

INDEX

Volume No. 1

References are to sections unless otherwise noted. The following abbreviations are used. Def. for definitions; Chap. for chapter.

A

Abandoned lines	E 121.04(2)(c)
Accessible (def. 1)	E 101.02
Accessibility of	
conductors in manholes	E 129.04(1)
fuses	E 117.01
grounding conductors	E 103.08(1)
lines	E 121.03
live parts	E 113.02(2)
manholes	E 129.01(3)
overhead lines	E 121.03
station equipment	E 113.02(2), E 117.01, E 118.01(3) & (4)
supply lines	E 121.03
switchboards	E 118.01, E 143.01
switches	E 117.01, E 121.07(1)
underground lines	E 129.01
working space	E 112.06
Acid	E 114.01, E 143.01(5)
fumes	E 111.01(2)(c), E 112.04(2), E 114.02
resistive coverings	E 114.06
Additions, application of orders to	E 20.13(2)
Address lists	E 141.01(3)(a), E 144.02
Adjustable speed motor	E 113.01(5)
Adjusting lightning arresters	E 119.05(2)
Administrative authority (def. 3)	E 101.02, E 2.02
application and waving of rules by	E 20.13
Alive (def. 4)	E 101.02
by leakage	E 140.03
Allowable	
fibre stresses wood poles	E 126.02 (Table 19)
unit stresses, steel	E 126.02 (Table 16)
Alternating-Current circuits	E 103.02(2)
ground connections	E 103.07
made electrode	E 103.08(4)
anchors	E 103.08(4)
grounding	E 103.08
grounding conductor	E 103.06
size and capacity	E 103.06
ground resistance	E 103.09
anchors and guys	E 103.08(4), E 128.03
Angles in line, strength	E 126.03(1)(d)
loading at	E 125.03(2)(d)
use of guys with	E 128.03(1)
Antislip treads	E 111.03(5)
Antenna, community (def. 23)	E 101.02
conflict (def. 38)	E 101.02

Apparatus	
location relative to climbing space	E 123.07(4)
Apparent sag, of span (def. 135(b))	E 101.02
at any point (def. 135(a))	E 101.02
Appliances, electrical (def. 6)	E 101.02
branch circuit (def. 12)	E 101.02
fire-extinguishing	E 111.04
Application of loads	E 125.03(5)
Application of rules	E 20.13, E 103.01, E 110.01, E 120.01, E 140.01
communication circuits	E 143.06(1)
grounding	E 103.01
intent	E 20.13(1)
killing equipment and lines	E 142.04
meters	E 143.02
overhead lines	E 143.04
protective grounds	E 142.05
series street lights	E 143.05(1)
specialized work	Chap. 143
supply equipment	E 110.01
temporary installations	E 20.13(3)
testing	E 20.13(4), E 143.03(1)
tunnel and subway	E 143.08(1)
underground lines	E 143.07(1)
waivers	E 20.13(1)
Approval of lines	E 122.05
Approved (def. 7)	E 101.02
materials	E 20.11(1)
methods of installation	E 20.11(2)
Arcing at insulators	E 127.08
Arcing parts	E 117.08, E 119.05
guarding	E 119.05
lightning arresters	E 119.05
precautions	E 142.01(6)
shielding	E 117.08
Arcing shields	E 113.02(4)
Arc lamps	E 128.07(5)(f)
Armored cable (def. 8)	E 101.02
grounding	E 103.03
Arrangement of equipment	Chap. E 111, E 121.07
lines	E 141.02(4)
station and substations	Chap. E 111
switchboards	Chap. E 118
switches	Chap. E 117, E 121.07
Arresters (see lightning arresters)	E 103.02(2)(f), E 103.10(1)(a), E 111.05(4), Chap. 119
Artificial grounds	E 103.07(3), E 103.08(4), E 103.09
Assumptions for stress calculation	E 126.01
Attachment of	
conductor to insulator	E 126.02(5), E 126.03(8)
lightning rods	E 103.10(1)(d)
wires and grounds	E 142.03(8)
Attachment plugs	E 111.02(4)
Attendance	E 141.02
Authority (def. 10)	E 101.02
in charge of operation	E 141.01(6)(a)
of deputy	E 141.01(6)(b)
Authorization	
for work	E 142.02(4)
Automatic (def. 11)	E 101.02

Automatic cutout and grounding conductor	E 103.06(1)
Auxiliaries	E 113.03(3)
Availability of water pipes	E 103.07
Averaging, adjacent poles	E 126.02(1)(a)
span length	E 125.03(4)
Avoiding, flames	E 143.07(5)
shock	E 142.03
Avoidance of conflict	E 122.02
Avoidance of current flow over grounding conductor	E 103.02(3)

B

Bare, conductors	E 116.03
Bare grounding conductors	E 103.06
Bare parts, separation of	E 112.06, E 118.05
Barriers for	
conductors	E 112.05(3)
coupled machines	E 113.03
disconnectors	E 112.05(3)(f)
protection of traffic	E 142.02(8)(a)
rotating machinery	E 112.03(1), E 113.02
switchboard equipment	E 118.05, E 118.07(1)
testing	E 143.03(5)
use of employees	E 143.03(5)
working space	E 112.05, E 123.08
Baskets, work from	E 142.03(1)
Batteries	Chap. 114, E 143.05(1), E 145.01(9)
emergency lighting	E 111.02
Battery rooms	Chap. 114, E 145.01(9)
floors	E 114.06
guarding live parts	E 114.08
illumination	E 114.09
smoking in	E 143.01(5), E 145.01(9)
supply stations	E 143.01(5)
supports in	E 114.05
ventilation	E 114.03
wiring in	E 114.07
working in	E 143.01(5), E 145.01(9)
Belts, guarding of	E 112.03
safety	E 141.02(7), E 142.01(10), E 144.05, E 145.01(4)(b)
Blasting, tunnels	E 143.08(12)(c)
Blocking switches	E 117.01(2), E 117.05(2)
Bolts	E 123.10(6)(d), & (7)(d)
Bonding	E 113.03, E 129.06(2)
Braces for, crossarms	E 126.08(4)(b), E 126.04(3), E 128.01(2)(b)
poles	E 128.03(1), E 143.04(2), E 145.02(1)
racks	E 126.03(5)
Brackets and racks	
conductor separation on	E 123.06(1)(d)
Grades B and C	E 126.02(4)
Grade D	E 126.03(5)
Branch circuits (def. 12, 13, 14, 15)	E 101.02
Branch connections for conductors	E 128.06(2)
Bridges	
conductor clearance	E 123.05(4)
conductor separation	E 123.06(3)
guards under	E 128.10(5)
Bridging series lamps	E 143.05(4)

Brushes, handling of	E 143.01(4), E 145.01(8)
Buckarms	E 123.07(6), E 123.08(4)
Building (def. 16)	E 101.02
as conductor supports	E 123.04(3), E 128.01(3)
clearance of conductors from	E 123.05(3)
separation of conductors attached to	E 123.06(2)
yards and general safety	E 111.03
Buried grounds	E 103.07(2) & (3), E 103.09
cable	E 129.05
Burns, protection from	E 117.08(1)
Bus bars	E 116.03, E 116.05(1),
.....	E 118.05(1), E 118.07(3)
ground	E 103.02(2), E 103.06(6)
Bushings	E 113.04(2)

C

Cabinets (def. 17)	E 101.02
grounding of	E 117.09
Cable (def. 18)	E 101.02
Cabled service drops	E 126.04(5)(d)
Cables	
bonding	E 129.06(2)
communication	E 123.10(7)(a), E 126.02(9)
grades B and C	E 126.02(7) & (9)
grade D	E 126.03
grade N	E 126.04
injury	E 143.08
installation	E 116.04, E 116.05(2),
.....	E 143.07, Chap. 129
live, in manholes	E 143.07(8)
location in manholes	E 129.04
portable, inspection	E 143.08(8)
protection	E 129.08
underground	E 129.04
pulling	E 143.07(6), E 145.03(5)
splicing of live	E 143.07(8)
strength of communication	E 126.02(9)
supply lines	E 124.02, E 126.02(7)
construction	E 124.02
covering	E 123.10(6)(a)
grounding	E 103.02(2)(d) & (e)2, E 126.02(7)
insulation of	E 126.02(7)
messengers for	E 126.02(7), (9) & (10)
pole strength for	E 124.02(1), E 124.04
specially installed	E 124.02, E 126.02
splices	E 126.02, Chap. 129, E 143.07(8)
strength	E 126.02(7) & (9)
supports in manholes	E 129.03(7)
testing before working on	E 143.07(8)
underground, accessibility	Chap. 129
accessibility	E 129.04(1)
protection of	E 129.05
spacing of	E 129.03, E 129.05
supports	E 129.03
unidentified	E 143.07(7)
Cable vault (def. 19)	E 101.02
Calculation of stresses	Chap. 125, Chap. 126
Capacity	
disconnectors	E 117.05
switches	E 117.05

Care, exercising	E 142.01(5), E 143.08(2), E 145.02(6)
live parts	E 142.01(5), E 143.04(6)
near live parts	E 142.01(5), E 143.04(6)
supply lines	E 145.02(6)
Carrying tools	E 143.08(6)
Casings	E 116.02(1)
Catenary construction	E 128.10
Cedar poles (see poles)	
Chestnut poles (see poles)	
Character of construction etc.	E 20.10, E 20.12
Checking conditions testing	E 143.03(3)
Checking grounds	E 103.09
Chief operator	E 141.01(6)(a)
authorization from	E 142.02(4)(a)
communication lines	E 143.06(2)
deputy	E 141.01(6)(b)
diagrams	E 141.02(4)
duties	E 141.01(6), E 142.02(1)
official in charge	E 143.06(2)
reporting circuit trouble	E 143.01(8)
Choke coils	E 119.05(3)
Circuit-breakers (def. 21)	E 101.02, E 111.05(1)
arrangement	E 117.01(1)
grounding	E 112.04, E 117.09
guarding	E 112.05, E 117.10
installation	Chap. 117
location	Chap. 117, E 117.02
protection required	E 111.05(1)
where required	E 117.06
Circuits (def. 20)	E 101.02
communication	E 143.06
constant current	E 123.01(2)
disconnected periodically	E 143.05(6)
fusing	E 117.06
grounding	Chap. 103, E 103.02, E 115.02, E 116.01(2) & (3), E 118.06
operation of, by employees	E 142.02(4)(b)
power, central offices	E 145.01(7)
protection of	E 115.01(2), E 116.01(1), E 116.02(1), E 117.06, E 119.01
series, handling of	E 142.03(9)
switches on	E 117.03
tagging	E 142.02(6)
Classification of	
circuits	E 124.03
supply cables	E 124.02(1)
voltages	E 122.01(3), E 123.09(1)
Clearances	Chap. 123
basic	
vertical	E 123.03(1)
wire-crossing	E 123.04(1)
branch connections	E 128.06(2)(b)
cable	E 123.01(3)
circuits, constant-current	E 123.01(2)
conductors	
above rails and ground	E 123.03
at supports	E 123.06(1)
from buildings	E 123.05(3)
from bridges	E 123.05(4)
from conductors of another line	E 123.05(1)

from floor	E 112.05
from other conductors at crossings	E 123.04
from poles of another line	E 123.05(2)
from signs	E 123.05(5)
from stored material	E 123.02(7)
from tanks	E 123.02(8)
from trees	E 123.02(6)
from wells	E 123.02(9)
in ground, cables	E 129.05
in manholes	E 129.04
lateral and vertical	
climbing space	E 123.07, E 123.10
communication	E 123.10(5) & (6)
conductors not in conduit	E 123.10(2)
from supports and other wires	E 123.06(1)(c), E 123.10
mechanical protection	E 103.06(3), E 123.10(3)
pole steps	E 123.10(1)
power wires on poles	E 123.10(4), (5)
separation	E 123.06(1)
working space	E 123.10(1)
longitudinal runs	E 123.07(7)
neutral	E 123.01(4)
on buildings	E 123.05(2)(c)3, E 123.06(2),
on bridges	E 123.06(3)
on pole lines	Chap. 123
on racks	E 123.06(1)(d)
open not in conduit	E 123.10(2)
connections on poles	E 128.06(2)
constant current circuits	E 123.01(2), E 128.07(5)
ducts, from other structures	E 129.02(5)
employees from, arcing parts	E 142.01(6)(b)
high voltages	E 142.03(2) & (3)
guards, from live parts	E 112.05
hand	E 128.07(4)
increases for, flexible supports	E 126.02(1)(f)(2)
high voltage	E 123.03(2), E 123.04(2)
large sags	E 123.03
long spans	E 123.03(2), E 123.04(2)
suspension insulators	E 123.03(2), E 123.04(2)
maintenance of	E 20.12, E 123.01(5)
metal sheath cables	E 123.01(3)
minimum requirements	E 20.01, E 120.02
poles, from conductors on another line	E 123.05(2)
from curbs	E 123.02(3)
from hydrants	E 123.02(1)
from rails	E 123.02(4)
from street corners	E 123.02(2)
pole steps above ground	E 128.01(1)(e)
street lamps above ground	E 128.07(5)(b)
from buildings	E 128.07(5)(c)
from poles	E 128.07(5)(a)
supply equipment from communication equipment	E 123.09(5), E 129.08(1)
trolley contact conductors	
above ground	E 123.03(1), E 128.10(1) & (2)
above rails	E 123.03(1)
from other wires at crossings	E 123.04(1)
Climbers	E 143.04(5)
Climbing poles	E 143.06(3)
Climbing space (def. 22)	E 101.02, E 123.07
dimensions	E 123.07(1) & (5)

longitudinal conductors	E 123.07(7)
obstruction of	E 123.10(1), E 128.07(2)
past apparatus	E 123.07(4), E 128.07(2)
through conductors	E 123.07(5)
vertical conductors	E 123.07(8)
with buckarm construction	E 123.07(6)
with racks	E 123.07(7)
with ridge pins	E 123.07(9)
Closing circuits	E 142.02(7)(b)
Clothes	E 141.02(6)(a), E 142.01(8)
Clothing, suitable	E 142.01(8)
Communication cable strength	E 126.02(9)
Communication circuits classed as supply circuits,	
clearances	E 123.05
grade of construction	E 124.03(3)
guarding of	E 128.09(2)
used in operation of supply lines	E 124.03(3), E 128.09
Communication conductors	E 126.02, E 126.03, E 126.04(9)
climbing space	E 123.07
crossarm separation	E 123.09
strength	E 126.02
unguyed at railroad crossings	E 125.03(3)(d)
vertical and lateral conductors	E 123.10(5) & (6)
Communication lines (def. 24 & 105)	E 101.02
alone	E 124.03, E 126.04(9)
clearance above ground and rails	E 123.03
clearance from other wires	E 123.04
climbing space	E 123.07
concerned only with other communication lines	E 124.03, E 126.04(9)
conductor sizes	E 126.03(9)
crossing over trolley contact conductors	E 124.03
crossing railways, grade of construction	E 124.03
inspection of	E 121.04
maintenance of	E 121.04
minimum sizes of	
crossarms	E 126.03(4)(b)
pins	E 126.03(6)(c)
poles	E 126.03(1)(f)
wires	E 126.03(9)(b)
transverse and longitudinal strength	E 126.03(1)
underground	E 129.02(4), E 129.05
fire alarm lines	E 124.03(4), E 128.08(1)
grades of construction	E 124.03
grounding, isolation or protection of	E 128.08(1)
joint use of poles	E 122.03, E 126.02(7)
rules for employees	E 145.01
rules for employers	E 144.01
supporting structures for	E 126.03, E 126.04(1)
Community antenna (def. 23)	E 101.02
Commutators	E 113.02(4)
Complaints	E 2.02(5)
Compliance with orders	E 20.13
Compliance with building code	E 111.03
Compression members unsupported length	E 126.02(1)(c)6
Compression ratio (steel)	E 126.02(1)(c)
Concealed (def. 25)	E 101.02
Concrete poles	E 126.02(1)(b)
Condensers (see capacitors)	
Conductance of grounding conductor	E 103.06

Conductors (def. 26-33)	E 101.02, Chap. 116
accessible	E 129.04
attached to buildings	E 123.05(3)(c)
attaching	E 142.03(8)
attachment to insulator	E 126.03(8)
bare	E 116.02(3), E 116.03, E 129.07(1)
branch connections	E 128.06(2)
clearance (see clearances)	
conflict (def. 38 & 40)	E 101.02, E 124.02(5)
connecting lightning arresters	E 119.03
contact, clearance above ground	E 123.03, E 128.10(1) & (2)
high voltage	E 128.10(2)
jointly used poles	E 123.09(5)(c)
supports for	E 128.10(1)
third rails, protection of	E 128.10(3)
cradles	E 126.02(12), E 126.04(8)
damage	E 116.02
different voltage on same crossarm	E 123.06
exposed to higher voltages	E 116.01(3)
fallen, protection from	E 142.02(8)(b)
fastenings, strength of	E 126.02(5)
fire-alarm	E 124.03(4)
flame proofing	E 116.02(2)
form of guards	E 116.04(2)
fuses	E 116.01(1)
fuses in ground	E 116.01(2)
grade of construction	E 124.03, E 126.02(6)
B & C	E 126.02(6), E 126.02(8)
D	E 126.03(9)
N	E 126.04
grounded, fuses in	E 116.01(2)
grounding, installation of	E 103.06
grounding	Chap. 103, E 119.03, E 121.06
guarding	E 112.05, E 116.02, E 116.04
identification	E 116.01(3), E 128.06(1)
in high temperature	E 116.02(5)
insulation of	E 112.05(3)(e), E 116.02(5), E 123.10(4)
E 123.10(6), E 129.08	
isolation	E 112.05(3), E 116.03
lateral (def. 100, 101)	E 101.02
lightning protection	E 126.02(6)(c), E 126.04(6)
loading	E 125.01
location in manholes	E 129.04
location of vertical and lateral	E 123.10(1)
longitudinal runs of, protected	E 123.07(7)
material	E 126.02(6)(a), E 126.02(9), E 126.04(4)(a)
mechanical protection	E 123.10(3), E 129.08(2)
metal sheaths	E 116.04(1)
minimum sizes	E 126.02(6)(b)
neutral	E 123.01(4)
not in conduit	E 123.10(3)
over buildings	E 123.05(3)(d)1
paired communication	E 126.02(10)
protection of	E 116.01, E 126.02(6)(a)2
against contact	E 116.02(3)
breakage	E 126.02(1)(f) & (6), E 128.02(2)
damp locations	E 116.05(2), E 129.06(1)
from falling trees	E 128.02(1)
hazardous locations	E 116.05
heat	E 116.02(2) & (5)

high voltages	E 116.01
magnetic force	E 116.02(3)
mechanical injury	E 116.02(1), E 116.04(1), E 123.10(3)
overload	E 116.01(1)
sags	E 126.02(6)(d), E 126.02(10)(a)2, E 126.03(9)(d), E 126.04(5)(c)
sags at same supports	E 123.09(2)(c)
separation	
from communication equipment	E 123.09(5)
from stored equipment	E 123.02(7)
from signs	E 123.05(5)
from tanks	E 123.02(8)
from trees	E 123.02(6)
from wells	E 123.02(9)
in any direction	E 123.09(5)
in manholes	E 129.04
on buildings	E 123.06(2)
on bridges	E 123.06(3)
on poles	E 123.06
on racks	E 123.06(1)(d)
when attached to bridges	E 123.06(3)
when attached to buildings	E 123.05(3)(c)3, E 123.06(2)
service	E 126.04(5)
size for grounding	E 103.06
size, minimum	E 126.02(6)(b), E 126.03(9), E 126.04(4)(b)
slack, taken up	E 123.01(5)
span lengths	E 123.03(1), E 125.03(4)
splices and taps	E 126.02(6)(e), E 126.03(4)
storage-battery rooms	Chap. 114
strength	E 124.03, E 126.02, E 126.03, E 126.04
supported by suspension insulators	E 123.04(2)(c)
supported by trees and roofs	E 128.01(3)
tensions, maximum	E 126.02(6)(d)
terminal construction	E 129.08(4)
third-rail	E 128.10(3)
trolley contact	E 126.02(6)(f)
twisted pair	E 126.02(10)
underground, clearance, of in manholes	E 129.04(3), E 129.05
guarding of live parts	E 129.07
location of	E 129.04, E 129.05
mechanical protection of	E 129.06, E 129.08
separation of	E 129.04(3), E 129.05(1)
supports for	E 129.03(7)
unusual supports	E 128.01(3)
vertical (def. 169)	E 101.02, E 123.09, E 123.10
vertical separation	E 123.09(2) & (4)
Conduit (def. 35)	E 101.02
for grounding conductors	E 103.06(3), E 123.10(1)
grounding	E 103.03, E 103.04, E 103.08(1) & (2), E 115.01(2), E 116.01(3), E 116.05, E 126.06(2)
grounding noncurrent-carrying parts	E 103.04
hazardous locations	E 116.05
in stations	E 116.05
service entrance	E 103.02(2)(b)
use of	E 103.06(3), E 115.01(2), E 116.01(3), E 116.05(1)
Conflict (def. 38, 39, 40)	E 101.02
antenna (def. 38)	E 101.02
avoidance	E 122.02, E 122.03(3)
conductor (def. 39)	E 101.02

grade of construction for	E 124.03
how determined	E 124.02(5)
structure (def. 40)	E 101.02
Connections, attaching to live parts	E 142.03(8)
Connections to be avoided	E 103.07(4), E 103.10
Connectors (def. 41)	E 101.02
plug	E 111.02(3) & (4), E 118.07(2)
separable	E 111.02(4)
Constant-current circuits (series)	E 124.03(1)
clearances for	E 123.01(2)
grade of construction	E 124.03(1)
insulators for	E 127.07(1)
Construction of	
duct system	E 129.02
lines and equipment	E 20.10, E 20.12, E 121.01
manholes	E 129.03
railways	E 128.10
Construction, grades of	E 124.03
Contact conductors (trolley)	E 124.03(2), E 125.03(2)(b), E 126.04(7), E 128.10
surface	E 103.08(3)
Control apparatus	
circuit protection for	E 113.01(6), E 113.06(1)
equipment	E 113.06(1), E 117.01(1)
Control of	
oil switches	E 117.02
remote	E 117.01(1), E 117.02, E 117.05 (2), E 119.02(2)
rotating machines	E 113.01
Controllers (def. 42)	E 101.02
arrangement	E 117.01(1)
Cooperation, between utilities	E 122.03(2)
to avoid hazard	E 122.02, E 122.03
Cooperative study	E 122.03(2)
Corner poles	E 123.02(2), E 126.02(2)
Corrosion of conductors	E 114.06, E 126.02(6)(a), E 126.03(9)(a), E 126.04(4)(a)
Corrosive vapors	Chap. 114
Coupled machines	E 113.03(2)
Covers for, enclosed control equipment	
live parts	E 112.05(3)
manholes	E 129.03(6)
Cradles	E 126.02(12), E 126.04(8)
Creosoted poles (signs on)	E 121.05(3)
Crossarms	
at ends of high grade construction	E 126.02(4)
at ends of transversely weak sections	E 126.04(3)
bracing for	E 126.02(4), E 126.03(4), E 126.04(3), E 128.01(2)(b)
dimensions	E 126.02(4)(d), E 126.03(4), E 126.04(3)
double	E 126.02(4)(e), E 126.03(4), E 126.04(3)
grade of	E 124.04(2)
grade B & C	E 126.02(4)
grade D	E 126.03(4)
grade N	E 126.04(3)
loading	E 125.03(1)
location	E 126.02(4)(f), E 128.01(2)
material	E 126.03(4)
minimum size	E 126.03(4)

separations	E 123.09
size	E 126.02(4)(d), E 126.03(4), E 126.04(3)
steel	E 126.02(4)
strength	E 126.02(4)(c), E 126.03(4), E 126.04(3)
Crossings	
average pole strength, not applicable	E 126.02(1)
average span not applicable	E 125.03(4)
communication over railroad	E 126.03
supply conductors	E 123.04
trolley contact	E 126.02(10)(b)2, E 126.04(7)
clearances	E 123.04
cradles	E 126.02(12), E 126.04(8)
double	E 124.02(4)(c)
grade of construction at	E 124.02(4), E 124.03, E 124.04
short-span construction	E 126.02(11)
supply lines over, communication	E 126.02
railways	E 126.02
underground	E 129.04, E 129.05(2)
Curbs, clearance from	E 123.02(3)
Current-carrying parts (def. 44)	E 101.02, E 121.05(1)
isolation, guarding & marking	E 121.05(1)
Current transformers, bridging of	E 115.01(1), E 143.02(5)
grounding	E 103.04, E 115.02
secondary circuits	E 115.01
Cutout	
box (def. 46)	E 101.02
Cutting into insulation	E 142.03(1)(d)

D

Damp locations, conductors in	E 116.05(2)
grounding station, equipment in	E 112.04, E 115.03
Dangerous conditions (see hazardous)	
Danger signals	E 143.07(2), E 145.03(1)
signs	E 121.05(3), E 141.02(9)
Dead (def. 47)	E 101.02
Dead ends, loading	E 125.03(3)(c)
strength of construction at	E 126.02(1)(d)
use of guys at	E 128.03(1)
Dead-front boards	E 118.07(3)
Defective equipment	E 112.02(1), E 113.01(2)
Defects, in wood poles	E 126.02(1)(d)5, E 126.03(1)(e)
record	E 121.04
reporting	E 121.04(1)(d), E 143.01(9), E 143.02(7), E 143.03(7), E 143.04(11), E 143.05(7), E 143.06(7), E 143.07(9), E 143.08(14), E 145.02(9), E 145.03(6)
Definitions	E 101.02
Deflecting supports, use of guys with	E 126.02(1)(f), E 128.03
Deflection or deformation of supports	E 126.01
Demand factor (def. 48)	E 101.02
Depth of setting poles	E 126.02(2)(b)2
Desirability of joint use	E 122.03(3)
Deteriorating agencies, protection against	E 112.09, E 113.05, E 126.02(1)(c)8, E 126.02(13)
Device (def. 49)	E 101.02
Diagrams, for chief operator	E 141.02(4)
organization	E 141.01(2)
Dimensions of, climbing space	E 123.07(1), E 123.07(5)
working space	E 123.08(2)

Disconnecting means (def. 50)	E 101.02
Disconnection of fuses	E 117.07
Disconnectors (def. 51)	E 101.02
air break	E 117.05(3)
alignment	E 117.05(4)
barriers for	E 112.05(3)(e)
capacity of	E 117.05(1)
for lightning arrester	E 119.02
for street lamp	E 128.07(5)(f)
identification	E 112.10(1)
locking of	E 117.05(2)
opening and tagging	E 142.04(3)
protecting workman by	E 142.02(9)
rating	E 117.05(1)
use	E 117.03, E 117.05(3)
Distribution systems, grounding of	Chap. 103, E 103.02
Double crossarms	E 126.02(4)(e), E 126.03(4)(c), E 126.04(3), E 128.01(2)(b)
Double crossings	E 124.02(4)(c)
Double pins	E 126.02(5)(c)
Drainage	
for oil-filled apparatus	E 111.05, E 115.04
of manholes	E 129.03(3)
of underground systems	E 129.02(2)
Drip pans	E 113.06(2)
Driven-pipe ground (made ground)	E 103.08(4)(c)
Ducts (def. 53)	E 101.02
alignment	E 129.01(2), E 129.02
arrangement	E 129.02(8)
clearance from other structures	E 129.02(4)
construction	E 129.02(1)
dissipation of heat in	E 129.02(8)
for generator leads	E 116.02(4)
grading of	E 129.02(2)
location of	E 129.01(1)
material size and finish	E 129.02(1)
protection of	E 129.02(7)
separation between communication supply	E 129.02(5)
Dust proof (def. 54)	E 101.02
Dust-tight (def. 55)	E 101.02
Duties of chief operator	E 142.02(1)
Duties of foreman	E 142.02(2)
Duty (defs. 56-60 incl.)	E 101.02

E

Earth, resistance between ground part and	E 103.09
Effectively grounded (def. 61)	E 101.02, E 103.02, E 103.02(2)(d) & (e)
Effectiveness of ground connection	E 103.07
Electrical strength of insulators	E 127.03
Electrical supply equipment (def. 64)	E 101.02
Electrical supply lines (def. 65)	E 101.02, Chap. 126, E 145.02(6)
Electrical supply station (def. 66)	E 101.02
Electrical lines on highway	Chap. 122
Electric railway construction	E 128.10
Electric sign (def. 62)	E 101.02
Electrodes, made	E 103.07(3)
Electrolysis of anchor rods, protection against	E 128.03(6)
prevention	E 103.07(1)
Elevated parts	E 112.06(3)

Elevation, working in positions of	E 143.01(6)
Emergencies, first-aid address book	E 141.01(3)(a), E 144.02(1)
waiver of rules in	E 20.13(5)
Emergency	E 20.13(5)
control	E 113.01(2)
equipment	E 112.02(3)
illumination	E 111.02
installations	E 20.13(5)
methods	E 141.01(3), E 142.01(1), E 144.02(1)(b)
rules	E 144.02
Employees, battery rooms	E 143.01(5)
communication systems, avoidance of supply lines	
and equipment by	E 145.02(4), E 145.02(5)
duties of	E 142.02(1), E 142.02(2), E 145.01(3)
fuses, about	E 143.01(4)
inexperienced and unfit	E 142.01(3), E 145.01(2)
instruction, concerning equipment	E 141.02(5)
for first aid	E 141.01(4), E 144.03
protection of, by disconnectors	E 112.04(3), E 142.02(9),
E 142.04	
by grounding	E 112.04(3), E 117.04, E 118.06(2),
E 142.04(4), E 142.04(6), E 142.05	
qualification of	E 141.01(5), E 144.04
rules for, on communication systems	E 145.01
on supply systems, general	E 142.01
special	E 143.01
supervision of	E 142.01(4)
two required	E 141.02(2), E 142.03(4), E 143.03(6)
uninstructed	E 141.02(3)
Employers'	
instruction to employees	E 141.02(5)
operating rules	Part 3
responsibility	E 141.01(7)
rules, communication system	Chap. 144-145
Enclosed (def. 67)	E 101.02, E 112.05, E 112.07,
E 114.01, E 115.04, E 117.08, E 118.07	
Enforcement	E 2.02(3)
Enforcement of rules by distribution of rules books	E 141.01(1)(a)
Entering manholes	E 129.02(5)(b)
Equipment (def. 69)	E 101.02
accessibility of connections to	E 128.06(2)
and wire runways, grounding of	E 103.03, E 103.04
emergency	E 112.02(3)
for work on live parts	E 112.07
grounding during repairs	E 112.04(3)
grounding of	E 103.03, E 103.04, E 103.05,
E 112.04, E 121.06, E 128.01(1)(d)	
guarding (see guarding)	
identification (see identification)	
inspection of	E 112.02
isolation	E 111.05, E 112.05, E 114.01,
E 115.04, E 121.05(2)	
live, handling of	E 142.03
on poles	E 115.04, E 128.07
permission to work on	E 142.04(5)
request for killing of	E 142.04(2)
switchboard	E 118.03
tests of	E 112.02(3), E 121.04(1)(c)
Existing installations	E 20.13
Exists, station and substation	E 111.03(4)

Exposed (def. 74)	E 101.02
communication lines	E 140.03
conductors	E 116.01(3)
to higher voltage	E 116.01(3), E 142.03(1)(c)
Extension, application of rules to	E 20.13, E 122.01(2)
Externally operable (def. 75)	E 101.02
Extinguishers	E 111.04

F

Factor of safety	E 126.02
Factory tests of insulators	E 127.06
Falling objects	E 143.04(9)
Feeders (def. 76)	E 101.02
electric railway	E 124.03(2)
protection of supply	Chap. 110
Fences	E 111.01(4), E 112.05(3)(c)
Field rheostats	E 115.05
Fire alarm	
conductors	E 124.03(4)
Fire extinguishers	E 111.04, E 141.02(6), E 142.01(11), E 144.05
Fire hydrants, horizontal clearance	E 123.02(1)
Fire proof construction for supply stations	E 111.01(2)
Fires, protecting of poles against	E 123.02(5), E 128.01(1)(a)
First aid, instruction	E 141.01(4), E 142.01(1), E 144.03
outfits	E 141.02(6)(1), E 144.05(1)(a)
rules	E 141.01(3)(b), E 144.02
Fittings (def. 77)	E 101.02
approval	E 20.11
Fixtures, lighting, sockets and lampholders or plug receptacles	E 111.02
Flame-proofing	E 116.02(2)
Flammable gas and flyings	E 111.01(2)(c), E 112.04, E 112.08(1), E 113.06(2), E 114.02, E 115.03, E 116.05(1)
Flash-over voltage for insulators	E 127.04, E 127.05
Flat surfaces, wind pressure on	E 125.03(2)(c)
Flexible line supports	E 126.02(1)
Flexible metallic tubing (def. 78)	E 101.02
Floor	E 111.03(5)
surfaces (see mats)	E 112.05(3)(f), E 114.06
Floors in storage-battery rooms	E 114.06
Flying taps	E 123.02(2)
Foreman, duties of	E 142.02(2), E 143.03(4), E 145.01(5)
Foundations for, ducts	E 129.02(3)
poles and towers	E 126.02(2), E 126.03(2)
rotation machinery	E 111.01(3)
Frame switches	E 113.02(3)
Fumes (see also deteriorating agencies)	E 111.01(2), E 112.04(2), E 114.03
Fuses and Circuit breakers	
arrangement	E 117.01(1), E 117.07
disconnected by switch	E 117.07
enclosure	E 117.08(1), E 117.10
grounding of cases	E 103.04, E 117.09
guarding	E 117.08(1), E 117.09, E 117.10
handling of	E 117.07
identification	E 117.01(1), E 118.04

in ground conductorsE 103.06(1), E 116.01(2)
 installation ofE 117.01(1)
 on switchboardE 118.05(2)
 where requiredE 116.01(1), E 117.06
 working onE 143.01(4)

G

GalvanizingE 103.08(4), E 126.01(1)(3)
 Garage (def. 79)E 101.02
 Gas, flammableE 111.01(2), E 112.04(2), E 112.08(1),
 E 113.06(2), E 114.01, E 115.03, E 116.05(1)
 m underground systemsE 129.03(4), E 143.07(3), E 145.03(2)
 piping for groundsE 103.08(1)
 General precautions in operation of supply &
 communication linesPart 3
 Supply line operationChap. 141, 142 & 143
 communicationChap. 144 & 145
 General requirementsChap. E 20
 General requirements for supply stationsPart 1
 General requirement for overhead and underground linesPart 2
 General use switch (def. 157)E 101.02
 Generators (see motors)
 leadsE 116.02(3) & (4)
 protection ofE 113.01, E 117.06
 Gloves insulatingE 112.07(1), E 117.07, E 141.02,
 E 142.03, E 143.05(3)
 GogglesE 113.02(4), E 141.02(6), E 142.03
 Good practice, conformity withE 120.01(3)
 Grade of
 additional requirements (two or more conditions)E 124.02(2)
 communication conductorsE 124.02(3), E 124.03
 in operation of supply linesE 124.03(3)
 communication lines over RR & supply linesE 124.02(4)
 conductorsE 124.03
 conductor fasteningsE 124.04(3)
 constant current circuitsE 124.03(1)
 cradlesE 126.02(12)
 crossarmsE 124.03(4), E 124.04(2),
 E 126.02(4), E 126.04(3)
 fire-alarm conductorsE 124.03(4)
 foundationsE 126.02(2), E 126.03(2)
 guysE 126.02(3), E 126.03(3),
 E 126.04(2), E 128.03
 insulatorsE 124.04(3), Chap. 127
 joint poles at crossingsE 125.03(3)
 lightning protection wiresE 126.04(6)
 neutralE 123.01(4)
 order of gradesE 124.02(3)
 pinsE 124.04(3), E 126.02(5)
 poles and towersE 124.04(1), E 126.02(1), E 126.04
 railway feedersE 124.03(2)
 supply linesE 124.02, E 124.03, E 126.04(1)
 supply servicesE 126.04(5)
 supporting structuresE 124.04
 trolley contact conductorsE 124.03(2)
 under two or more conditionsE 124.02(2)
 Grades of construction
 B & CE 126.02
 DE 126.03
 NE 126.04

neutrals	E 124.03(5)
relative order of	E 124.02(3)
required, at conflicts	E 124.02(5)
at crossings	E 124.02(4)
short span construction	E 126.02(11)
two or more conditions	E 124.02(2)
Ground	
as part of circuit	E 121.06(3)
busses	E 103.02(2)(b), E 103.06(6)
checking	E 103.09(2)
clamps	E 103.08(2)
connections	
artificial (made electrode)	E 103.02(2)(b), E 103.07(3), E 103.08(4)
at building service	E 103.02(2)
contact surfaces	E 103.08(3)
direct current	E 103.02(1)
for alternating-current systems	E 103.02(2)
for direct-current systems	E 103.02(1)
gas piping	E 103.07(1)
guys	E 103.08(4)(e), E 128.03
individual services	E 103.02(2)
limited piping	E 103.08(1)
location of (for noncurrent-carrying parts)	E 103.03, E 103.04, E 103.05
method of making	E 103.08
multiple	E 103.02(2)(e), E 103.07(4)
number	E 103.02(2), E 103.07(3)
piping	E 103.07(1), E 103.08(1)
resistance	E 103.09
to building frames	E 103.07(2)
to piping systems	E 103.07(1)
to railway returns	E 103.07(4)
within building served	E 103.04(4), E 103.08(1)
detectors, grounding conductor for	E 103.06(1)
where required	Sec. 115, E 115.06
resistance	E 103.09(1)
checking	E 103.09(2)
limits of	E 103.09
standing on	E 143.08(5)
wire	E 103.06
Grounded (def. 82)	E 101.02
anchor rods	E 128.03
circuits	E 103.02
circuits, testing	E 142.02(7)(c)
conductor, continuity of	E 103.06, E 116.01(2)
switch in	E 117.03
guys	E 103.08(4)(e), E 128.03
system (def. 85)	E 101.02
Grounding	Chap. 103, E 112.01, E 121.01, E 142.05
alternate methods	E 103.07(2)
arresters	E 103.02(2)(f), E 103.06(1), E 103.06(2)(d), E 103.07(3)(a), E 103.10(1)(a), E 119.04, E 121.06(1)
auxiliaries	E 113.03(3)
cable sheaths	E 103.02(2)(e)2, E 121.06(2), E 126.02(7)(a)
capacity of	E 103.06(2)
circuits	Sec. 103, E 103.01, E 103.02, E 116.01(3), E 121.06(1)

lines	E 103.02, E 142.04(6)
machine frames	E 113.03
metal frames	E 103.04, E 112.08(2)
metal poles	E 128.01(1)(d)
metal sheath	E 103.02(2)(e)2, E 121.06(2), E 126.02(7)(a)
methods	Chap. 103, E 103.08
motor frames	E 103.04, E 113.06
neutral conductors	E 103.02(2)(e)
non-current parts	E 103.03, E 103.04, E 103.05, E 112.08(2), E 113.05(2), E 117.09, E 118.06(1), E 119.04, E 121.06(2)
on farms (limited water systems)	E 103.08(1) & (3)
permanent protective measure	E 103.01
portable devices	E 103.05
protection in subway work	E 143.08
riser pipes	E 129.08(3)
rotating machinery	E 113.03(1)
scope	E 103.01
small isolated plants	E 103.02(2)(c)
supply conductors	E 103.01
switch	E 112.04(3), E 117.04
switchboard frames	E 103.04, E 118.06(1)
temporary installations	E 20.13(3)
to buried metal structures	E 103.07(2), E 103.08(1) & (3)
to limited metallic bodies	E 103.08(1) & (3)
transformer cases and circuits (interconnection)	E 103.02(2)(d), E 103.04(4), E 115.01(2), E 115.02, E 115.03
water pipe connections	E 103.06(2), E 103.08(1) & (3)
wires	E 123.10(6)
Grounds	
abandoned	E 103.02(3)
arrangement	E 103.02(3), E 103.08, E 103.09
artificial (see made grounds)	
attaching and removing temporary	E 142.04(4), E 142.04(6), E 142.05
completing	E 142.05(4)
lightning rods	E 142.05(4)
made electrodes	E 103.07(3)
multiple	E 103.02(2), E 103.07(4)
relocated	E 103.02(3)
resistance of	E 103.09
separate	E 103.10
tests for	E 103.09(2), E 142.02(7)(c)
Guarded (def. 87)	E 101.02
Guarding	E 103.06(3), E 112.05
against deteriorating agencies	E 112.09, E 113.05(1)
apparatus in manholes	E 129.07(2)
arcing and sparking parts	E 112.08(1), E 117.08(1)
circuit breakers	E 112.05, E 117.10
conductor joints in manholes	E 129.07(1)
conductors	E 116.02(1), E 116.04, E 116.05
current-carrying parts	E 112.05, E 121.05(1)
equipment	E 113.05(1), E 121.05(2), E 128.07(3)
grounding conductors	E 103.06(3)
in hazardous locations	E 116.05
lightning arresters	E 119.04
live equipment on poles	E 128.07(3)
live parts, in manholes	E 129.07
in storage battery rooms	E 114.08

of line equipment	E 121.05(1)
of rotating machinery	E 113.02
of supply equipment	E 112.05
of switchboards	E 118.07
of switches, fuses and circuit-breakers	E 117.10
underground	E 129.07(2)
manholes	E 143.07(2), E 143.07(4), E 145.03(1)
metal sheath	E 116.05(1)
methods of	E 112.05, E 113.02
moving parts	E 112.03, E 117.08(2)
noncurrent-carrying parts	E 112.04(2), E 121.05(2)
poles	E 128.07(3)
against climbing	E 121.05(3), E 128.01(1)(b)2
against mechanical injury	E 121.05, E 128.01(1)(b)1
warning signs	E 121.05(3), E 128.01(1)(c)
shaft ends, pulleys, belts	E 112.03
street openings	E 143.07(2), E 145.03(1)
suddenly moving parts	E 112.03
switchboards	E 118.07
third rails	E 128.10(3)
transformers	E 115.03
trolley contact conductors	E 123.05(4)(b), E 128.10(1)
Guard zone (def. 88)	E 101.02, E 112.05
Guards	
climbing	E 128.01(1)(b)2
conductor	E 116.04
for floor openings	E 111.03(2)
for grounding conductors	E 103.06(3)
for guy wires	E 128.03(5)
for ladders, heads of	E 111.03(10)
for live parts	E 113.02
for manholes	E 129.03
for poles and towers	E 128.01(1)
for protection of traffic	E 142.02(8)(a)
for stairs	E 111.03
for trolleys, at railroad crossings	E 128.10(4)
under bridges	E 128.10(5)
for vertical conductors	E 123.10(3)
guy	E 128.03(5)
location	E 112.05
on buildings	E 123.05(3)(c)
on grounding conductor	E 103.06(3)
portable	E 143.03(5)
railway	E 128.10(5)
rotating equipment	E 113.02(1)
strength	E 112.05
types	E 112.05(3)
under bridges	E 128.10(5)
Guides	E 142.02(3)
Guying at a distance	E 126.02(1)(e), E 126.03(1)(e)
for communication lines at railroad crossing	
longitudinal	E 126.03(3)(d)
transverse	E 126.03(3)(d)
Guys	
anchor rods	E 128.03(7)
attachment	E 128.03(3)
clearances from other wires	E 123.04
from rails or ground	E 123.03
fastenings for	E 128.03(4)
for flexible supports	E 126.02(1)(e)

for lines in exposed locations	E 126.02(3)(b)
for steel structure	E 126.02(3)(c)
general requirements	E 128.03
grades B and C	E 126.02(3)
D	E 126.03(3)
N	E 126.04(2)
grounding	E 128.03(8)
guards for mechanical	E 128.03(5)
head, for communication lines crossing railways	E 126.03(3)(d)
insulation of	E 128.03(6)
insulators for	E 128.04
location	E 128.03(3)
strength of	E 126.02(3)(e), E 126.03(3)(d)
take total load	E 126.02(3)(d), E 126.03(3)(c), E 128.03(2)
used with steel supports	E 126.02(3)(c)
wood and concrete	E 126.02(3)(d)

H

Hand clearance	E 128.07(4)
Handholes (def. 89)	E 101.02
Hand line, specification for	E 143.04(6)(e)
Handling connecting lines	E 142.03(8)(a)
Handling live equipment	E 142.03
Handling series circuits	E 142.03(9)
Hazard, conditions of	E 124.01
Hazardous locations (def. 90)	E 102.01, E 111.01(2), E 112.04(2), E 112.08(1), E 113.06(2), E 114.02, E 115.03, E 116.05(1)
Hazardous locations, conductors in	E 116.05(1)
storage battery rooms	E 114.02
Head guys (See guys, guying)	
Headroom of passageway and working spaces	E 111.03(6), E 112.05(1)
Heat, dissipation of, in ducts	E 129.02(8)
Heavy loading	E 125.02, E 125.03
Height of pins	E 126.02(5)(a)1
High voltage contact conductors	E 128.10(1)
High voltages, clearance of employees from	E 142.03(3)(a)
Highways	
clearance of wires over	E 123.03
clearance of wires along	E 123.03
obstruction by poles	E 123.02
Hoistway (def. 91)	E 101.02
Horizontal separation between line conductors	E 123.06
Hydrants, clearance of poles and towers from	E 123.02(1)

I

Ice on conductors (See loading)	E 125.02
Identification	E 118.04
circuits	E 113.03(3), E 116.01(3)
conductors	E 128.06(1)
equipment	E 112.10(1)
generators	E 112.10(2)
lines and equipment	E 128.07(1), E 141.02(4)
motors	E 112.10(2)
poles	E 128.01(1)(f)
station equipment	E 112.10
switchboard equipment	E 118.04

Illumination	E 111.02
of storage battery rooms	E 114.09
of supply station	E 111.02, E 116.07
of switchboards	E 118.02(2)
Increase in vertical clearance	E 123.03(2)
Indicating position of switches	E 121.07(2)
Induction regulators	Chap. 115
Inspection and repairs	E 20.12, E 121.04
Inspection of	E 20.12
ground connections	E 103.09(2)
lines	E 121.04
portable cables	E 143.08(8)
protective devices	E 141.02(7), E 144.05
station equipment	E 112.02
supply lines and equipment	E 121.04
structures and equipment	E 121.04(1)(b)
Installation, emergency	E 20.13(5)
Instructing employees	E 141.01(4), E 144.03
Instructions to employees	E 141.02(5)
Instruments, grounding of	E 103.04(3), E 118.08
switchboard	E 118.06
Instrument transformers	E 115.01, E 115.02, E 118.08
grounding	E 103.04(3)
Insulated (def. 93)	E 101.02
supports	E 142.03(1)
Insulating (def. 94)	E 101.02
conductor supports	E 116.05(2)
conduit or molding	E 123.10(3) & (4) & (6)
gloves	E 112.07(1), E 117.07, E 142.03(1)(d), E 142.03(2), E 143.05(3)
guards	E 112.05, E 118.05(1)
guys from poles	E 128.03(6)
live parts of switchboards	E 118.05(1)
supports	E 116.05(2)
wearing apparel	E 141.02(6)(a), E 144.05(1)
Insulation and guarding	E 103.06(3)
Insulation, cutting into	E 142.03(1)(d)
dependence on	E 112.05(3)(e), E 142.03(1)(b), E 143.04(6)(d)
Insulation for	
conductors in battery rooms	E 114.07
grounding conductor	E 103.06(3)
lightning protection equipment	E 119.05(3)
protection of	E 116.02(1)
services	E 126.04(5)(a)
supply cables	E 126.02(7)(a)
terminal bases	E 113.04(1)
vertical and lateral conductors	E 123.10(3) & (4) & (5)
Insulators, arcing at	E 127.08
arc lamp disconnectors	E 128.07(5)(f)
at crossings	E 126.03(7)
factory test	E 127.06
flash-over voltages	E 127.04, E 127.05
for communication lines at crossings	E 126.03(7)
for conductors entering stations	E 116.02(4)
for conductors in damp places	E 116.05(2)
for constant current circuits	E 127.07(1)
for guys	E 128.04
for nominal line voltage	E 127.07(3)
for span wires	E 128.05

for suspension	E 128.07(5)(e)
grade of	E 124.04(3)
grade B	E 127.02, E 127.03, E 127.04, E 127.05, E 127.06
grade D	E 126.03(7)
in strain position	E 127.03, E 128.04
material and working	E 127.02
selection of	E 127.07
strain	E 127.03
strength, electrical	E 127.03
suspension, increased clearance for	E 123.03(2), E 123.04(2)
test voltage	E 127.05
wet process	E 127.02
Intensity of illumination	E 111.02
Intent of rules, realization of	E 20.13(2)
Inter-connection of transformer	E 103.02(2)(b)
Interpretation of rules by employer or authorized agent	E 141.01(1)(b)
Interior conduit grounding	E 103.03, E 103.04
Interior wiring system grounding of	E 103.03, E 103.04
Introduction	E 2.01, E 103.10
Isolated (def. 95)	E 101.02
switch in grounding conductor	E 103.06(1)
Isolated plants (def. 96)	E 101.02, E 103.02(2)(c)1
Isolating live parts by elevation	E 112.05
switchboard equipment	E 118.07(3)
Isolating switch (def. 97)	E 101.02
Isolation by elevation (def. 98)	E 101.02
Isolation of, batteries	E 114.02
conductors	E 116.03
circuits	E 116.01(3)
lightning arresters	E 119.02(1)
live parts by elevation	
communication lines	E 128.08(1)
conductors	E 116.03
fuses and switches	E 117.10
lightning arresters	E 119.04, E 119.05(1)
motors	E 113.06
noncurrent-carrying parts	E 121.05(2)
oil switches	E 117.02
overhead lines and equipment	E 121.05
station equipment	E 112.08(1)
suddenly moving parts	E 117.08(2)
transformers	E 115.03, E 115.04

J

Jointly used poles, at crossings	E 125.03(3)(b)
extensions on	E 122.01(2)(b)
steps on	E 128.01(1)(e)
Joint poles	
conductors on	E 123.10(4)
grades of construction at crossings	E 125.03(3)(b)
Joints, in conductors	E 116.06, E 126.02(6)(e), E 126.02(7)(a)3
in grounding conductors	E 103.06(1)
Joint use (def. 99)	E 101.02
poles	E 122.03
Jurisdiction of municipal code	E 2.02(4)(b)

K

Killing circuits	E 142.02(4)(c), E 142.03(5), E 142.04
equipment or lines	E 142.04
lines	E 142.04
parts	E 142.03(6)

L

Ladder space on building	E 123.05(3)(b)
Ladders	
guards for	E 111.03(10)
metal reinforced	E 142.03(1)(f)
portable	E 142.01(9)
Lamps	
clearance of, on jointly used poles	E 123.09(5)(c)
disconnectors for	E 128.07(5)(f)
handling of	E 128.07(5)(f)
in battery rooms	E 114.09
location of	E 128.07(5)
suspension for	E 128.07(5)(d)
Lanterns	E 111.02(2)
Lateral conductors (def. 100)	E 101.02, E 123.08(3), E 123.10
Lateral and vertical conductors	E 123.10(4)
Lateral working space (def. 101)	E 101.02, E 123.08, E 123.10(1)
Laterals	E 129.02(7)
Latticed structures	E 125.03(2)(c)
Legal authority and requirements	Chap. 2
Laws (quoted or referred to)	Chap. 123, E 2.02(3)(a), E 2.02(4)(b)
Leakage from live parts	E 117.09
Levels, arrangement of relative levels	E 122.01
Levers, protection from suddenly moving	E 112.03(2), E 117.08(2)
Lighting	E 111.02
branch circuits (def. 12)	E 101.02
emergency	E 111.02(2)
fixture—	
in stations	E 111.02, E 116.07
outlet (def. 120)	E 101.02
Lightning arrester (def. 103)	E 101.02, Chap. 119
charging of	E 119.05(2)
disconnecting	E 119.02
ground conductors	E 103.06(1)
grounding	E 103.02(2)(d), E 103.06(2), E 103.07(3), E 103.10, E 119.04, E 121.06(1)
guarding	E 119.05(1)
installation of	E 111.05(4), E 119.01
location	E 119.01
on poles	E 128.07(2)
requirement for in stations	E 119.01
where required	E 119.01(1)
Lightning protection wires	E 126.02(6)(c), E 126.04(6)
clearance of	E 123.03
Limited metallic structures, grounding of	E 103.08(1)
Line conductors (def. 104)	E 101.02
clearance on poles	E 123.06
Line insulators	Chap. 127

Lines, accessibility	E 121.03
communication (def. 24 and 105)	E 101.02
construction of, general	E 120.01(3), E 121.01, E 121.02, E 143.04(10)
design of	E 121.01
electrical supply (def. 65 and 106)	E 101.02
grounding of	E 142.04(6)
guarding of	E 121.05
handling of	E 142.03
inspection	E 20.12, E 121.04
in trees	E 123.02(6)
isolation	E 121.05
killing of	E 142.02(4)(c), E 142.03(5), E 142.04
near stored material	E 123.02(7)
near wells	E 123.02(9)
out of service	E 121.04
over tanks	E 123.02(8)
relation of	Chap. 122
relative levels	E 122.01
standardization of levels	E 122.01(1)
stringing of	E 143.04(10)
tests of	E 121.04(1)(c)
Live (def. 4)	E 101.02
Live electrical, parts	E 143.08(3)
equipment	E 142.03
lines, handling	E 142.03
not worked on, climbing space of	E 123.07(5), E 123.07(6), E 123.07(7)
permission to work on	E 142.04(5), E 142.04(7), E 142.04(8)
request for killing of	E 142.04(2)
series circuits considered as	E 143.05(4)
Live or moving parts, care about	E 143.01(3)
Live parts	E 112.07, E 142.01(6)
care about	E 143.01(3), E 143.04(6), E 145.01(6)
care when exposed to	E 142.01(5), E 142.03(2), E 142.03(3), E 143.01(3), E 143.04(6)
guarding or isolated	E 112.05, E 113.02, E 114.04, E 121.05(1)
handling in subway operations	E 143.08(3) & (7)(a)
handling of	E 142.03(1), E 142.03(10), E 145.01(6)
isolation by elevation	E 112.06(3)
repairing in subway operations	E 143.08(7)(a)
touching of	E 142.03(1), E 143.04(7)
treat everything as alive	E 142.01(6)(a)
underground guarding of	E 129.07
handling of	E 143.08(3), E 143.08(7)
repairing	E 143.08(7)
when to kill	E 142.02(4)(c), E 142.03(5), E 142.04
working space about	E 112.06
Loading	Chap. 125
dead ends	E 125.03(3)(c)
districts	E 125.01
flat surfaces	E 125.03(2)(c)
for conductors	E 125.02
latticed structures	E 125.03(2)(c)

supports, longitudinal	E 125.03(3)
transverse	E 125.03(2)
vertical	E 125.03(1)
trolley contact conductors	E 125.03(2)(b)
Loads upon	
line supports	E 125.03
Local electrical regulations	E 2.02(4)
Location of (def. 107, 108, 109)	E 102.01
buckarms relative to working space	E 123.08(4)
climbing space	E 123.07(1)
conductors relative to working space	E 123.08
conductors vertical and lateral	E 123.10(1)
diagrams	E 141.02(4)
equipment in climbing space	E 123.07(4)
guards	E 112.05(3)
lightning arresters	E 111.05(4)
oil switch and circuit breakers	E 111.05(1)
regulators	E 111.05(2)
transformers	E 111.05(2), E 115.04, E 128.07
vertical and lateral conductors	E 123.10(1)
working space	E 123.08
Locking switches	E 117.05(2)
Longitudinal, conductors or runs	
loading	E 125.03(3)
runs, climbing space	E 123.07
strength requirements, grades B & C	
concrete poles	E 126.02(1)(b)
conductors	E 126.02(6)
crossarms	E 126.02(4)(c)
guys	E 126.02(3)(e)
messengers	E 126.02(7)(a)1
method of providing	E 126.02(1)(e)
steel poles	E 126.02(1)(c)2
wood poles	E 126.02(1)(d)2
strength requirements, grade D	
conductors	E 126.03(9)
crossarms	E 126.03(4)
guys	E 126.03(3)(d)
insulators	E 126.03(7)
messengers	E 126.03(10)
pins	E 126.03(6)b
poles	E 126.03(1)
strength requirements, grade N	E 126.04
Loss of contact at railroad crossings	E 128.10(4)
Low-voltage, protection (def. 111)	E 101.02, E 113.01(4)
release (def. 112)	E 101.02, E 113.01(5)
L/R for compression members	E 126.02(1)(c)

M

Machinery, foundations	E 111.01(3)
Machines	
care about	E 143.01(2)
coupled	E 113.03(2)
protection from accidental starting	E 113.01, E 143.01(2)
Made electrodes	E 103.07(3), E 103.08(4)
contact surface	E 103.08(3) & (4)
installation of	E 103.08(4)
guy as ground	E 103.08(4)(e)
limited water systems	E 103.08(1)

number of	E 103.09
on water systems	E 103.08(1)
resistance	E 103.09
wood pole grounds	E 103.08(4)(d)
extra for buried structures	E 103.08(4)(f)
Magnetic forces on conductor	E 116.02(3)
Maintaining service	E 142.02(7)
Maintenance of	
clearance	E 123.01(5)
lines and equipment	E 20.12, E 121.02
overhead and underground lines	E 20.12
stations	E 112.02(1)
steel poles and towers	E 126.02(13)
wood poles	E 126.02(1)(d)
Making protective grounds	E 142.05
Manholes (def. 113)	E 101.02, E 129.03
avoid smoking in	E 143.07(5), E 145.03(4)
avoid use of flames in	E 143.07(5), E 145.03(4)
conductor location in	E 129.04, E 129.06, E 129.07
construction of	E 129.03
covers	E 129.03(6)
dimensions	E 129.03(2)
drainage	E 129.03(3)
ducts entrance into	E 129.02(6)
entrance to	E 129.03
guarding live parts in	E 129.07
guards and guarding of	E 129.06, E 143.07(2), E 143.06(4), E 145.03(1), E 145.03(3)
jointly used	E 129.02(5)
location of	E 129.01(3), E 129.03
minimum strength	E 129.03(1)
openings	E 129.03(5)
precautions with fire	E 143.07(5), E 145.03(4)
strength	E 129.03(1)
supporting cables	E 129.03(7)
supports	E 129.03(7)
ventilation	E 129.03(4)
watchmen for	E 143.07(2), E 145.03(1)
working space	E 129.03(2)(b)
Manual (Def. 114)	E 101.02
operation	E 117.03
Manufacturing processes in stations	E 111.01(2)(b)
Marking of	
insulators	E 127.02
poles	E 121.05(3)
Master service (def. 142)	E 101.02
Materials for	
ground conductors	E 103.06(1)
switchboards	E 118.02
Mats	E 112.05(3)(f)
Mats, floors and platforms, insulating, as	
guards for live parts of	
machines	E 112.05
station equipment	E 112.05(3)(f), E 112.07(1), E 117.07, E 142.03
switchboards	E 118.07(1)
switches	E 117.10
Mechanical protection of conductors	E 103.06(3), E 113.01(6), E 116.02(11), E 123.10(3)
Messengers, repeating of	E 142.01(12)

Messengers	E 126.03(10)
communication cable	E 126.02(9)(b), E 126.03(10)(a)
communication conductors paired	E 126.02(10)(a), E 126.03(10)
grounded effectively	E 103.02(2)(d) & (e)
sag	E 126.02(10)(a)2
size	E 126.03(10)(a)
specially installed cable	E 126.02(7)(a)1
strength	E 126.02(9)(b)
supply cable	E 126.02(7)
Metal	
cabinets grounding	E 117.09
poles	E 126.02(1)
grounding of	E 128.01(1)(d)
guarding of	E 128.01(1)(d)
use of guys with	E 126.02(3), E 128.03(6)
raceways, grounding of	E 103.03
protection of conductors	E 123.10(3), E 123.10(4)(b), E 123.10(6)(a)
protection of control circuit	E 113.01(6)
sheathed cable	E 116.04(1), E 123.01(3), E 124.03, E 126.02(7)(a), E 126.02(9)(a), E 128.08(2)
clearances	E 123.01(3)
Meters, care about live parts	E 143.02
current-transformer secondary	E 103.06(2)(c), E 143.02(5)
open circuits at connections	E 143.02(4)
reporting defects	E 143.02(7)
special tools	E 143.02(6)
taped joints	E 143.02(2)
water, ground connections near	E 103.07(1) & (2), E 103.08
shunting of	E 103.08(1)
Methods of protective grounding	Chap. 103, E 103.01
Methods, of connection to ground	E 103.06, E 103.07
of construction	E 20.11(2)
of first-aid instruction	E 141.01(4)
of providing longitudinal strength	E 126.02(1)(f)
Minimum	
clearance for live parts	E 112.05
pole sizes	E 126.02(1)(d)6, E 126.03(1)(f)
sizes of conductors	E 126.02(6)(b), E 126.03(9), E 126.04(4)(b)
sizes of crossarms	E 126.03(4)(b)
Miscellaneous requirements for overhead lines	Chap. 128
Modification	
of rules	E 20.13(1)
Moisture and weather	E 111.01(2)(e), E 112.09
Molding, wood	E 123.10
Motor circuit switch (def. 115)	E 101.02
Motor generators, control of	E 113.01(3)(c)
Motors and Generators	E 113.01, E 113.06
control devices for	E 113.01, E 113.06(1)
enclosed type	E 113.06(2)
guards for live parts of	E 113.02, E 113.05(1)
identification of	E 112.10
in hazardous locations	E 113.06(2)
leads of	E 113.04(2), E 113.05(1)
location	E 113.06(2)
speed limits for	E 113.01(3)
starters for	E 113.06(1)
terminal bases	E 113.04(1)

Moving parts, care about	E 143.01(3)
guarding of	E 112.03, E 143.01(3)
protection against	E 117.08(2)
Multiple made grounds	E 103.02(2)(e), E 103.07(3), E 103.10
crossings	E 124.02(4)(c)
grounds	E 103.02(2), E 103.02(3), E 103.07(3), E 103.10
Municipal codes jurisdiction	E 2.02(4)(b)

N

Name plates	E 112.10
Nature of ground connections	Chap. 103
Neutral conductors, grounding of	E 103.02, E 103.02(2)(e), E 123.01(4)
clearance	E 123.01(4)
use of circuit breakers on	E 116.01(2)
New construction (def. 117)	E 101.02
N-grade construction	E 128.04
Noncombustible construction	E 111.01(2)
Noncurrent-carrying parts	
grounding	E 103.03, E 103.04, E 103.05, E 112.04
frames of generators, cases of transformers	E 112.04(2), E 113.05(2), E 118.06(1), E 119.04
metal conduit, cable sheath etc.	E 121.06(2)
where leakage is liable to occur	E 117.09
isolation guarding and marking	E 121.05(2)
Notification	
aeronautics commission	E 122.06
other utilities	E 122.02(2)
Number of made grounds	E 103.02(2)(e), E 103.07(3)

O

Obstruction of highway	E 123.02
Obstruction on poles	E 128.01(1)(g)
Oil filled apparatus	E 111.05
lightning arresters	E 119.01
requirements for general	E 111.05
switches	E 117.02
transformers	E 115.04
Oil switches	E 111.05(1), E 117.02
Omission of guys, communication line crossing	E 126.03(3)(b)
Open communication conductors	E 126.02(8)
Open circuits	E 143.02(4)
Open wire communication lines	E 128.08(1)
Open wires (def. 119)	E 101.02
Operating	
lines and equipment	E 20.10
routine	E 142.02
rules	E 140.01 to E 145.03
application	E 140.02
scope	E 140.01
Operation, at stations	E 142.02(4)(b)
of electrical equipment and lines	E 140.01
Order, of grades of construction	E 124.02(3)
Organization diagram	E 141.01(2)

Outlet (def. 120)	E 101.02
Outline lighting (def. 121)	E 101.02
Overhead and underground lines	Part 2
accessibility	E 121.03
design and construction	E 121.01
installation and maintenance	E 121.02
Overhead lines, operation	E 143.04
grounding when worked on	E 142.04(6)
miscellaneous requirements	Chap. 128
precautions in climbing structures	E 145.02(1)

P

Painting steel poles	E 126.02(1)(c)8
Paired conductors	E 123.06(1)(a), E 126.02(10), E 126.03(9)(c)
Panelboard (def. 123)	E 101.02
Parts to be grounded	E 121.06(2)
Passageways	E 111.03(6)
guarding equipment near	E 112.05(1)(b), E 118.07(1), E 119.01(2)
Penalties	E 2.02(3)
Pendants (see also portables)	E 111.02(3)
Permanent supporting surface for workman	E 112.05(1)
Permanently grounded (def. 124)	E 101.02
Permission to work	E 142.04(5)
Phase, failure	E 113.01
Physicians addresses	E 141.01(3), E 144.02(1)(a)
Pine poles (see poles)	
Pins, grade of	E 124.04(3)
grades B, C	E 126.02(5)
grade D	E 126.03(6)
material	E 126.02(5), E 126.03(6)(a)
size	E 126.02(5), E 126.03(6)(c)
strength	E 126.02, E 126.03(6)(b)
Pins and conductor fastenings	E 126.02(5)
Pin spacing	E 123.06
Pin type insulators	E 126.03(7)
Pipe connections for grounding	E 103.07(1), E 103.08
size for made electrodes	E 103.07(3), E 103.08(4), E 103.06(3)
system grounds	E 103.02(2)(e), E 103.07(2)
Platforms, insulating (see mats)	
protection of	E 111.03
Plug connectors	E 111.02(3), E 118.07(2)
Plugs attachment	E 111.02(4)
Plug type switchboard	E 118.07(2)
Points of attachment of grounding conductors	E 103.02, E 103.08
A.C. systems	E 103.02(2)
D.C. systems	E 103.02(1)
Pole face (def. 125)	E 101.02
Poles attachment of guys to	E 128.03(3)
clearances from, conductors	E 123.05, E 123.06, E 123.10
from hydrants	E 123.02(1)
from rails	E 123.02(4)

from street corners and curbs	E 123.02(2), E 123.02(3)
rubbish	E 123.02(5), E 128.01(1)(a)
climbing of	E 128.01(1)(b)2
communication	E 126.02(1), E 126.03(1), E 126.04(1)
concrete	E 126.02(1)(b)
deflection and deformation of	E 126.01, E 126.02(1)(f)2
depth of setting	E 126.02(2)(b)2, E 126.03(2)
equipment on	E 128.07
exposure to fires	E 123.02(5), E 128.01(1)(a)
flexible supports	E 126.02(1)(f)2
foundations	E 126.02(2), E 126.02(2)(b)
grade of	E 124.04(1), E 126.02(1)
grounding	E 128.01(1)(d)
guards for	E 128.01(1)(b)1
guys	E 126.02(3), E 126.03(3), E 128.03
hand clearance	E 128.07(4)
identification of	E 128.01(1)(f), E 128.07(1)
jointly used, grades of	E 124.04(1)
relative conductor levels	E 122.01
supply communication circuits	E 122.03
loading	E 125.03
location of	E 123.02, E 126.03(1)(d), E 128.07(2)
longitudinal strength of, special cases	E 126.02(1)
maintenance	E 20.10, E 126.02(1)(d)
minimum sizes	E 126.02(1)(d)7, E 126.03(1)(f), E 126.03(1)(h), E 126.04(1)
obstructing traffic	E 123.02
obstructions	E 128.01(1)(g)
precautions when climbing	E 143.04(2), E 145.02(2)
protection against climbing	E 128.01(1)(b)2, E 143.04(2), E 145.02(2)
against fire	E 128.01(1)
against mechanical injury	E 128.01(1)(b)1
protective coatings	E 126.02(13)
selected	E 126.02(1)(d)5, E 126.03(1)(e)
settings	E 126.02, E 126.03(2)
spliced	E 126.02(1)(d)7, E 126.03(1)(g)
steel	E 126.02(1)(c)
flexible	E 126.02(1)(f)2
foundations	E 126.02(2), E 126.03(2)
strength of	E 126.02, E 126.03, E 126.04(1)
at angles and dead ends	E 126.02(1)(g)
for grades B and C	E 126.02(1)
for grade D	E 126.03
for grade N	E 126.04(1)
when used jointly	E 124.04(1), E 126.02(7)(a)
stresses in maximum	E 126.02(1)(c)4, E 126.02(1)(d)4, E 126.02(2)(b)1
testing of, before climbing	E 143.04(2), E 145.02(1)
top diameter	E 126.02(1)(d)6, E 126.03(1)(f)
warning signs	E 121.05(3), E 128.01(1)(c)
wood	E 126.02(1)(d), E 126.03(1), E 126.04(1)
Pole steps	E 123.10(1), E 128.01(1)(e), E 143.04(3), E 145.02(2)
Porcelain, bushings	E 113.04(2)
insulators	Chap. 127, E 128.04

sockets	E 114.09
terminal bases	E 113.04(1) & (2)
Portable appliance (def. 126)	E 101.02
cables, inspection of	E 143.08(8)
devices, grounding of	E 103.05
handling	E 143.08(9)
equipment, grounding of	E 103.05, E 103.06
Portable, cable connection for	E 111.02(4)
grounding	E 103.05
installation of	E 111.02(4)
in subway operation	E 143.08(9)
Position and connection	
of switches	E 121.07(2) & (3)
Potheads, use of	E 116.04(1), E 129.08(4)(b)
Power circuits in central office	E 145.01(7)
Prime movers, speed limit for	E 113.01(1)
Private plant grounding	E 103.02(2)(c)1
Proceeding with work	E 142.04(7) & (8)
Protecting, arcing parts (see guarding)	E 112.05
circuits	E 116.01(1), E 116.02, E 117.06
conductors, longitudinal runs	E 123.07(7)
vertical runs	E 123.07(8), E 123.10(3)
control circuits	E 113.01(6)
ends and joints	E 116.06
moving parts	E 112.03, E 117.08(2)
station equipment	Chap. 113, E 117.06
traffic	E 142.02(8), E 143.04(8), E 145.02(8)
working by grounding	E 112.04(3), E 117.04, E 118.06(2), E 142.04(4), E 142.05
by switches and disconnectors	E 142.02(9)
Protection against, arcing insulator	E 127.08
arcing of underground cable	E 129.06(1)
deteriorating agencies	E 113.05(1)
rain and falling objects	E 111.03(3)
Protection	
low and under voltage	E 113.01(4)
of conductors	E 103.06(3), E 116.01, E 116.02(1), E 129.08(2)
of control circuits	E 113.06(1)
near ground	E 123.10(3)
of exposed communication lines	E 128.08
of longitudinal lines	E 123.07(7)
Protective, arrangements of equipment	Chap. 112
clothing	E 142.01(8)
covering	
for metal parts	E 126.02(13)
for steel supporting structures	E 126.02(1)(c)7
devices	E 141.02(6) & (7), E 144.05
grounding	Chap. 103
grounds making	E 142.05
methods	E 141.02
Pulling cables	E 143.07(6), E 145.03(5)
Puncture voltage for insulators	E 127.04, E 127.05

Q

Qualifications of employees	E 141.01(5), E 144.04
Qualified (def. 127)	E 101.02
Qualified guides	E 142.02(3)

R

Raceways (def. 128)	E 101.02
Racks	
on communication at crossings	E 126.03(5)
on supply lines, vertical	E 123.06(1)(d)
climbing space for	E 123.07(7)
Railings	E 111.03(7), E 112.05(3)(c)
grounding	E 112.04(2)
guards for switchboards	E 118.07(1)
on machines	E 113.02(2)
Railroads	
clearance of wires over	E 123.03
increased vertical clearance of lines over	E 123.03(2) & (3)
tracks, horizontal clearance to poles	E 123.02(4)
Rails clearance of poles from	E 123.02(4)
Railway construction	E 128.10
assurance against loss of power	E 128.10(4)
at railroad crossings	E 124.03(2), E 128.10(4)
guards under bridges	E 128.10(5)
high voltage contact conductors	E 128.10(2)
supports for contact conductors	E 128.10(1)
third rails	E 128.10(3)
Railway crossings by electric railways	E 128.10(1)
clearance of conductors above rails	E 123.03
of trolleys above rails	E 123.03(1)
grade of construction at	E 124.03, E 124.04
Railway, feeders, grades of construction	E 124.03(2)
Rain-tight (def. 129)	E 101.02
Ratio, of flashover to puncture voltage	E 127.04
Readily accessible (def. 130)	E 101.02
Readjustment of sags	E 123.09(2)
Realization of intent of rules	E 20.13(2)
Receptacle outlet (def. 131)	E 101.02
Reconstruction (def. 132)	E 101.02
Record of defects	E 121.04(1)(d)
Reduced clearance of neutral	E 123.01(4)
Reduction in number of wires, permissible	E 125.03(3)
Redwood poles (see poles)	
Regulators, induction	E 111.05(2), E 115.03, E 128.07(8)
Reinforced concrete poles	E 126.02(1)(b)
Relation between various classes of lines	Chap. 122
Relative levels of wires	E 122.01, E 123.09(1)(a)
at crossings	E 122.01(3)(a)
minor extensions	E 122.01(2)(b)
preferred levels	E 122.01(2)(a)
supply and communication lines	E 122.01(2)
supply lines of different voltage	E 122.01(3)
Remote control	E 117.01(1), E 117.02, E 117.05(2), E 119.02(2)
Removing grounds	E 142.05(5)
Repairing and inspecting	E 20.12
Repairing, lines	E 121.04(1)(e), E 126.03(11)
station equipment	E 112.04(3)
subway equipment	E 143.08(7)
Repeating messengers	E 142.01(12)
Replacing equipment	E 121.04(1)
Reporting dangerous conditions	E 143.06(7), E 145.03(6)

Reporting defects E 143.02(7), E 143.03(7), E 143.04(11),
 E 143.05(7), E 143.06(7), E 143.07(9),
 E 143.08(14), E 145.02(9), E 145.03(6)

trouble or circuits E 143.01(8)

when lines are clear E 142.04(9)

Requirements for

in stations E 110.01

overhead and underground lines Part 2

rooms and spaces E 111.01

stations and substations Part 1

two workman E 141.02(2)

Resistance devices E 115.05

location E 115.05

Resistance of ground connections E 103.09

Responsibility, between officials and employees E 141.01(2)

designation of E 141.01(7)

transferring of E 142.04(9)

Restoring service E 142.02(5)

Resuscitation from shock E 141.01(4), E 142.01(1), E 144.03

Rheostats Chap. 115, E 115.05, E 117.01(1)

location E 115.05

Rights-of-way, construction on fenced E 124.03

Rigid conduit (def. 36) E 101.02

Risers E 123.03(3), E 129.08

clearance above ground E 123.03(3), E 129.08

grounding E 121.06(2)

Rivets E 126.02(1)(c)

Roads, clearance of wires along and over E 123.03

Roadway, clearance of wires and conductors above E 123.03

for electric railway E 128.10(1), E 128.10(2)

Rods, anchor E 128.03(7)

Rod size for made grounds E 103.08(4)

Roofs, attaching conductors to E 128.01(3)

conductors crossings E 123.05(3)

Rooms and spaces E 111.01

Rotating equipment Chap. 113

Rotating, machinery Chap. 113, E 111.01(3)

attendance of E 141.02(1)

grounding of E 103.03, E 103.04,
 E 103.05, E 113.03(1)

grounding live parts of E 113.02(2)

guarding moving parts E 112.03

Rubber

gloves E 112.07(1), E 117.07,
 E 142.03(2), E 143.05(3)

mats E 112.05(3)(f)

Rubbish near poles E 128.01(1)(a)

Rules, book of E 141.01(1), E 141.01(3),
 E 144.01, E 144.02(2)

enforcement of E 141.01(1)(a), E 144.01

for employees, communication systems Chap. 144, Chap. 145

supply systems Chap. 142, Chap. 143

interpretation of E 141.01(1)(b), E 144.01(3)

Rural districts (def. 134) E 101.02

supply lines in E 124.03

S

Safe supports for workman E 143.04(2), E 143.04(4),
 E 145.01(4), E 145.02(1)

Safety appliances, furnishing	E 112.07, E 141.02(6), E 144.05
use of	E 142.01(7)
Safety belts, inspection of	E 141.02(7), E 142.01(10)
provision of	E 142.01(10), E 144.05(1)(c)
use of	E 142.01(10), E 145.01(4)
Safety loops on ladders	E 111.03
Sags (def. 135)	E 101.02
basis of computation	E 126.02(6)(d)
communication lines crossing contact conductors	E 126.02(10)(b)2
conductors on same support	E 123.09(2)(b)
different, on same supports	E 123.09(2)(c)
grades B and C	E 126.02(6)(d), E 126.02(10)(a), E 126.02(10)(b)
D	E 126.03(9)(d), E 126.03(10)(b)
N	E 126.04(5)(c)
increased clearance for	E 123.06(1)(b)1.b.
messenger	E 126.02(10)(a)2, E 126.03(10)(b)
readjustment of	E 123.01(5), E 123.09(2)(c)2
service leads	E 126.04(5)(c)
Scope of code	E 2.01
grounding	E 103.01
on lines	E 120.01
operating rules	E 140.01
stations	E 110.01
Sealable equipment (def. 136)	E 101.02
Sealing conduit, hazardous locations	E 116.05(1)
Sealing laterals	E 129.02(7)
Secondaries	
grounding of	E 103.02
instruments transformers	E 103.04(3), E 115.02
Selection of insulators	E 127.07
Separate, pole lines	E 122.04
grounds and ground conductors	E 103.07, E 103.10
Separation in any direction	E 123.09(3)
Separation of, bare parts	E 112.05, E 118.05(1)
cables underground	E 129.02(4), E 129.05
circuits and equipment on joint poles	E 123.09
communication and supply lines	E 122.04
communication equipment and supply lines	E 123.09(5)
communication lines and supply equipment	E 123.09(5)
conductors, and noncurrent-carrying parts	E 123.09(5)
at supports	E 123.06(1)
attached to bridges	E 123.06(3)
attached to buildings	E 123.05(3)(c), E 123.06(2)
in manholes	E 129.04(3)(c)2
not carried on crossarms	E 123.09(4)
of different voltages on same crossarm	E 123.06(1)(e)
of same voltage classification	E 123.09(2)
on horizontal crossarms	E 123.09(2)
on poles	E 123.06(1)
on poles according to sags	E 123.06(1)
on racks	E 123.06(1)(d)
underground	E 129.04(3)
vertical	E 123.06(1), E 123.09
crossarms	E 123.09
duct systems, supply and communication	E 129.02(5)
pole lines	E 122.04
risers, communication and supply	E 129.08(1)
vertical	E 123.09

Series circuits, clearance for	E 123.01(2)
grade of	E 124.03(1)
handling of	E 142.03(9)
position of	E 123.06(1)(e)
precaution when worked on	E 143.05(2), E 143.05(6)
reporting defects	E 143.05(7)
testing of	E 143.05(5)
Series generators	E 113.03(2)
Series lamps	
bridging of	E 143.05(4)
disconnection	E 128.07(5)(f), E 143.05(6)
handling of	E 143.05(3)
installation of	E 128.07(5)
on poles	E 128.07(5)
suspension of	E 128.07(5)
work on	E 143.05
Service (def. 138-146)	E 101.02
cable (def. 139)	E 101.02, E 126.04(5)(d)
conductor (def. 140)	E 101.02
conduit, grounding	E 103.03
crossings, grade of construction	E 124.03
drops, cabled (def. 141)	E 101.02, E 126.04(5)(d)
connections of	E 128.06(2)
supply	E 126.04(5)
entrance (def. 142 and 143)	E 101.02
equipment (def. 144)	E 101.02
hazard by interruption of	E 117.06
insulation	E 126.04(5)(a)
leads, crossarms	E 124.04(2)
poles	E 124.04(1)
maintaining of circuits	E 142.02(7)
materials	E 126.04(5)(a)
pipe	E 126.04(5)(a)
raceway (def. 146)	E 101.02
restoring	E 142.02(5), E 142.04(11)
sag	E 126.04(5)(c)
size	E 126.04(5)(b)
Setting poles	E 126.02(2), E 126.03(2)
Shading lamps	E 111.02(3)
Shafting, guarding of	E 112.03
Shall (def. 148)	E 101.02
Shielding equipment from deteriorating agencies	E 112.09
Shields	E 112.05(3)
Shock, avoiding	E 142.03(2) & (3)
Short-span construction	E 126.02(11)
Should (def. 149)	E 101.02
Shunting water meters	E 103.08(1)
Side guying	E 126.02(1)(e)
Signal (see communication)	
Signaling apparatus, fire and police special supply circuits for	E 122.01(2)(c)
Signs, clearance from lines	E 123.05(5)
Signs, danger	E 121.05(3), E 141.02(9)
Signs on poles	E 121.05(3)
Signs warning	
as protective device	E 141.02(8) & (9)
for bridges	E 128.01(1)(c)
for disconnectors and switches	E 117.05(1), E 117.05(2)
for equipment under test	E 143.03(5)
for exposed live parts	E 141.02(9)
for fire extinguishers	E 111.04

for poles	E 121.05(3), E 128.01(1)(c), E 128.01(1)(c)
for starting devices	E 143.01(2)
for station entrances	E 111.01(1), E 141.02(8)
for traffic protection	E 143.04(8), E 143.07(2), E 145.02(8), E 145.03(1)
Simultaneous application of loads	E 125.03(5)
Size of	
ground conductor	E 103.06
lightning arrester ground connection	E 103.10
made electrodes	E 103.08(4)
pins	E 126.02(5), E 126.03(6)
services	E 126.04(5)
Slack in overhead conductors	E 123.01(5)
Slippery floors	E 111.03(2), E 112.06(1)
Sockets	
insulating	E 114.04
Solid enclosure in hazardous locations	E 112.08(1)
Spacing blocks for crossarms	E 126.03(4)(c)
Span lengths (def. 153)	E 101.02, E 126.03(9)
Spans, averaged	E 125.03(4)
increased clearance for long	E 123.03(2), E 123.04(2)
length of, communication line at railway crossing	E 126.03(1)(d)2
paired conductors	E 126.03(9)
supply line	E 126.02(6)(b), E 126.04(4)(b)
Span wires, clearances, above rails or ground	E 123.03
insulators for	E 128.05(1) & (2)
jointly used poles	E 123.09(5)(c)
on joint poles	E 123.09(1)(a)
Sparking, distance	E 119.02(1)
parts (see arcing parts)	
Special, authorization for station operation	E 142.02(4)
permission (def. 154)	E 101.02
precautions, supply lines on unusual supports	E 128.01(3)
supply circuits for operating signal equipment	E 122.01(2)(c)
tools	E 143.02(6)
Specially installed cables	E 124.02(1)(a), E 126.02(7)
Speed control	E 113.01
Speed limit, motors	E 113.01(3)
prime movers	E 113.01(1)
Spliced poles	E 126.02(1)(d)7, E 126.03(1)(g)
Splices	
and taps	E 126.02(6)(e), E 126.03(9)(e)
at crossings	E 126.02(6)(e), E 126.03(9)(e)
in supply cables	E 126.02(7)(a)3, E 129.07(1)
Spurs or climbers, care and use of	E 143.04(5), E 145.02(3)
Stairs, antislip treads for	E 111.03(2)
as supporting surface for workman	E 112.05(1)
guards for	E 111.03
landings for	E 111.03
Starters (see also controllers)	
motor control	E 113.01(4)
Starting rheostats	E 112.08(1), E 113.06(2), E 115.05, E 117.01(1)
Station, arrangement	Chap. 111
equipment, authorization to work on	E 142.02(4)(a)
guarding live parts	E 112.05
guarding moving parts	E 112.03
identification of	E 112.10
in hazardous locations	E 112.08

inspection of	E 112.02
lighting	E 111.02
protective grounding	E 112.04, E 113.03, E 117.09, E 118.06(2), E 119.04, E 142.04(4)
wiring for illumination	E 116.07
working space about	E 112.06
Stations, (def. 66) authorization for operation of	E 101.02, E 142.02(4)(b)
construction of, exists	E 111.03
floors	E 111.03
rooms	E 111.03
stairs and ladders	E 111.03
construction precautions	E 112.05(1)
fire protection of	E 111.04
hazardous conditions in	E 111.01(2), E 112.04(2)
identification of equipment	E 112.10
illumination of	E 111.02, E 114.09, E 116.07
requirements in	E 110.01
temporary wiring	E 20.13(3)
ventilation of	E 111.01(2)(d)
Statutes affecting electrical construction	E 2.02(1), E 2.02(3) & (4), E 121.05(3), E 122.05, Chap. 123
Statutory authority	E 2.02(1)
Steel supporting structures	E 126.02(1)(c)
Steps	
pole, clearance above ground	E 128.01(1)(e), E 145.02(2)
of conductors from	E 123.10(1)
metal and wood	E 128.01(1)(e)
use of	E 143.04(3), E 145.02(2)
Stopping devices	E 113.01
Storage about switchboards	E 118.01(2)
in supply stations	E 111.01(2)
Storage batteries	Chap. 114
Strain insulators	E 127.03
Street lighting	E 128.07(5)
drip loop clearance	E 123.09(5)(d)
Street openings, guarding of	E 143.07(2), E 145.03(3)
Street railways construction	E 128.10
grade of conductors	E 124.03(2)
span-wire insulators	E 128.05
third rails	E 128.10(3)
tracks separation from ducts and manholes	E 129.01(1), E 129.01(3), E 129.04, E 129.05
trolleys, guarding under bridges	E 123.05(4)(b), E 128.10(5)
included in transverse load	E 125.03(2)(b)
minimum size	E 126.04(7)
supports	E 125.03(2)(b), E 128.10(1)
suspension of high voltage	E 128.10(5)
Strength of	
communication cables	E 126.02(9)
conductor fastening	E 126.02(5)
conductors	E 126.02(6), E 126.03(9), E 126.04(4), E 126.04(5)
construction, minimum requirements	E 2.01
foundations	E 126.02(2), E 126.03(2)
guards	E 112.05(2)
guys	E 126.02(3), E 126.03, E 128.03(2)
messengers	E 126.02(9)(b)
paired communication conductors	E 126.02(10)
paired conductors over supply lines	E 126.02(10)(b)1
paired conductors over trolley conductors	E 126.02(10)(b)2

pins	E 126.02(5)(b), E 126.03(6)(b)
poles	E 126.02(1), E 126.03(1), E 126.04(1)
splices and taps	E 126.02(6)(e)
steel supporting structure	E 126.02(1)(c)
supply cables	E 126.02(7)
supports at angles	E 126.02(1)(e)2
trolley contact conductors	E 126.02(6)(f)
wood poles	E 126.02(1)(d)
strength requirements	Chap. 126
Stresses in conductors	E 126.02(6)(d)
magnetic	E 116.02(3)
Stringing wires	E 142.03(10), E 143.04(10), E 143.06(6), E 145.02(7)
Structural steel	E 126.02(1)(c)
Structure conflict (def. 155)	E 101.02, E 124.02(5)
Structures, supporting	E 124.04
Substantial (def. 156)	E 101.02
Substations (see stations)	
fences	E 111.01(4)
Subway and tunnel operation	E 143.08
Suddenly moving parts, protection	E 112.03(2), E 117.08(2)
Supervision of employees	E 142.01(4)
Supply cable, classification for grades	E 124.02(1)
strength	E 126.02(7)
Supply equipment (def. 69)	E 101.02
separation from communication conductors	E 123.09(5)
Supply lines (def. 106)	E 101.02
approaching	E 143.06(4), E 145.02(4)
branch connections of	E 128.06(2)
clearance above ground and rails	E 123.03
climbing space for	E 123.07
communication lines used in operation of supply lines	E 128.09
construction and maintenance general	E 121.01, E 121.02
construction under railways	E 129.02(4), E 129.05
crossarms	E 123.09
grades of	E 124.03, E 124.04
guarding or isolation	E 121.05, E 129.07
identification of conductors and equipment	E 128.06(1), E 128.07(1)
inspection and tests	E 121.04
insulators	E 127.07(2)
joint use	E 122.03
precautions while working on	E 142.02(4), E 142.03, E 142.04, E 143.04, E 145.02(6)
relative levels	E 122.01(1)
short-span construction	E 126.02(11)
Supply systems	
operating rules for	Chap. 141 and 142
Supporting conductors on trees	E 128.01(3)
structures, grade of	E 124.04
Supports (also see foundations)	
battery rooms	E 114.05
flexible	E 126.02(1)(f)2
for cable	E 129.03(7)
for contact conductor	E 125.03(2), E 128.05, E 128.10(1)
for large conductors and generator leads	E 116.02(3) & (4)
for rheostats and resistance devices	E 115.05
insulating conductors	E 116.05(2)
loads on	E 125.03

safe for workman	E 142.01(9), E 143.04(2), E 145.01(4), E 145.02(1)
unsafe	E 143.04(4)
Suspension for street lights	E 128.07(5)(d)
Suspension insulators	
increased clearances for	E 123.03(2), E 123.04(2)
material for street lamps	E 128.07(5)(d)
Switch (def. 157)	E 101.02
Switchboards and panelboards (def. 158)	E 101.02, Chap. 118
accessibility of	E 118.01(3) & (4)
arrangement of	E 118.01(4), E 118.04, E 118.07(2)
bare parts	E 118.05(1)
care about, employees	E 143.01(2)
dead-front	E 118.07(2)
equipment	E 118.03
frames	E 118.06
fuses	E 118.05(2)
grounding	E 118.06
guarding live parts	E 118.07
handling of	E 143.01(7)
identification of equipment	E 118.04
illumination	E 118.02(2)
instruments	E 118.03, E 118.08
location	E 118.01(1)
material	E 118.02
plug-type	E 118.07(2)
separation of bare parts on	E 118.05(1)
spaces around	E 118.01(2)
spacings	E 118.05
wiring on	E 118.04
Switch cells, illumination of	E 111.02
in supply stations	E 111.02, E 117.02
Switches (def. 157) and circuit breakers	E 102.01, Chap. E 117
accessibility and arrangement	E 121.07(1)
accidental operation	E 117.01(2), E 117.05(2)
ahead of fuses	E 117.07
air break	E 117.05(3)
alignment	E 117.05(4)
arrangement of	E 117.01(1), E 121.07
blades dead	E 117.01(2)
capacity of	E 117.05
closing	E 117.01(2)
construction of, for good contacts	E 117.05(4)
frame on rotating equipment	E 113.02(3)
grounding	E 117.04, E 117.09
guarding	E 117.10
in battery rooms	E 114.05
identification	E 117.01(1), E 118.04
indicating	E 117.01(1), E 121.07(2)
in grounding conductors	E 103.06(1)
in manholes	E 129.07(2)
isolation	E 117.02
knife	E 117.01(2)
location	E 117.01(1), E 117.02, E 117.03
locking or blocking of	E 117.05(2)
oil	E 111.05, E 117.02, E 117.05(3)
on poles	E 128.07(2)
on switchboards	E 118.01(4)
opening and closing	E 142.03(6)

operation by employees	E 142.03, E 143.01(7), E 143.02(4), E 143.08(10)
position	E 121.07(3)
remote control	E 117.02
suitability	E 117.05(1)
used as grounding devices	E 117.04
where required	E 117.03
System ground wire	E 103.02(2)(b) and (2)(c)3

T

Tables

clearance	
from live parts	E 112.05(1), E 142.03(3)
underground risers	E 123.03(3)
vertical and lateral conductors	E 123.10(4)
wires crossing wires	E 123.04(1)
wires from, bridges	E 123.05(4)(a)
buildings	E 123.05(3)(d)
ground or rails	E 123.03
supports	E 123.06(1)(c)
climbing space	E 123.07(5)(c)
crossarms separation	E 123.09(1)(a)
size	E 126.02(4)(d)
depth of setting poles	E 126.02(2)(b)2
foundation for poles, strength	E 126.02(2)(b)2
grades of construction, communication conductors	E 124.03
at multiple crossings	E 124.02(4)
supply conductors	E 124.03
guys, strength for grades B and C	E 126.02(3)(e)
for grade D	E 126.03(3)
horizontal clearances and separations	E 123.06(1)
illumination intensities in stations	E 111.02
insulator test voltage	E 127.05
isolation by elevation	E 112.05(1)
loading specifications	E 125.02
messenger communication cables, size	E 126.03(10)(a)
pole setting depths	E 126.02(2)(b)2
sags of communication conductors, copper and steel	E 126.03(9)(d)
service leads, sags	E 126.04(5)(c)
sizes	E 126.04(5)(b)
steel poles, L/R ratio	E 126.02(1)(c)6
thickness of metal	E 126.02(1)(c)5
unit stresses	E 126.02(1)(c)4
vertical clearances and separations	E 123.09(1)
wood poles, allowable stresses	E 126.02(1)(d)4
depth of setting	E 126.02(2)(b)2
strength of grade D	E 126.03(1)(a)
ultimate stresses	E 126.02(1)(d)3
working space about live parts	E 112.05(1)
Tag (def. 159)	E 101.02, E 141.02(6)(a)5, E 141.02(10)
distinctive character	E 142.04(3)
removal of	E 142.04(10)
use of	E 117.05(2), E 141.02(6)(a)5, E 141.02(10), E 142.02(6), E 143.01(2)
Tagging, circuits	E 142.02(6)
open disconnects	E 142.04(3)
Tapes or ropes	E 142.03(1)(c)
Tagging ends and joints	E 116.06, E 143.02(2)

Taps, flying	E 123.02(2)
in crossing spans	E 126.02(6)(e), E 126.03(9)(e)
Temperature	
of rheostats and resistance devices	E 115.05
protection against excessive	E 116.02(5)
Temporary decorative lighting	E 121.04(3)
Temporary installations	E 20.13(3)
modification of rules	E 20.13(3), E 141.01(1)(c)
waiver for	E 20.13(3)
wiring, disconnection of	E 143.08(12)
for subway construction	E 143.08(12)
Tensions in, cable messengers	E 126.03(10)(b)
conductors (def. 160)	E 101.02, E 126.02(6)(d)
Terminals bases	E 113.04(1)
construction	E 129.08(4)
Testing	E 143.03
and splicing live cables	E 143.07(8)
for gas	E 143.07(3), E 145.03(2)
for grounds	E 103.09, E 142.05(3)
of cables to determine if alive	E 143.07(8)
of equipment	E 122.02(2)
of lines and equipment	E 121.04(1)(c)
of series lamp circuits	E 143.05(5)
of structures before climbing	E 143.04(2)
operations	E 143.03
rooms	E 20.13(4)
Tests for insulators	E 127.05, E 127.06
steel towers	E 126.02(1)(c)7
Thermal protection of conductors	E 116.02
Thickness of steel	E 126.02(1)(c)5
Third-rail collector	
guarding or isolating	E 128.10(3)
Through bolts	E 123.10(6)(d), E 123.10(7)(d)
Tie wires and fastenings for communication	
lines	E 126.03(8)
supply lines	E 124.04(3), E 126.02(5)(a)1
special cases	E 126.02(5)(a)
Toe boards for, floors	E 111.03
platforms	E 111.03
stairs	E 111.03
surfaces above live parts	E 112.05(3)(g)
Tools	E 143.02(6)
Top diameter	
communication poles	E 126.03(1)(f)
supply poles	E 126.02(1)(d)1
Totally enclosed motor (def. 67)	E 101.02
Touching equipment	E 143.06(5), E 145.02(5)
Touching live parts	E 142.03(1)(a)
Towers (see poles)	
Traffic, protection of	E 142.02(8), E 143.04(8), E 145.02(8)
Transformers	Chap. 115
general	Chap. 115
grounding	E 103.04(2), E 115.02, E 115.03, E 121.05, E 121.06
guarding	E 112.05, E 121.05, E 121.06, E 128.07(2), E 128.07(6)
installation of	E 111.05, E 115.02, E 115.04, E 123.09, E 128.07
interconnection	E 103.02
location	E 111.05(2), E 115.04

on poles	E 128.07(2)
vault (def. 164)	E 102.01, E 115.04, E 116.03
Transmission lines (see supply lines)	Part 2
Transverse loading (see loading)	E 125.03(2)
averaging span lengths	E 125.03(4)
special requirements	E 126.02(1)(e)
strength (line supports)	E 126.02(1)(c)1, E 126.02(1)(d)1 E 126.03(1)
three poles	E 126.02(1)(a)
Traps for drainage pipes in manholes	E 129.03(3)
Trees	
attaching conductors to	E 128.01(3)
falling	E 128.02
lines in	E 123.02(6)
protection from	E 128.02
trimming	E 128.02
Trolley contact conductors (see conductors)	
attached to bridges	E 123.05(4)
clearance above rails and aground	E 123.03
grade of	E 124.03(2)
guarding	E 123.05(4)(b)
at railway crossings	E 128.10(4)
under bridges	E 128.10(5)
high voltage	E 128.10(2)
insulation for	E 128.05(2)
minimum size	E 126.02(6)(f)
on jointly used poles	E 125.03(2)(b)
supports	E 128.10(1)
third rails, protection of	E 128.10(3)
Trolley feeders	E 122.01(2)(a), E 123.04(1), E 124.03(2)
Trouble reporting to chief operators	E 143.01(8)
Tunnel working on	E 143.08
Twisted pair (see paired conductors)	
Two workman required	E 141.02(2), E 142.03(4), E 143.03(6)
Type of guards	E 112.05(3)

U

Ultimate fiber stresses, wood poles	E 126.02(1)(d)3
Ultimate strength of	
steel	E 126.02(1)(c)4
wood poles	E 126.02(1)(d)3
Underground	
cables and lines	Chap. 129
conduit and ducts	Chap. 129
lines, communication operating rules	Chap. 145
crossings under railway	E 129.02(4)(b)
operation	E 143.07
risers	E 123.03(3), E 129.08(3)
systems, communication, operation of	Chap. 145
location of	E 129.01(1)
supply operation of	E 143.07, E 143.08
Under voltage protection	E 113.01(4)
Unguyed supports at railroad crossings	E 125.03(3)
Uniformity with existing construction	E 20.13(2)
Unqualified workman	E 141.02(3)
Unsafe supports	E 143.04(4)

all

Urban districts (def. 165)	E 101.02
grade of conductors	E 124.03
Use of	
approved material and construction methods	E 20.11
ground as part of circuit	E 121.06(3)
of guy insulators	E 128.04(2)
Utilization equipment (def. 166)	E 101.02

V

Vapor-tight (def. 167)	E 101.02
Vault, transformer (def. 164)	E 101.02, E 111.05(2), E 115.04, E 117.03
Ventilated (def. 168)	E 101.02
Ventilation of battery rooms	E 114.03
manholes	E 129.03(4)
motor compartment	E 113.06(2)
station	E 111.01(2), E 111.05(2), E 115.04
Vertical clearance of wires, above ground and rails	E 123.03
increase	E 123.03(2)
increase for suspension insulators	E 123.03(2)
increase for voltage	E 123.03(2)
Vertical conductor (def. 169) (see conductors)	E 101.02, E 123.10(4)
arrangement of	E 123.09(2)(b)
climbing space	E 123.07(8)
separations for	E 123.09
Vertical loading	E 125.03(1), E 125.03(5)
Vertical separations of	
conductors and noncurrent-carrying parts	E 123.09(5)
conductors on, same pole	E 123.09(2)
racks	E 123.06(1)(d)
line conductors on horizontal crossarms	E 123.09(2)
Visitors	E 141.02(3)
Voltage (def. 170)	E 101.02
increased clearance for	E 123.03(2)(b), E 123.04(2)(b), E 123.06(1)(b)

W

Waiving rules	E 20.13
Warning employees	E 142.01(2)
Warning signs (see signs)	E 121.05(3), E 128.01(1)(c), E 141.02(8)
warnings and barriers	E 143.03(5)
Watchman at manholes	E 143.07(4), E 145.03(3)
Water pipe connections	E 103.07(1), E 103.08
Water pipe grounds	E 103.07(1)
Water systems grounding	E 103.07(1), E 103.08
limited	E 103.08(1)
Water tight (def. 171)	E 101.02
Weather conditions	E 111.01(2), E 125.01, E 125.02
Weatherproof (def. 172)	E 101.02
cases	E 111.01(2)
Well casing grounds on	E 103.08(1)
Width of working space	E 112.06(2)
Wind pressure	E 125.02
Wires	
connecting lightning arresters	E 119.03
handling	E 142.03(8)(9) & (10)

protection from falling	E 142.02(8)(b)
stringing of	E 142.03(10), E 143.06(6), E 145.02(7)
vertical clearance, above ground and rails	E 123.03
Wiring	
diagram for, equipment and lines	E 141.02(4)
for illumination	E 116.07
lightning arrester grounds	E 119.03
on switchboards, arrangement	E 118.01(3) & (4), E 118.05(1)
Wood, molding, use of	E 103.06(3), E 123.10(3), E 123.10(4)(b), E 123.10(6)
poles	E 126.02(1)(d), E 126.03(1), E 126.04(1)
allowable fiber stresses	E 126.02(1)(d)3
guys	E 126.02(3)
longitudinal strength	E 126.02(1)(d)2
minimum sizes	E 126.02(1)(d)6
spliced	E 126.02(1)(d)7
top diameters	E 126.02(1)(d)6
ultimate fiber stresses	E 126.02(1)(d)3
Working space	E 123.08
about equipment	E 111.01, E 112.05(1), E 112.06(1) & (2), E 113.02(4), E 115.05
about lightning arresters	E 119.01(2), E 119.02(2)
about switchboards	E 118.01(2) & (4), E 118.07(3)
dimensions	E 123.08(2)
elevated parts	E 112.06(3)
exits from	E 111.03(4)
headroom for	E 111.03(6)
height	E 123.08(4)(a)
in manholes	E 129.03(2)(b)
in stations	E 112.06
lateral (def. 100 & 101)	E 101.02, E 123.08
lightning arresters	E 119.01(2), E 119.02(2)
location	E 123.08(1)
obstruction of, by conductors	E 123.08(3), E 123.10(1)
on poles	E 123.08(2) & (4), E 123.10(1), E 128.07(1) & (4)
where required	E 112.06(1)
width	E 112.06(2)
Workman's request	E 142.04(2)
Workmen, position	E 142.03(7)
protection of, by disconnectors	E 142.02(9)
requirements for two	E 141.02(2), E 142.03(4), E 143.03(6)
unqualified	E 141.02(3)
Work on circuits	E 118.06(2)
on live lines	E 141.02(2)