

**SUPPLEMENT
VOLUME NO. 1
FIFTH EDITION
WISCONSIN STATE ELECTRICAL CODE**

Effective July 25, 1951

**Compiled by
Industrial Commission of Wisconsin
and
Public Service Commission of Wisconsin**

In this supplement are included the changes in Volume No. 1 of the Fifth Edition of the Wisconsin State Electrical Code. The Fifth Edition of the code became effective on August 30, 1944 and December 21, 1944. A supplement was issued February 25, 1949. This supplement contains all changes made since the 1944 effective dates of the Fifth Edition.

It is suggested that immediately upon receipt of this supplement you change your copy of the code. This will eliminate the possibility of using obsolete orders.

Madison, Wisconsin

Industrial Commission of Wisconsin

VOYTA WRABETZ
Chairman

HARRY J. BURCZYK
Commissioner

C. L. MILER
Commissioner

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Director of Safety and Sanitation

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Electrical Engineer

Public Service Commission of Wisconsin

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Chief Engineer

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Asst. Chief Engineer

SUPPLEMENT FIFTH EDITION

Volume No. 1

WISCONSIN STATE ELECTRICAL CODE

Revisions To
(July 25, 1951)

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

In the Matter of the Revision by the Commission of the Rules and Regulations Governing the Construction, Operation, and Maintenance of Lines and Equipment Owned, Managed, Operated, or Controlled by Every Public Utility and Every Railroad Along or Across any Public Highway or Private Right of Way over which Electrical Energy is Transmitted, or Messages are Transmitted or Conveyed. U-2776

ORDER APPROVING ELECTRICAL CODE

WHEREAS copies of Volume 2 of the fifth edition of the code as adopted August 30, 1944; November 21, 1944 and amended February 25, 1949 have become exhausted and changes in material and methods have made it desirable to revise both volumes of the code; and

WHEREAS a joint investigation has been conducted by the Industrial Commission of Wisconsin and the Public Service Commission of Wisconsin involving the revision of the standards of safe electrical construction and operation; and

WHEREAS all railroads and public utilities under the jurisdiction of this Commission and subject to the requirements of Chapters 195 and 196 of the Statutes have had due notice of the hearing held in connection with the aforesaid investigation; and

WHEREAS as a result of such investigation certain changes in, and additions to, the Wisconsin State Electrical Code have been adopted and promulgated by the Industrial Commission of Wisconsin as their General Orders Nos. 1000 to 1452 and 1600 to 1652 inclusive, effective July 25, 1951, as more particularly shown in said code;

FINDING

THE COMMISSION FINDS:

That the requirements set forth in the order herein made are proper and necessary to be prescribed for the railroads and public utilities of this state.

ORDER

IT IS THEREFORE ORDERED:

(1) That all railroads and public utilities subject to the jurisdiction of this Commission and subject to the requirements of Section 196.74 be and are hereby required to observe and conform to the standards of construction, maintenance, and rules of operation as established by the Wisconsin State Electrical Code adopted by the Industrial Commission, which is hereby approved and adopted as an order of this Commission.

(2) That to make the latest code available to the public.

a. Volume 2 of the fifth edition shall be reprinted and shall contain all revisions to the date of this order.

b. A supplement to Volume 1 of the fifth edition shall be printed containing all changes made since November 1944 to the date of this order.

Dated at Madison, Wisconsin, this 25th day of July 1951.

PUBLIC SERVICE COMMISSION OF WISCONSIN

JOHN C. DOERFER

Chairman

JAMES R. DURFEE

Commissioner

W. F. WHITNEY

Commissioner

WISCONSIN STATE ELECTRICAL CODE

Preface

By Chapter 101 of the revised statutes, it is the duty of the Industrial Commission to fix standards of safety in all places of employment and to formulate rules and regulations relative to the enforcement of such standards. It is further the duty of the Industrial Commission to fix similar standards and formulate rules and regulations relating to fire hazards or to the prevention of fires in buildings so situated as to endanger other buildings or property.

The first electrical code was adopted in 1917. Between 1917 and the present date, the 1917 code orders were revised and changed a number of times.

The first printing of the fifth edition contained some orders which became effective August 30, 1944 and some that became effective December 21, 1944. Certain amendments became effective February 25, 1949.

The fifth edition was the first code that was printed in two volumes to accommodate various interests who use some parts of the code to the exclusion of others. When reference is made to the Wisconsin State Electrical Code, both volumes are meant.

Because copies of volume 2 of the code became exhausted and new materials and methods have become available, it was decided to reprint and revise volume 2 and to print a supplement for volume 1.

The following committee representing the organizations noted, together with the advisors given below, met with representatives of the Industrial and Public Service Commission at various times to formulate recommendations to be presented to the Commission.

Code Committee

John E. Wise, Madison, Chairman of Committee, Industrial Commission of Wisconsin.

R. E. Purucker, Madison, Secretary of Committee, Public Service Commission.

J. A. Dickinson, Washington, Bureau of Standards.

W. A. Haig, Milwaukee, Milwaukee Building Inspection Department.

George C. Cooper, West Allis, Wisconsin Manufacturers' Association.

L. A. Wood, Chicago, Association of American Railroads.

E. J. Kallevang, Madison, Wisconsin Utilities Association.

B. H. Barg, Milwaukee, Electrical Contractors' Association.

J. B. Wilkinson, Milwaukee, Fire Insurance Rating Bureau.

Wm. Harnack, Wauwatosa, Wisconsin State Federation of Labor.

G. W. Searle, Milwaukee, Wisconsin Telephone Company.

Orville R. Nichols, Milwaukee, Wisconsin Electrical Association.

C. T. Evans, Milwaukee, Electrical Utilization Equipment Manufacturers.

Herman P. Siebkin, Madison, State Telephone Association.

The persons consulted as technical advisors were:

G. A. Benjamin, Minneapolis, Western Union Telegraph Company.

Walter Gerke, Milwaukee, Wisconsin State Federation of Labor.

W. E. Gundlach, Milwaukee, Wisconsin Electric Power Company.

E. H. Herzberg, Milwaukee, Manager Electrical Contractors' Association, Milwaukee Chapter.

R. C. Siegel, Milwaukee, Wisconsin Telephone Company.

C. L. Smith, Chicago, Electric Field Engineer, National Fire Protection Association.

W. S. Wilder, Milwaukee, Wisconsin Electric Power Company.

H. E. Reinhold and L. W. Butler, Milwaukee, Wisconsin Telephone Company.

The formal hearing was held at Milwaukee on January 12, 1951, at which time the committee's report was submitted to the two commissions. Following the hearing the committee considered certain questions raised at the hearing and made recommendations to the commissions. The committee's recommendations and other suggestions were considered fully and the Industrial Commission's action was published in the official state paper on June 25, 1951, and hence became effective thirty days later, namely, July 25, 1951. The Public Service Commission's order became effective as of the same date.

The following paragraphs 4 and 5 shall be inserted after paragraph 3 on page 11.

4. Supply to the employe copy of final report on Form A-13 in all cases at the time of final payment, and final physician's report in cases where disability has extended beyond three weeks following the date of injury, or where permanent disability has resulted.

5. Make immediate report of any amputation which requires an artificial member or appliance.

Add the following to the list of Industrial Commission publications.

Cleaning and Dyeing Code

General Orders on Liquefied Petroleum Gases

Order 1001—Emergency Amendment

Delete this order. All actions taken under this order have been repealed or incorporated as parts of orders in the Fifth Edition of the code. This action was taken Feb. 25, 1949.

Order 1013C

Section 102.58 of the Wisconsin Statutes which is quoted has been revised to read as follows:

102.58. Decreased compensation: Where injury is caused by the wilful failure of the employe to use safety devices where provided in accordance with any statute or lawful order of the Commission and adequately maintained, and their use is reasonably enforced, by the employer, or where injury results from the employe's wilful failure to obey any reasonable rule adopted by the employer for the safety of the employe and of which the employe has notice, or where injury results from the intoxication of the employe, the compensation, and death benefit provided herein shall be reduced 15 per cent.

SECTION 102. DEFINITIONS OF SPECIAL TERMS

Order 1020. Definitions.

Remove all numbers and letters ahead of the definitions.

Delete the definitions of Adjustable-Speed Motor; Automatic Fire Door; Factory Yard; Master Service; Motion Picture Studio; Rating; Service Pipe; Totally Enclosed Motor; Waterproof.

Revise the definitions of Branch Circuit; Conduit; Controller; Device; Equipment; Exposed; Hazardous Locations; Multi-outlet Assembly; Outlet; Panelboard; Qualified; Raceway; Service; Service Cable; Service Conductors; Isolating Switch; and Switchboard, and insert new definitions for Askarel; Disconnecting Means; Low-energy Power Circuit; Remote-control Circuit; Setting; Show Window; and Signal Circuit. The revised and new definitions are as follows:

Askarel means a synthetic non-flammable insulating liquid which, when decomposed by the electric arc, evolves only non-explosive gases.

Branch Circuit means that portion of a wiring system extending beyond the final overcurrent device protecting the circuit.

A device not approved for branch circuit protection, such as a thermal cutout or motor overload protective device, is not considered as the overcurrent device protecting the circuit.

Conduit:

Conduit means a tube especially constructed for the purpose of enclosing electrical conductors.

Rigid Metal Conduit means a tubular raceway with threaded ends, for electric wires and cables; if of ferrous metal, having a corrosion resistant coating on all surfaces, except threads and if of corrosion resistant material, properly identified and in either case with a uniformly smooth interior coating of enamel or like material. Conduit may be made of mild steel tubing of circular cross-section having walls which in the various electrical trade sizes comply with the measurements and weights set forth in Order 13-93461. For other materials dimensions are to be the same and weights will vary.

C. Flexible Metallic Conduit.

(Present wording retained)

D. Electrical Metallic Tubing.

Change the wording by placing the words "or corrosion resistant metal" after the word "steel" in the first line.

Controller: A device, or group of devices, which serves to govern, in some predetermined manner, the electric power delivered to the apparatus to which it is connected.

Device means a unit of an electrical system which is intended to carry but not consume electrical energy.

Disconnecting Means means a device, group of devices, or other means whereby the conductors of a circuit can be disconnected from their sources of supply.

Equipment. Insert "material," ahead of "fittings."

Exposed. (As applied to live parts) means that a live part can be inadvertently touched or approached nearer than a safe distance by any person. It is applied to parts not suitably guarded or isolated.

Exposed: (as applied to wiring methods) means accessible; not concealed.

Hazardous Locations—See Section 13-500, part 3, Volume No. 2.

Low-energy Power Circuit means a circuit which is not a remote-control or signal circuit but which has the power supply limited in accordance with the requirements of Class 2 remote-control circuits. See Section 13-725, Part 3, of Volume No. 2.

Such circuits include electric door openers and circuits used in the operation of coin-operated phonographs.

Multi-outlet Assembly. This definition is in Volume 2. It was changed by removing the word "metal" from the first line.

Outlet: The definition is only in Volume 2. It was changed by changing "device" to "equipment."

Panelboard. This definition was changed by changing the word "overload" to "overcurrent" in the third line and placing a semicolon after "capacity" in the 5th line.

Qualified Person means one familiar with the construction and operation of the apparatus and the hazards involved.

Raceway means any channel for holding wires, cables, or bus-bars, which is designed expressly for, and used solely for, this purpose.

Raceways may be of metal or insulating material, and the term includes rigid metal conduit, flexible metal conduit, electrical metallic tubing, underfloor raceways, cellular metal floor raceways, surface metal raceways, wireways, busways, and auxiliary gutters.

Remote-Control Circuit means any electrical circuit which controls any other circuit through a relay or an equivalent device.

Service:

Service means the conductors and equipment for delivering energy from the electricity supply system to the wiring system of the premises served.

Service Cable means service conductors made up in the form of cable.

Service Conductors means that portion of the supply conductors which extends from the street main or duct or from transformers to the service equipment of the premises supplied. For overhead conductors this includes the conductors between the last pole or other aerial support and the service equipment.

Paragraphs D, E, and F are not changed.

Service Raceway means the rigid metal conduit, electrical metallic tubing, or other raceway, that encloses service-entrance conductors.

Setting (of Circuit Breaker) means the value of the current at which it is set to trip.

Show-Window means any window used or designed to be used for displaying of goods or advertising material, whether it is fully or partly enclosed or entirely open at the rear, and whether or not it has a platform raised higher than the street floor level.

Signal Circuit means any electrical circuit which supplies energy to a device which gives a recognizable signal.

Such circuits include circuits for door bells, buzzers, code-calling systems, signal lights, and the like.

Isolating Switch means a switch intended for isolating an electric circuit from the source of power. It has no interrupting rating and is intended to be operated only after the circuit has been opened by some other means.

Switchboard means a large single panel, frame, or assembly of panels, on which are mounted, on the face or back or both, switches, overcurrent and other protective devices, buses, and usually instruments. Switchboards are generally accessible from the rear as well as from the front and are not intended to be installed in cabinets. (See Panelboard).

Section 103

Page 25

The following note shall be placed directly under the title "Section 103 Protective Grounding."

Note: In Volume 2 of the Wisconsin State Electrical Code the term "Made Grounds" is used in place of "Artificial Grounds." The two terms have the same meaning.

Order 1030 **Page 25**

In the third paragraph the words "and signal systems" shall be deleted; the reference to 13-8031 shall be changed to 13-8041 and the phrase "and signal circuits Order 13-7271 part 3, volume 2" shall be added.

Order 1031 B 4(b) **Page 27**

The note following the paragraph shall be replaced with the following: "Note: See definition of lighting arrester, Order 1020."

Order 1033D **Page 29**

The reference to 13-2556 shall be changed to 13-2557.

Order 1035B—Grounding Conductors **Page 29**

A wartime amendment limited the maximum size of grounding conductors to No. 000. Order 13-2594, Part 3, Volume 2 specifies the limitation for interior wiring but the limitation as far as utility supply systems are concerned was removed by an amendment dated February 25, 1949.

Order 1035C 1(b) **Page 30**

The word "or" shall be inserted between the words "districts" and "where" in the first line.

Order 1037A **Page 32**

The following exception shall be added to order 1037A.

Exception: The connection to underground piping systems made outside buildings by electric distribution agencies need not be accessible.

Order 1037D **Page 33**

Change the second sentence in the third paragraph to read: Electrodes of rods of steel or iron shall be at least $\frac{5}{8}$ inch minimum cross-sectional dimension.

The following shall be inserted in the third paragraph (second paragraph on page 33) following the sentence ending with the word "used" in the ninth line.

Where rock is encountered at a depth of less than 4 feet, buried plate electrodes shall be used or pipe or rod electrodes shall be buried in a horizontal trench as deep as is practicable. If rock is at a greater depth than 4 feet, pipes or rods may be driven at an angle if this must be done to drive the full length of the electrode.

Order 1039B **Page 34**

The following shall be substituted for the present Order 1039B and the note:

B. Metallic objects having a resistance of more than 3 ohms to ground or buried pipe systems having less than 50 feet of buried pipe, exclusive of well casings; or having a resistance of more than 3 ohms to ground shall not be used as a grounding electrode unless connected to 2 artificial (made) electrodes spaced at least 6 feet apart.

Note: Any metal stanchions or other metal objects in contact with animals should be insulated from the metal in contact with the ground electrode.



Order 1151 **Page 51**

The present order and note shall be deleted and the following inserted:

**Order 1151—Grounding Secondary Circuits of *
Instrument Transformers.**

The secondary circuits of all instrument transformers shall be effectively grounded.

Order 1152 **Page 52**

Delete the exception following the order.

Order 1164A **Page 54**

The reference in the last line of the order shall be changed from (See Order 13-5005) to (See Section 13-500.)

Order 1214C—(Note) **Page 64**

Delete the note which permits the use of wooden signs.

Order 1225 **Page 70**

The following new order shall be added to cover notification of construction near airports.

Order 1225 Construction Near Airports

When any portion of a contemplated overhead line or structure will be at a greater height above the level of a proposed or existing airport than one-fortieth of the distance from the boundary of such site, the owner if known and the Wisconsin Aeronautics Commission should be notified.

The Wisconsin State Aeronautics Commission will supply maps showing the location of prospective and existing publicly-owned airport sites and information relative to their development.

It is recommended that a reasonable effort be made to determine if private airports are contemplated in the area where the construction will be located.

Section 123 **Page 70**

Section 86.16(1), (2), and (4) of the Wisconsin Statutes was changed to read:

(1) Any person, firm or corporation including any corporation licensed under Chapter 226 may, with the written consent of the town board, but subject to the approval of the State Highway Commission, construct and operate telegraph, telephone, or electric lines, or pipes or pipe lines for the purpose of transmitting messages, heat, light or power along, across, or within the limits of any highway.

(2) All poles used in the construction of such lines shall be set in such manner as not to interfere with the use of such highway by the public, nor with the use of the adjoining land by the owner thereof; and all pole lines shall hereafter be constructed so as to meet the requirements of the Wisconsin State Electrical Code.

(3) -----
(4) Any person erecting any telephone, telegraph, electric light, or other pole or stringing any telephone, telegraph, electric light or other wire, or constructing any pipes or pipe lines in violation of the provisions of this section shall forfeit a sum not less than \$10 nor more than \$50.

Section 180.18 of the Wisconsin Statutes was changed to read:

180.18 Wires over railroads. (1) All wires strung over any steam railroad prior to August 1, 1949, shall be tied to insulators fastened to double cross-arms attached to a pole at each side of the crossing. The poles if of wood shall not be less than 6 inches in diameter at the top (if of other materials at least the equivalent strength thereof), set not less than 5 feet in the ground, securely guyed, and, unless the railroad right of way is over 100 feet in width, shall be set not more than 100 feet apart. The cross-arms shall be attached to the poles by machine bolts, and braced by at least one iron brace from each cross-arm to the pole. All wires shall be maintained not less than 25 feet above the rails, except street railway trolley wires, which shall be maintained not less than 22 feet above the rails.

(2) Any person ordered by the public service Commission to change its wires so as to conform to this section failing to comply with such order within 10 days from the service thereof, shall forfeit \$25, and a like forfeiture for every additional 10 days of noncompliance with the order, unless a greater length of time to make such change shall be granted.

(3) All wires strung over any steam railroad on or after August 1, 1949 shall be strung in such a way as to meet requirements of the Wisconsin state electrical code. Any person stringing wires in violation of the code, shall be subject to a forfeiture of not more than \$100 nor less than \$25. Each 10-day period, after the first day, that such violation occurs shall be a separate violation and shall subject the violator to an additional forfeiture of not less than \$25 nor more than \$100 for each such violation.

Order 1230F

Page 72

The following new order taken from the Industrial Commission's Flammable Liquids Code shall be inserted as Order 1230F.

"F. *Over Storage Tanks*: Electric lines operating at more than 300 volts to ground shall not pass over flammable liquids storage tanks and shall be kept at least 15 feet horizontally from such tanks. When the voltage is below 300, a clearance, both vertically and horizontally of not less than 8 feet, shall be maintained."

Table No. 1, Order 1232

Pages 74 and 75

Table No. 1 of Order 1232 on pages 74 and 75 shall be changed to read as follows:

TABLE 1

**MINIMUM VERTICAL CLEARANCE OF WIRES (IN FEET) ABOVE GROUND OR RAILS
SUPPLY WIRES INCLUDE TROLLEY FEEDERS**

Location of Wires and Cables	Guys (a); Communication Cables, Messengers & Wires	Grounded (b) Supply Cables & Messengers; Lightning Protection Wires	Open Supply Line Wires, Arc Wires, and Service Drops (c)					Trolley Contact Conductors and Associated Span or Messenger Wire (d)	
			0 to 750 Volts	750 to 15,000 Volts (e)	15,000 to 75,000 Volts	75,000 to 100,000 Volts	100,000 to 150,000 Volts	0-750 Volts	Over 750 Volts
Over track rails of railroads (e).....	(f) (q) 27	(f) (q) 27	(f) (q) 27	(f) 28	30	31	33	22	22
At crossings over streets, alleys, or roads (g)	(r) 18	18	18	20	22	23	25	18	20
Along streets or alleys in urban districts (g)	(h) 18	(h) 18	(h) 18	20	22	23	25	18	20
Along roads in rural districts (g).....	(h) 14	(h) 14	(h) 15	18	20	21	23	18	20
At crossings over private driveways used for general farm purposes.....	14	14	15	18	20	21	23	18	20
Over open areas used for general farm purposes.....	13	14	15	18	20	21	23	18	20
Over fenced or otherwise guarded rights of way in which only authorized persons are permitted (i).....	(j) 10	14	(k) (l) 15	15	17	18	20	(n) 16	(n) 18
Over lakes, streams, or ponds where boats are operated or used for fishing.....	10	14	15	18	20	21	23		
Over driveways to residence garages.....	12	12	15 (s)	20	22	23	25	18	20
Over spaces or ways not covered above:									
(1) In rural districts (p).....	(j) 10	14	(k) 15	(m) 18	(m) 20	21	23	18	20
(2) In urban districts (p).....	(j) 10	14	(k) 18	20	22	23	25	18	20

FOOTNOTES FOR TABLE 1

- a. Including supply lines guys where effectively grounded or insulated against the highest voltage to which they were exposed. Note: No clearance from ground is required for anchor guys not crossing streets, driveways, roads or pathways nor for anchor guys provided with traffic guards and paralleling sidewalk curbs.
 - b. This relates to a supply cable of any voltage having effectively grounded continuous metal sheath supported by continuous grounded messenger and to non-metallic sheathed cable supported by effectively grounded continuous metallic messenger, with insulated conductors lashed to the messenger with continuous spiral metal tape or wire.
 - c. Conductors which are grounded in accordance with Order 1031(B)(5) and are associated with circuits of 750 to 8,750 volts, may have the clearances specified for open supply line wires of 0 to 750 volts to ground.
 - d. Where subways, tunnels, or bridges require it, less clearances above ground or rails than required by Table 1 may be used locally. The trolley contact conductor should be graded very gradually from the regular construction down to the reduced elevation.
 - e. In the case of electrified railroads served by overhead trolley conductors, these clearances do not apply if other orders require greater clearances.
 - f. This clearance may be reduced to 25 feet where paralleled by trolley contact conductor on the same street or highway.
 - g. These requirements apply only to wires within the limits of public highways or other public rights of way for traffic.
 - h. Where the terrain, with respect to ditches, embankment, etc. is such that vehicles will not travel under the wires, this clearance may be reduced to the following values:
 - (1) Communication conductors limited to 160 volts to ground and communication cables ----- 8 ft.
 - (2) Conductors of other communication circuits ----- 10 ft.
 - (3) Supply conductors ----- 12 ft.
 - (4) For guys (a) ----- 8 ft.
 - i. These clearance requirements do not apply in transformer or substation areas which are so fenced or guarded that they are never accessible to other than authorized persons. (See Order 1124).
 - j. This clearance may be reduced to 3 feet for guys, cables, messengers and communication wires limited to 160 volts, where the ground underneath the wires or cables is accessible to pedestrians only.
 - k. This clearance may be reduced to 12 feet for supply service drops limited to 300 volts and to 10 feet for supply service drops limited to 150 volts.
 - l. This clearance may be reduced to 10 feet for supply circuits of 550 volts or less, with transmitted power of 3,200 watts or less which are run in accordance with the provisions specified in Order 1220B(3).
 - m. This clearance may be reduced by 3 feet for distribution circuits in rural districts not along or across the yard or space near to the buildings of a farmstead, residence or school, if the wires are located relative to embankments, marshes, woods, etc., so that the ground underneath is not likely to be traveled by high loaded vehicles.
 - n. Trolley contact conductors for industrial railways when not along or crossing roadways may be placed at a less height if suitably guarded.
 - o. These clearances also apply to the diagonal distance between the conductors and terrain of rapidly changing contour where surface can be readily walked on.
 - p. See Order 1286E for street lamps and drops.
 - q. This value may be reduced to 25 feet for guys and for cables carried on messengers.
 - r. Where communication wires or cables cross over or run along alleys, this clearance may be reduced to 15 feet.
 - s. Service drops operating at less than 600 volts may have the clearance reduced to 12 feet.
- For clearance of conductors over parking lots and similar locations see order 13-7323, part 3, Vol. 2 of this code.

Change the heading on the second column of figures in the table on page 80 in Order 1233-B-1-(b) from "6 feet" to "5 to 10 feet"

Order 1236

It was decided that a new Order 1236J covering climbing space past rack construction be inserted.

J. *Climbing Space in Rack Construction.* A climbing space shall be maintained through the levels of conductors supported in rack construction and for a vertical distance of not less than 4 feet above the top conductor and not less than 4 feet below the bottom conductor so supported.

The width of the climbing space measured horizontally through the center of the pole shall be not less than 5 inches plus the diameter of the pole and the extremities of such width shall be equidistant from the center line of the pole. The depth of the climbing space shall be not less than 30 inches measured perpendicularly to this climbing space boundary through the center line of pole. The width of the climbing space, perpendicular to and at the extremity of this 30-inch depth dimension, shall be not less than 38 inches and neither of the other two side boundaries shall make an angle of less than 90 degrees with the boundary through the center line of pole.

The position of the climbing space through the levels of conductors in rack construction shall be related to climbing spaces through the levels of conductors on cross-arms in accordance with the requirements of Order 1236E. The climbing spaces through the levels of conductors of two or more rack groups which are separated less than 6 feet shall be maintained in the same quadrant or on the same side of pole.

Vertical conductors are not permitted in the climbing spaces through conductors in rack construction.

Table 19 Order 1261-A-4-(c)

Add the following to Table 19:

	Lbs./Sq. In.
Ponderosa Pine -----	6,000
Western Fir -----	6,600
Northern Pine -----	6,600
Western Hemlock -----	7,400
Western Larch -----	8,400