (Precast)
CP-L	Colorado Procedure – Laboratory
CPM	Critical Path Method
CPPA	Corrugated Plastic Pipe Association
CPT	Corrugated Polyethylene Tubing
CR	County Road
CRF	Concrete Rigid Frame
CRS	Colorado Revised Statutes, 1973, as amended
CRSI	Concrete Reinforcing Steel Institute

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
CS, C.S.	Curve to Spiral, Commercial Standard, Concrete Slab
CSC	Concrete Slab Continuous
CSG	Concrete Slab & Girder (Poured in Place)
CSGC	Concrete Slab & Girder Continuous (Poured in Place)
CSGCP	Concrete Slab & Girder Continuous Prestressed (Poured in Place)
CSGP	Concrete Slab & Girder Prestressed (Poured in Place)
Csk, Csk.	Countersunk
CSL	Cross Sonic Log
CSP	Corrugated Steel Pipe, Concrete Slab Prestressed
CSPC	Concrete Slab Prestressed Continuous
CTR	Certified Test Reports
Ctr, Ctr.	Center
CY, Cu. Yd., c.y.	Cubic Yards
D	
D	Degree of Curvature, Depth, Density, Distance, Diameter
DB, D/B	Design Build
DAS, D.A.S.	Deformed Anchor Stud
dB	decibels
DBA	Deformed Bar Anchor
DBE	Disadvantaged Business Enterprise
Dbl, Dbl.	Double
Deg, Deg., °	Degrees (Angular)
Deg, °F, °C, Deg., °F., °C.	Degrees (Thermal) – Degrees Fahrenheit, Degrees Celsius
DEIS	Draft Environmental Impact Statement
Dept, Dept.	Department
Dgn, DGN, Dgn.	Design, Microstation Drawing, Design
DH	Design Height (or, Avg. height for qty. calculations)
DHV	Design Hour Volume
DHW	Design High Water
DI, D.I.	Ductile Iron
Dia, Dia., ϕ , \varnothing , Φ , &	Diameter
Dist, Dist.	District
Div, Div.	Division
DMS	Dynamic Message Sign
DNR	Department of Natural Resources
DOR	Design Office Review
DOW	Division of Wildlife (Colorado)
DPA	Department of Personnel & Administration
DRCOG	Denver Regional Council of Governments

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
DS, <i>D.S.</i>	Down Station
DSR	Design Scoping Review
DTD	Division of Transportation Development (CDOT)
DTM	Digital Terrain Model
Dwg, <i>Dwg.</i>	AutoCAD Drawing, Sheet
E	
E to E	End to End
e.g.	Exempli Gratia (For Example)
E/A	Engineer and/or Architect
EA	Environmental Assessment
Ea, <i>Ea.</i> , <i>EA</i>	Each
EB, <i>E.B.</i>	Eastbound
ECR	Epoxy Coated Rebar
EEO	Equal Employment Opportunity
EF, <i>E.F.</i>	Each Face
EIA	Electronic Industries Alliance (formerly Electronic Industries Association)
EIS	Environmental Impact Statement
El, <i>El.</i> , <i>EL</i> , <i>Elev.</i>	Elevation
Elast, <i>Elast.</i>	Elastomeric
Elect Cond, <i>Elect. Cond.</i>	Electrical Conduit
EM ₁	Quantity of Structure Excavation without Shoring
EM ₂	Quantity of Structure Excavation with Shoring
Engr, <i>Engr.</i>	Engineer
EPA	Environmental Protection Agency
EPDM	Eethylene Propylene Ddiene Monomer-class rubber
Eq, <i>Eq.</i>	Equal
ESAL	Equivalent Single Axle Load
ESB	Emerging Small Business
Est, <i>Est.</i>	Estimate
ET, <i>E.T.</i>	Ending of Transition
EVT	Event Point (InRoads Terminology)
EW, <i>E.W.</i>	Each Way
E, <i>Ex</i>	Expansion Bearing
Ex, <i>Ex.</i>	Example, Except
Exc, <i>Exc.</i> , <i>Excav.</i>	Excavation
Exist, <i>Exist.</i>	Existing
Exp	Non-guided (free floating) expansion bearing
Exp Jt, <i>Exp. Jt.</i>	Expansion Joint
Expn, <i>Expn.</i>	Expansion

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
Ext, <i>Ext.</i>	Exterior
F	
F to F	Face to Face
FAP, <i>F.A.P.</i>	Federal Aid Project
FL, <i>F.L.</i>	Flow Line
FAA	Federal Aviation Administration
FAPG	Federal Aid Policy Guide
FCM	Fracture Critical Member
Fdn, <i>Fdn.</i>	Foundation
Fed, <i>Fed.</i>	Federal
FEMA	Federal Emergency Management Agency
FES	Flared End Section
FF, <i>F.F.</i>	Far Face, Front Face
FFBW, <i>F.F.B.W.</i>	Front Face of Backwall
FHWA	Federal Highway Administration
Fig, <i>Fig.</i>	Figure
Fin, <i>Fin.</i>	Finished
FIPI	Finding-in-the-Public-Interest
FIR	Field Inspection Review
Fl, <i>Fl.</i>	Floor
Flg, <i>Flg.</i>	Flange
FM	Factory Mutual
FMV	Fair Market Value
FO	Fiber Optic
FONSI	Finding of No Significant Impact
FOR	Final Office Review
fpm, <i>F.P.M.</i>	Feet Per Minute
Fps, <i>F.P.S., FPS</i>	Feet Per Second
FRA	Federal Railroad Administration
Freq, <i>Freq.</i>	Frequency
FRP	Fiber Reinforced Polymer
FS, <i>F.S.</i>	Planned Finish Surface
FSS	Federal Specifications and Standards
Ft, <i>FT, Ft., ft</i>	Feet
Ft Kip, <i>Ft. Kip.</i>	Foot Kips
Ft Lb, <i>FT LB, Ft. Lb.</i>	Foot Pounds
FTA	Federal Transit Administration
Ftg, <i>Ftg.</i>	Footing
FTP	File Transfer Protocol
Fut, <i>Fut.</i>	Future
F, <i>Fx</i>	Fixed Bearing

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
G	
Ga, <i>Ga.</i>	Gage, Gauge
Gal, <i>Gal.</i>	Gallons
Galv, <i>Galv.</i>	Galvanized
Gd	Guided expansion bearing
GEIA	Government Electronics and Information Technology Group (ITAA)
GIP	Galvanized Iron Pipe
Gir, G, <i>Gird, Gird., Gir., Grd, Gr</i>	Girder
GIS	Geographical Information System
GL	Girt Line
GPM	Gallons Per Minute
GPS	Global Positioning System
GRI	Geosynthetic Research Institute
GRS	Geosynthetic Reinforced Soil
GSI	Geosynthetic Institute
GUTS	Guaranteed Ultimate Tensile Strength (replaced by AUTS & MUTS)
H	
H	Depth of Excavation at Wall Layout Line
HAS, <i>H.A.S.</i>	Headed Anchor Stud
HAZMAT	Hazardous Materials
HBP	Hot Bituminous Pavement
HC	Horizontal Clearance
HCL, <i>H.C.L.</i>	Horizontal Control Line
HCM	Highway Capacity Manual
Hd, <i>HD, Hd.</i>	Head
HDPE	High Density Polyethylene
HDPP	High Density Polypropylene
HEEP	Highway Engineering Exchange Program
HES	Hazard Elimination System
Hex Hd, <i>Hex. Hd.</i>	Hexagonal Head
HID	High Intensity Discharge (Lamps)
HLMR	Highload Multi-Rotational
HMA	Hot Mix Asphalt
Horiz, <i>Horz., Horiz., Hor.</i>	Horizontal
HOV	High-Occupancy Vehicle
HP	H pile, horsepower
HSHP	High StrengthHorsepower
HPC	High Performance Concrete

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
HS Bolt, <i>H.S. Bolt</i>	High Strength Bolt
HS, <i>H.S.</i>	High Strength
HSC, <i>H.S.C.</i>	High Strength Concrete
Ht, <i>Ht.</i>	Height
HTF	Highway Trust Fund (Federal)
HUTF	Highway Users Tax Fund (State)
HW, <i>H.W.</i>	High Water
Hwy, <i>Hwy.</i>	Highway
Hyd, <i>Hyd.</i>	Hydraulic
I	
I	I beam or Wide Flange section (steel), Interstate
ICEA	Insulated Cable Engineers Association, formerly IPCEA
ID, <i>I.D.</i>	Inside Diameter
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IGA	Inter-Governmental Agreement
IMP	Incident Management Plan
IMSA	International Municipal Signal Association
In. Kips	Inch Kips
In. Lb.	Inch Pounds
In., <i>IN</i>	Inches
Incl, <i>Incl., Inc.</i>	Included
Insp, <i>Insp.</i>	Inspector
Int, <i>Int.</i>	Interior
Inv, <i>Inv.</i>	Invert
IP	Iron Pipe
IPCEA	Insulated Power Cable Engineers Association (defunct, currently known as ICEA)
IRI	International Roughness Index
IRIS	Inventory Road Information System
ISA	Initial Site Assessment
ISO	International Organization for Standards
ISP	Information or Internet Service Provider
ISTEA	Intermodal Surface Transportation Efficiency Act
ITAA	Information Technology Association of America
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation System
IVHS	Intelligent Vehicle Highway System
J	
JB, <i>J</i>	Junction Box
JBC	Joint Budget Committee

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
Jct, <i>Jct.</i>	Junction
Jt, <i>Jt., jt.</i>	Joint
K	
Kip, kips	Kilo Pounds, Thousand Pounds
KSF, ksf	kips per square foot
KSI, ksi	Kips per square inch
KW	Kilowatt
L	
L, L	Length, Angle(steel)
LA	Local Agency
Lac, <i>Lac.</i>	Lacing
LAN	Local Area Network
Lb, <i>Lb., LB, lb</i>	Pounds
Lb/Ft, <i>lb./ft.</i>	pound per foot
Lb/SY, <i>Lb/sy</i>	Pounds per square yard
Lb-Ft, <i>lb-ft.</i>	pound foot
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LF, <i>Lin. Ft.</i>	Linear Feet
LFD	Load Factor Design
LLDPE	Linear Low-Density Polyethylene
LRFD	Load and Resistance Factor Design
LS, <i>L.S.</i>	Lump Sum, Length of Spiral
Lt, <i>Lt.</i>	Left
LTDS	Required Long Term Design Strength
Lum, <i>Lum.</i>	Luminaire
M	
m	Meters
MPH	Miles Per Hour
M	Mass
Maint, <i>Maint.</i>	Maintenance
MARV	Minimum Average Roll Value
Matl, <i>Matl.</i>	Material
Max, <i>Max., max.</i>	Maximum
MBTA	Migratory Bird Treaty Act
MCR	Minor Contract Revision
MD	Machine Direction
MFBM, <i>M.F.B.M.</i>	Thousand Foot Board Measure
Mfg, <i>Mfg.</i>	Manufactured, Manufacturer
MHT	Method of Handling Traffic
Mi, <i>Mi.</i>	Mile

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
MIL	Military Specification
Min, <i>Min.</i> , <i>min.</i>	Minimum
Misc, <i>Misc.</i>	Miscellaneous
mm	Millimeters
MMIS	Maintenance Management Information System
MMP	Materials Management Plan
MMS	Maintenance Management System
MOA	Memorandum of Agreement
Mobl, <i>Mobl.</i>	Mobilization
MOSS	Modeling of Surfaces and Strings
MOT	Maintenance of Traffic
MOU	Memorandum of Understanding
MP, <i>M.P.</i>	Milepost
MPH, <i>M.P.H.</i>	Miles Per Hour
MPO	Metropolitan Planning Organization
MRS	Quantity of Mechanical Reinforcement for prescribed Soil zone
MSE	Mechanically Stabilized Earth
MSEW	Mechanically Stabilized Earth Wall
MSS	Manufacturers Standardization Society of the Valve and Fitting Industry
MTIP	Materials Testing and Inspection Plan
MUTCD	Manual on Uniform Traffic Control Devices
MUTS	Minimum Ultimate Tensile Strength
N	
NA, <i>N/A</i> , <i>N.A.</i>	Not Applicable
NACE	National Association of Corrosion Engineers
NAD	North American Datum
NAVD	North American Vertical Datum
NB, <i>N.B.</i>	Northbound, Total Number of Blocks
NBIS	National Bridge Inspection Standards
NBS	National Bureau of Standards
NC	Uniform National Coarse (screw thread)
NCHRP	National Cooperative Highway Research Program
NCR	Nonconformance Report
NDT	Non Destructive Testing
NEC	National Electrical Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NEPA	National Environmental Policy Act
NESC	National Electric Safety Code

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
NF, <i>N.F.</i>	Near Face, Uniform National Fine (screw thread)
NFPA	National Fire Protection Association
NFRT&AQPC	North Front Range Transportation & Air Quality Planning Council
NGS	National Geodetic Survey
NGVD	National Geodetic Vertical Datum of 1929
NHI	National Highway Institute
NHS	National Highway System
NIC, <i>N.I.C.</i>	Not in Contract
NIP, <i>N.I.P.</i>	Nail in Place
NIST	National Institute of Standards and Technology
No, <i>No.</i>	Number
NOAA	National Oceanic and Atmospheric Administration
Nom, <i>Nom.</i>	Nominal
NPCA	National Precast Concrete Association
NPDES	National Pollutant Discharge Elimination System
NPT	National Pipe Thread
NS, <i>N.S.</i>	Near Side
NSC	Normal Strength Concrete
NSF	NSF International, formerly National Sanitation Foundation
NTCIP	National Transportation Communications for ITS Protocol
NTP	Notice to Proceed
NTS, <i>N.T.S.</i>	Not to Scale
NWN	Nonconforming Work Notice
O	
OC, <i>O.C.</i>	On Center
OD, <i>O.D.</i>	Outside Diameter
OFMB	Office of Financial Management and Budget
OG, <i>O.G.</i>	Original Ground
OHW	Ordinary High Water
OJT	On-the-Job Trainee or On-the-Job Training
OP	Overhead Pipe
Opp Hand, <i>Opp. Hand</i>	Opposite Hand
OSHA	Occupational Health and Safety Administration
oz, <i>Oz.</i>	Ounces
P	
PACOG	Pueblo Area Council of Governments
PC, <i>P.C.</i>	Point of Curve
PCA	Portland Cement Association
PCBC	Concrete Box Culvert Precast
PCC, <i>P.C.C.</i>	Point of Compound Curve

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
PCCP	Portland Concrete Cement Pavement
PCI	Precast/Prestressed Concrete Institute
PCO	Potential Change Order
PCP	Product Control Plan
PD	Procedural or Policy Directive
PDA	Pile Driving Analyzer
PE	Preliminary Engineering, Professional Engineer, Permanent Easement
PEL	Planning & Environmental Linkage
PEP	Plain Elastomeric Pad
PG	Profile Grade, Performance Grade
PGL, <i>P.G.L.</i>	Profile Grade Line
PI, <i>P.I.</i>	Point of Intersection
PICS	Project Item Coding System (replaced by Inroads Survey)
PIP	Public Information Plan
PL, PI, <i>PL., PI.</i>	Plate
PLS	Professional Land Surveyor
PM	Project Manager
POC, <i>P.O.C.</i>	Point on Curve
POSS, <i>P.O.S.S.</i>	Point of Slope Selection
POT, <i>P.O.T.</i>	Point on Tangent
PPACG	Pikes Peak Area Council of Governments
PPE	Personal Protective Equipment
PPI	Plastics Pipe Institute
PPPP	Project Priority Programming Process
PS&E, <i>P.S. & E.</i>	Plans, Specification and Estimate
PS, <i>P.S.</i>	Planned Subgrade
Prin, <i>Prin.</i>	Principle
Proj, <i>Proj.</i>	Project, Projection
ProMIS	Project Management Information System
Prov, <i>Prov.</i>	Provisions
PSC	Prestressed Concrete
PS&E	Plans, Specifications and Estimate
psf	pounds per square foot
PSI	Preliminary Site Investigation
psi, <i>P.S.I.</i>	Pounds per square inch
PSIG	Pounds Per Square Inch Gauge
PT, <i>P.T.</i>	Point of Tangent
PTFE	Polytetrafluoroethylene
PTI	Post-Tensioning Institute
PUC	Public Utilities Commission

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
PVC	Poly Vinyl Chloride (pipe), Point of Vertical Curve
PVI	Point of Vertical Intersection
Pvmt, <i>Pvmt.</i>	Pavement
PVT	Point of Vertical Tangency
Q	
Q	Peak Discharge or Flow Volume
QA	Quality Assurance
QC	Quality Control
QMP	Quality Management Plan (Design/Build Terminology)
R	
R, <i>R.</i> , <i>Rad.</i>	Radius
RA	Rubble Arch
RAC	Rubble Arch Culvert
rad	radians
RC, <i>R.C.</i>	Reinforced Concrete, Reverse Crown
RCO	Request for Change Order
RCP, <i>R.C.P.</i>	Reinforced Concrete Pipe, Request for Change Proposal
RCPC	Reinforced Concrete Pipe Culvert
RCRA	Resource Conservation and Recovery Act
Rdwy, <i>Rdwy.</i>	Roadway
RE	Resident Engineer, Railroad Easement, Reinforced Earth
Ref, <i>Ref.</i>	Reference
Reinf, <i>Reinf.</i>	Reinforcing
Rem, <i>Rem.</i>	Remove, Removal
Repl, <i>Repl.</i>	Replace
Req, <i>Req.</i> , <i>Req'd</i> , <i>Reqd.</i>	Required
Rev, <i>Rev.</i>	Revised, Revision
RFC	Released for Construction
RFP	Request for Proposals
RFQ	Request for Qualifications
RG	Riveted Plate Girder
RGC	Riveted Plate Girder Continuous
RHM	Recognized Hazardous Materials
RL	Reinforcement Length
RME	Region Materials Engineer
RMWA	Roadmasters and Maintenance of Way Association (merged into AREMA)
ROD	Record of Decision
ROW, <i>R.O.W.</i> , <i>R/W</i> , <i>RW</i>	Right of Way
RPC	Region Planning Commission

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
rpm, <i>RPM</i>	Revolutions Per Minute
RSC	Rigid Steel Conduit
RSS	Reinforced Soil Slope
Rt, <i>Rt.</i>	Right
RTD	Region Transportation Director
RWIS	Road Weather Information System
S	
S	Tributary reinforcement spacing for MSE walls, Girder Spacing
SAC	Steel Arch Culvert
SAE	Society of Automotive Engineers
San, <i>San.</i>	Sanitary
SAP	Sample Analysis Plan
SB, <i>S.B.</i>	Southbound
SBA	Small Business Administration
SBG	Steel Box Girder
SBGC	Steel Box Girder Continuous
SC, <i>S.C.</i>	Spiral to Curve
Sch, <i>Sch.</i>	Schedule
SCS	Spiral Curve Spiral
SDG	Steel Deck Girder
SDGC	Steel Deck Girder with Floor Beam System
SDGCK	Steel Deck Girder Continuous & Composite
SDI	Steel Decks Institute or Steel Door Institute
SDT	Steel Deck Truss
Sect, <i>Sec., Sect.</i>	Section
SF, <i>Sq. Ft., Sq ft</i>	Square Feet
SH	State Highway
Shldr, <i>Shldr.</i>	Shoulder
SHPO	State Historic Preservation Office
Sht, <i>Sht.</i>	Sheet
SIA, SI&A	Structural Inventory & Appraisal
SIC	Standard Industrial Code
SIGN	Overhead Sign
SIGNB	Overhead Sign-Butterfly
SIGNC	Overhead Sign-Cantilever
SIGND	Overhead Sign + Cantilever
Sim, <i>Sim.</i>	Similar
SIP, <i>S.I.P.</i>	Stay in Place
SJI	Steel Joists Institute
SLT	Steel Low Truss

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
Sdwk, <i>SLWK.</i>	Sidewalk
SMA	Stone Matrix Asphalt
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SME	Subject Matter Expert
SMP	Safety Management Plan
SMSE	Shored Mechanically Stabilized Earth
SOQ	Statement of Qualification, Summary of Quantities
Spa, <i>Spa.</i>	Spaces or Spaced
Specs, <i>Specs.</i>	Specifications
Spl, <i>Spl.</i>	Splice
Sq In, <i>Sq. In.</i>	Square Inches
Sq Mi, <i>Sq. Mi.</i>	Square Miles
Sq, <i>Sq., Sqr.</i>	Square
SRW	Segmental Retaining Walls
SSE	Steel Stringer-Earth Filled
SSM	Steel Stringer-Metal Plank Deck
SSMC	Steel Stringer-Metal Plank Deck Continuous
SSPC	Society for Protective Coatings, formerly Steel Structures Painting Council
SSS	Steel Stringer-Timber Deck
SSSC	Steel Stringer-Timber Deck Continuous
ST, <i>S.T.</i>	Spiral to Tangent
St, <i>St.</i>	Straight, Street
Sta, <i>STA, Sta.</i>	Station
STAC	Statewide Transportation Advisory Committee
Std, <i>Std.</i>	Standard
STG	Steel Thru Girder
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
Str, <i>Str.</i>	Structure, Structural
STT	Steel Thru Truss
SUSP	Suspension Bridge
SWMP	Stormwater Management Plan
SY, <i>Sq. Yd., Sq Yd</i>	Square Yards
Sym, <i>Symm.</i>	Symmetrical
T	
T&B	Top and Bottom
T&E	Threatened & Endangered Species
T, <i>T.</i>	Tons
TAS, <i>T.A.S.</i>	Threaded Anchor Stud

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
TBC	Timber Box Culvert
TC, <i>T.C.</i>	Tangent to Curve
TCC	Traffic Communications Center
TCP	Traffic Control Plan
TD	Timber Stringer (Untreated) Concrete Deck
TDH	Total Dynamic Head
TE	Transportation Enhancement funding
TEA-21	Transportation Efficiency Act for the 21st Century
Temp, <i>Temp.</i>	Temporary, Temperature
Thd, <i>Thd.</i>	Thread
THHN	Thermoplastic High Heat-resistant Nylon coated (Insulation designation for wire)
THWN	Thermoplastic High Water-resistant Nylon coated (Insulation designation for wire)
TIG	Tungsten Inert Gas (Welding)
TIP	Transportation Improvement Program
TLA	Timber Laminated Arch (Gluelam)
TLS	Timber Laminated Stringer(Gluelam)
TLT	Timber Low Truss
TM	Timber Stringer (Untreated) Metal Deck
TMOSS	Terrain Modeling Survey System
TOC	Traffic Operations Center
Tot, <i>Tot.</i>	Total
TPI	Threads per Inch
TPR	Transportation Planning Region
TRB	Transportation Research Board
TS, <i>T.S.</i>	Tangent to Spiral, Timber Stringer (Untreated) Timber Deck
TSF	Tons/square foot
TSLAB	Timber Slab
TTC	Timber Culvert
TTD	Timber Stringer-Concrete Deck
TTM	Timber Stringer- Metal Deck
TTS	Timber Stringer- Timber Deck
TTT	Timber Thru Truss
TUNC	Tunnel-Concrete Lined
TUNR	Tunnel-Thru Rock-No Lining
Typ, <i>Typ.</i>	Typical

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
U	
UDBE	Underutilized Disadvantaged Business Enterprises
UG	Underground
UL	Underwriters Laboratories, Inc.
UMTA	Urban Mass Transportation Administration
UNC	Uniform National Coarse (screw thread)
UNCC	Utility Notification Center of Colorado
8UN	8 thread series (screw thread)
UNF	Uniform National Fine (screw thread)
UNO	Unless Noted Otherwise
UON	Unless Otherwise Noted
UPRR	Union Pacific Railroad
UPS	Uninterruptible Power Supply
US, <i>U.S.</i>	Upstation, United States
USACE	United States Army Corp of Engineers
USASI	United States of America Standards Institute (defunct, now known as ANSI)
USC	United States Code
USCS	Unified Soil Classification System
USDA	U.S.S Department of Agriculture
USDOT	U.S.S Department of Transportation
USFWS	U. S.S Fish and Wildlife Service
USGBC	United States Green Building Council
USGS	US Geological Survey
Util, <i>Util.</i>	Utility, Utilities
UV	Ultraviolet
V	
VC, <i>V.C.</i>	Vertical Curve
VCP	Vitrified Clay Pipe
VE	Value Engineering
VECP	Value Engineering Change Proposal
Veh, <i>Veh.</i>	Vehicle
Vert, <i>Vert.</i>	Vertical
VMS	Variable Message Sign (also known as DMS)
VMT	Vehicle Miles Traveled
Vol, <i>Vol.</i>	Volume
VPC	Vertical Point of Curvature
VPI	Vertical Point of Tangency
VPT	Vertical Point of Intersection
W	
W/C	Water-Cement Ratio

<u>Abbreviation or Acronym Symbols</u>	<u>Meaning</u>
WALL	Retaining Wall
Wash, <i>Wash.</i>	Washer
WASHTO	Washington Association of State Highway and Transportation Officials
WB, <i>W.B.</i>	Westbound
WBS	Work Breakdown Structure
WF	Wide Flange (Steel section)
WG	Welded Girder
WGC	Welded Girder Continuous
WGCK	Welded Girder Continuous & Composite
WGCKP	Welded Girder Continuous, Composite Prestressed
WGK	Welded Girder Composite
WGKP	Welded Girder Composite Prestressed
WP, <i>W.P.</i>	Work Point
WPA	Works Projects Administration (formerly Works Progress Administration, (defunct as of 1943)
WQCD	Water Quality Control Division (Colorado Department of Public Health and Environment)
WRI	Wire Reinforcement Institute
WS, <i>W.S.</i>	Water Surface
Wt, <i>Wt.</i>	Weight
WWF	Welded Wire Fabric, typically referred to very light gauge wire for crack control
WWR	Welded Wire Reinforcement
X	
Y	
Yd, <i>Yd.</i>	Yard