# 10235

ORDINANCE NO.

(New Series)

AN ORDINANCE AMENDING CHAPTER IX, ARTICLE 2 OF THE SAN DIEGO MUNICIPAL CODE BY ADOPTING THE NATIONAL ELECTRICAL CODE, 1968 EDITION, BY RENUMBERING, REPEALING AND AMENDING SECTIONS OF AND ADDING SECTIONS TO THE ELECTRICAL CODE.

WHEREAS, a committee composed of representatives of the electrical industry in the San Diego area have studied the 1968 Edition of the National Electrical Code, as promulgated by the National Fire Protection Association, and have recommended adoption thereof with suggested amendments; and

WHEREAS, such amendments reflect the construction industry's practices and experiences in the metropolitan area; and

WHEREAS, the Board of Appeals and Advisors recommended adoption of the 1968 Edition of the National Electrical Code with these amendments; and

WHEREAS, the 1968 Edition of the National Electrical Code, with amendments, has been adopted by the cities of Chula Vista, National City, La Mesa, and El Cajon; and

WHEREAS, the U. S. Department of Housing and Urban Development requires cities desiring to obtain approval of their "Workable Program" to have complete and up-to-date codes covering electrical work; and

WHEREAS, this requirement would be satisfied by the adoption of the 1968 Edition of the National Electrical Code and recommended amendments; and

WHEREAS, The City of San Diego is desirous of promoting uniformity between neighboring cities in the metropolitan area to better regulate the electrical industry in general and promote consistency where practical and for the public's benefit; NOW, THEREFORE,

BE IT ORDAINED, by the Council of The City of San Diego, as follows:

Section 1. That Chapter IX, Article 2, Divisions 1 and 6 of the San Diego Municipal Code be, and the same are hereby amended by renumbering the following sections as indicated below:

OLD SECTION NO.	TITLE	NEW SECTION NO.
92.0101.10	DEFINITIONS	92.0700
92.0101.13	MEANS OF IDENTIFICATION OF GROUNDED CONDUCTORS	92.0701
92.0101.14	BRANCH CIRCUITS - EXCEPTIONS	92.0702
92.0101.15	FEEDERS - COMMON NEUTRAL FEEDER	92.0703
92.0101.16	CALCULATION OF FEEDER LOADS	92.0704
92.0101.17	INSTALLATION OF SERVICE-ENTRANCE CONDUCTORS - WIRING METHOD	92.0706
92.0101.18	INSTALLATION OF SERVICE-ENTRANCE CONDUCTORS - NATIONAL ELECTRICAL CODE SECTIONS NOT APPLICABLE	92.0707
92.0101.19	BONDING JUMPERS	92.0709
92.0101.20	GROUNDING ELECTRODES - WATER PIPE	92.0710
92.0101.21	GROUNDING CONDUCTOR CONNECTIONS - ATTACHMENT TO ELECTRODES	92.0711
92.0101.22	OPEN WIRING ON INSULATORS - NATIONAL ELECTRICAL CODE ARTICLE NOT APPLICABLE	92.0714
92.0101.23	RIGID METAL CONDUIT - WET LOCATIONS	92.0717
92.0101.24	RIGID METAL CONDUIT - REAMING	92.0718
92.0101.25	NUMBER OF CONDUCTORS IN CONDUIT	92.0719
92.0101.26	RIGID NONMETALLIC CONDUIT	92.0720
92.0101.27	ELECTRICAL METALLIC TUBING - WET LOCATIONS	92.0721

OLD SECTION NO.	TITLE	NEW SECTION NO.
92.0101.28	SWITCHES - ACCESSIBILITY AND GROUPING	92.0722
92.0101.29	TRANSFORMERS - LOCATION	92.0609
92.0101.30	TRANSFORMERS - DISCONNECTING MEANS	92.0609.10
92.0102	DUTIES OF DIRECTOR OF BUILDING INSPECTION	92.0101.16
92.0103	AUTHORITY OF DIRECTOR OF BUILDING INSPECTION	92.0101.15
92.0105	INTERPRETATION	92.0101.10
92.0106	BOARD OF APPEALS AND ADVISORS	92.0101.14
92.0107	RESPONSIBILITY	92.0101.13
92.0108	PROHIBITIONS	92.0101.18
92.0606	SERVICE DISCONNECTING MEANS	92.0708
92.0609	WIRING METHODS	92.0715
92.0615	DIRECT BURIAL CABLE	92.0716
92.0621	TRAILER PARKS - ADOPTION OF CALIFORNIA ADMINISTRATIVE CODE	92.0101.17

Section 2. That Chapter IX, Article 2, Division 6 of the San Diego Municipal Code be, and the same is hereby amended by repealing Section 92.0623: SWIMMING POOLS - GROUNDING CONDUCTOR.

Section 3. That Chapter IX, Article 2, Divisions 1, 3, 4, 6, and 7 of the San Diego Municipal Code be, and the same are hereby amended by amending Sections 92.0101, 92.0101.14, 92.0301, 92.0303, 92.0309, 92.0401, 92.0608, 92.0612, 92.0613, 92.0622, 92.0708, 92.0715, 92.0720, and 92.0722 as renumbered in Section 1 above to read as follows:

SEC. 92.0101 STANDARDS FOR INSTALLATIONS AND MATERIALS; NATIONAL ELECTRICAL CODE ADOPTED

(a) The National Electrical Code, 1968 Edition, a USA Standard, published by the National Fire Protection Association, three printed copies of which are filed in

the office of the City Clerk as Official Document

No. 730870 be, and the same is hereby adopted as part of the Municipal Code of The City of San Diego, except as hereinafter modified, amended, repealed, or deleted; and by reference thereto is made a part hereof as though fully set out herein.

(b) The requirements of the National Electrical

Code shall apply to all residential, commercial, and
industrial installations. All electrical installations
that are under the jurisdiction of the California Division
of Industrial Safety shall also comply with requirements
of Title 24, Part 3, of the California Administrative Code.

SEC. 92.0101.14 BOARD OF APPEALS AND ADVISORS

When a question involving the interpretation of the intent and purpose of any provisions of this Article or the suitability of alternate materials and types of construction is presented to the Director of Building Inspection, he may request the Board of Appeals and Advisors to investigate such matters under the procedure established in Section 91.01 of this Code.

# SEC. 92.0301 PERMITS REQUIRED

- equipment shall be installed within or on any building, structure or premises nor shall any alteration or addition be made in any such existing wiring, devices, appliances or equipment without first securing a permit therefor from the Inspection Department, except as stated in Section 92.0302.
- (b) Permits shall be obtained before or at the time work is started, except in cases where emergency or urgent necessity can be shown to exist provided a permit is obtained

within twenty-four (24) hours, exclusive of Saturdays, Sundays, and holidays.

- (c) A separate permit must be obtained for construction pole or where a temporary meter is required for construction purposes.
- (d) A separate permit shall be required for each building or structure which stands alone, except garages which are accessory to dwellings and both are located on the same premises.
- (e) Permits for privately-owned conduits or other materials in public places and in and across streets and alleys may be issued only after approval has been granted for the installation, by the City Council. All work shall be done in accordance with law and special regulations applicable thereto.
- (f) Except as provided in Sections 92.0303 and 92.0304, permits shall be issued only to contractors licensed by the State of California to engage in the business or act in the capacity of a contractor relating to electrical installations.

# SEC. 92.0303 SPECIAL OWNER'S PERMIT

The Director of Building Inspection may issue to a property owner or his duly assigned agent a permit authorizing said individual to install, alter, change, or repair electrical wiring in, or about his own property.

The permittee shall be subject to all rules and regulations applicable to electrical wiring in the City of San Diego.

# SEC. 92.0309 APPLICATION FOR PERMIT

(a) Application for a permit, describing the work to be done, shall be made in writing to the Director of

Building Inspection. The application shall be accompanied by such plans, specifications, and schedules as may be necessary to determine whether the installation as described will be in conformity with the requirements of this article. If it shall be found that the installation as described will in general conform with the requirements of this article, and if the applicant has complied with all provisions of this article, a permit for such installation shall be issued; provided, however, that the issuance of the permit shall not be taken as permission to violate any of the requirements of this article.

.: .:

- (b) Electrical plans shall be submitted for the following types of installations:
  - All commercial and industrial installations.
  - 2. Apartment buildings containing three (3) or more units and having electric heating cables.
  - 3. Apartment buildings containing four (4) or more units but having no electric heating cables.

Submitted plans shall show a single line diagram of service, feeders, conduit, and wire sizes. Electrical calculations shall accompany all submitted plans.

SEC. 92.0401 FEE SCHEDULE

- (a) The fees prescribed in this article must be paid to The City of San Diego for each electrical installation for which a permit is required by this Section and must be paid before any such permit is issued, except as hereinafter provided.
- (b) Whenever it shall be necessary to make an extra inspection trip because the applicant for any permit gives an incorrect address or wrong location in obtaining a permit required by this article, a fee of Two Dollars (\$2.00)

shall be paid for correcting the address or location given in such permit.

- (c) The fee for an electric wiring inspection requested by an owner of his premises, shall be Seven Dollars (\$7.00) per hour or a minimum of Five Dollars (\$5.00) for any fraction of an hour.
- (d) For each inspection trip made necessary by reason of deficient or defective work, a fee of Three Dollars (\$3.00) shall be paid by the permittee.
- (e) There shall be a fee of Two Dollars (\$2.00) for each permit issued (not refundable) in addition to the following fees:
  - 1. For each lighting, small appliance, or general purpose 2-wire branch circuit, not including lighting fixtures or motors rated larger than 1/5 H.P. connected thereto. (Not more than 15 utilization outlets permitted per lighting or general purpose branch circuit.) For the purpose of this Section a multi-wire branch circuit contains as many 2-wire branch circuits as there are ungrounded conductors.
    - (a) 0-20 amps, fee per circuit

1 -	10 ci	ircu	its	each.	•	•	•	•	•	•	•	•	•	\$1.50
11 -	30 ci	ircu	its	each.	•	•	•	•	•	•	•	•	•	1.25
31 -	50 ci	ircu	its	each.	•	•	•	•	•	•	• -	•	•	1.00
51 -	70 ci	ircu	iits	each.	•	•	•	•	•	•	•	•	•	.75
71 -	90 ci	ircu	its	each.	•	•	•	•	•	•	•	•	•	.50
91 -	100 0	circ	cuits	each	. •	•	•	•	•	•	•	•	•	.25
Over	100 0	circ	uits	each		•	•		•	•	•	•	•	.20
	(b)	30	amps	bran	ch	ci	iro	uj	it	ea	c	1.	•	2.50
	(c)	40	amps	bran	ch	ci	iro	ui	it	ea	aci	1.	•	3.00
	(d)	50	amps	bran	ch	ci	irc	uj	L <b>t</b>	ea	acl	1.	•	3.50

2. Digitaling lineares including policialin
lamp holders each
3. Festoon lighting, temporary
lighting for carnivals, fairs, etc.,
Christmas tree lots and similar
locations
4. Motors, generators, transformers,
etc., including circuit wiring and controls
thereto.
(a) For each H.P., KW, or KV-A
or fraction thereof per unit not over
five (5)
For each additional H.P., KW,
KV-A or fraction thereof
(b) Maximum fee to be paid for
any one piece of equipment shall not
exceed Twenty-Five Dollars (\$25.00).
For the purpose of this Section,
equipment such as transformers,
capacitors, rectifiers, etc., which
are electrically interconnected and
operate as one unit shall be considered
to be a single unit.
<ol> <li>Heating, laundry, and cooking</li> </ol>
equipment, etc., including circuit wiring
and controls thereto.
(a) For each KW or KV-A or
fraction thereof per unit not over
five (5)
Per unit over 5 KW, KV-A or fraction
thereof
(b) Maximum fee to be paid for
any one piece of equipment shall not
exceed Twenty-Five Dollars (\$25.00).

6. Inspection of equipment, materials
exempt from testing laboratory approval
(Mun. Code Section 92.1104) at applicant's
request
7. The fees for gas tube lighting,
neon and/or incandescent lamp signs, shall
be as follows:
(a) Neon signs:
For not to exceed one (1) sign
including two (2) transformers
and/or sign flashers 3.00
For each additional transformer
and/or sign flasher therefor
For each additional sign on same
building 1.50
(b) Permit fees for gaseous
tube outline lighting, decorative
lighting and/or formed for adver-
tising purposes shall be based on
the following:
First two (2) transformers and/or
flashers therefor 3.00
For each additional transformer
and/or flasher
For each sign requiring inspection
before erection 5.00
(c) Incandescent lamp signs:
For each incandescent lamp sign
including sigh flashers 2.00
1 to 10 lamp holders for each sign25
11 to 25 lamp holders for each sign50

26 to 50 lamp holders for each sign	1.00
51 to 100 lamp holders for each sign	2.00
101 to 200 lamp holders for each sign .	3.00
Over 200 lamp holders for each sign	5.00
8. Fees for busways, trolley ducts	
and similar equipment shall be based on the	
following schedule:	
Each 20-foot section or major fraction	-
thereof for busway or trolley duct	
operating at a maximum of 120-240	٠
volts single phase	.25
Each 20-foot section or major fraction	
thereof for busway or trolley duct	-
operating at a maximum of 240 volts	•
3 phase	.50
Each 20-foot section or major fraction	·
thereof for busways or trolley duct	
operating at a maximum of 600 volts	· · · · · · · · · · · · · · · · · · ·
3 phase	1.50
9. Fees for service installation.	
(a) For each service installation	
not exceeding 600 volts, including one	
(1) electric meter, the fee shall be	
as follows:	
(1) Size of entrance	
conductors (copper or equivalent	
aluminum)	
Not larger than No. 1 AWG	1.00
Not larger than No. 4/0 AWG	1.75
Not larger than 500 MCM AWG	2.75
Not larger than 1000 MCM AWG	4.00
Larger than 1000 MCM AWG	5.00
For each service meter exceeding	-
one (1)	.25

(b) For each set of service	
entrance conductors operating at	
more than 600 volts	5.00
(c) Each construction pole	
wiring assembly	3.00
(d) Each temporary service other	
than construction	3.00
10. Fee for each feeder installed,	
replaced, relocated or reinstalled in any	
commercial and/or industrial premises, shall	
be as follows:	
(a) Size of feeder conductor	
(copper or equivalent aluminum):	
Not larger than No. 1 AWG	.50
Not larger than No. 4/0 AWG	1.75
Not larger than 500 MCM AWG	2.50
Larger than 500 MCM AWG	4.50
(b) For the purpose of this	
Section, the meaning of the term	
"Feeder" shall be to mean any single	
set of electrical conductors exceeding	
ten (10) feet in length and used to	
serve more than one set of fuses or	
circuit breakers.	
ll. Fee for installing, replacing,	
relocating, or reinstalling a switchboard	
or for addition to an existing switchboard,	
shall be as follows:	
(a) 0 - 600 volts:	
First switchboard section	4.50
Each additional switchboard section	2.50

(b) Over 600 volts:
First switchboard section 10.00
Each additional switchboard
section 5.00
(c) For the purpose of this
Section, a switchboard section shall
mean any portion of a complete switch-
board which is assembled or connected
together with an adjacent portion at
the place of installation.
12. Fees for underfloor duct or cellular
metal floor raceway shall be as follows:
Each one thousand (1000) square
feet of gross floor area or major
fraction thereof
13. Outlets added to existing
circuits, each
14. For inspection of electrical
installation or equipment for which no
fee is herein prescribed:
Time per hour 7.00
Minimum fee
15. In no case shall the additional
fee prescribed herein be less than 1.50
SEC. 92.0608 CIRCUIT CARDS
A complete schedule of circuits, showing the number
and arrangement of outlets on each circuit, shall be
posted at the service equipment location prior to request
for rough wiring inspection. Circuit cards furnished by
the Inspection Department shall be used for this purpose.

used.

In lieu of a circuit card, an approved wiring plan may be

SEC. 92.0612 TEMPORARY WIRING FOR CONSTRUCTION PURPOSES

Temporary wiring used on construction sites, where persons are employed under the provisions of the State of California Workmen's Compensation Insurance, shall be installed in conformance with the California Administrative Code, Title 24, Part 3 (Basic Electrical Regulations).

SEC. 92.0613 USE OF NONMETALLIC CONDUIT

- (a) Where ducts or conduits cross under public property they shall be installed to a depth determined by the City Engineer.
- (b) Galvanized heavy wall metal elbows shall be used to turn up conduit above the ground level. Approved fittings shall be used when connecting metal conduits to nonferrous conduits.
- (c) All nonmetallic conduit joints which are factorymade or machine-made in the field, need not be coated with
  a water proofing compound before sleeve couplings are made.
  All coupled joints shall be tightly fitted.
- (d) Direct earth burial types of nonmetallic conduits or ducts shall be installed in earth reasonably free of stones or other debris which may cause damage to said conduits or ducts, unless suitable means are provided to protect them against damage.
- (e) Nonmetallic underground conduit runs, when not encased in concrete and having a radius less than thirty-six (36) inches, shall turn through heavy wall steel elbows. Such steel elbows shall be painted with an asphaltic base preparation or equivalent protective coating against corrosion.

# SEC. 92.0622 WIRING IN EXISTING OR RELOCATED BUILDINGS OR STRUCTURES

(a) The provisions contained in Section 92.0101 of this Code shall apply to all existing or relocated buildings

or structures in addition to the requirements of this Section.

- (b) All buildings or structures moved into the City from other outside areas shall have their wiring conform to the provisions of this article, unless deemed otherwise by the Director of Building Inspection.
- (c) All relocated buildings or structures shall have service equipment conform to the provisions of Section 92.0708, if service equipment is relocated.
- (d) Additions to or alterations in old wiring shall be made in compliance with the provisions of this article.
- (e) Outlets added to existing branch circuits, including existing outlets, shall be rated at not less than one and one-half (1-1/2) amperes each. Circuits to which outlets have been added shall not contain outlets whose number will exceed 80 percent of the branch circuit rating.
- (f) Each room in a relocated dwelling shall be provided with not less than two (2) convenience outlets equally spaced. Receptacles which are a part of a fixture or switch outlet shall not count.

  SEC. 92.0708 SERVICE DISCONNECTING MEANS

Division J, Article 230 of the National Electrical Code is hereby amended by repealing Sections 70(b) and 70(g). In Division K, repeal Exception No. 4 of Section 90.

A service switch shall be provided for each set of service entrance conductors. It shall be located at the nearest readily accessible point to the entrance of the service entrance conductors.

Exception. Service entrance conductors of less than 300 volts may supply more than one individual service switch provided:

- (a) All service switches shall be grouped at the nearest readily accessible point of entrance and shall be accessible at all times to all consumers.
- (b) Not more than one service switch of this group is for the same class of service for the same consumer.
- (c) Where the number of service switches at the same location exceeds six (6), the entire current shall be taken through one main, fusible switch or circuit breaker.

In a multiple occupancy building, each occupant shall have access to his disconnecting means. A multiple occupancy building shall have service equipment for the same class of service grouped in a common, accessible place, except when more than one service is permitted in accordance with Section 230-2. The total number of service switches for each class of service shall not exceed six (6) for each set of service drop or underground conductors.

### SEC. 92.0715 WIRING METHODS

- (a) Nonmetallic wiring methods may be used only in residential-type dwellings when such buildings do not exceed two (2) stories in height. Nonmetallic wiring methods are not permitted within Fire Zone No. 1
- (b) Article 334 of the National Electrical Code is hereby amended as follows:

Type AC cable is not permitted for use in general wiring except that it may be fished through inaccessible areas when necessary to install wiring without causing disturbance to the finish of any portion of a building or structure.

#### SEC. 92.0720 RIGID NONMETALLIC CONDUIT

Section 2, Article 347, of the National Electrical Code is hereby amended by adding a new subparagraph (g) to read as follows:

- (g) Ducts placed under a concrete floor located within the walls of a building shall be not less than six (6) inches beneath the bottom of the floor slab. When deemed necessary, the Director of Building Inspection may allow or require other means of protection against physical damage to nonmetallic raceways.
- SEC. 92.0722 SWITCHES ACCESSIBILITY AND GROUPING

  Section 8, Article 380, of the National Electrical

  Code is hereby amended as follows:
- (a) Switches and circuit breakers, so far as practicable, shall be readily accessible and shall be grouped. They shall be installed so that the top of a fuse or the center of the grip of the operating handle of the switch, circuit breaker, or other control device, when in its highest position, will not be more than six and one-half (6-1/2) feet above the floor or working platform.
- (b) Snap switches used to control lighting branch circuits operating in excess of 150 volts to ground shall not be grouped in a common enclosure unless a permanent metal barrier is installed between every two, switches.

(c) All switch outlet plates shall be permanently engraved with the branch circuit voltage if such voltage exceeds 150 volts to ground.

Section 4. That Chapter IX, Article 2, Division 6 of the San Diego Municipal Code be, and the same is hereby amended by adding Section 92.0624 to read as follows:

# SEC. 92.0624 LOW VOLTAGE LIGHTING SYSTEMS

- (a) Low voltage lighting systems, other than portable types, which are served from a supply source in excess of twenty-five (25) volts and/or fifty (50) volts-amps shall comply with all regulations applicable to general wiring methods.
- (b) Underground conductors installed for low voltage lighting systems, other than portable types, shall be buried at a depth not less than ten (10) inches and shall be Type UF or equivalent.
- (c) Transformers for use with low voltage lighting systems and which do not have current limiting characteristics shall be provided with suitable overcurrent protection and such protection may be in the primary or secondary side.

Section 5. That Chapter IX, Article 2 of the San Diego Municipal Code be, and the same is hereby amended by amending the title of Division 7, and by adding Sections 92.0705, 92.0713, 92.0723, 92.0724 and 92.0725 to read as follows:

# DIVISION 7

MODIFICATIONS TO NATIONAL ELECTRICAL CODE SEC. 92.0705 CLEARANCE OF SERVICE DROPS

Section 24(a), Article 230, of the National Electrical Code is hereby amended by adding the following:

Exception No. 3. In no case shall a service head be placed more than eighteen (18) inches back of the

exterior wall facing the utilities serving line unless deemed impractical by the serving agency.

SEC. 92.0713 CONTINUOUS RIGID CABLE SUPPORTS - NATIONAL ELECTRICAL CODE

Article 318, of the National Electrical Code shall not be applicable to the San Diego Municipal Code.

SEC. 92.0723 MOBILE HOMES - NATIONAL ELECTRICAL CODE ARTICLE NOT APPLICABLE

Article 550 of the National Electrical Code shall not be applicable to the San Diego Municipal Code.

SEC. 92.0724 HIGH VOLTAGE - WIRING METHOD

Section 3, Article 710, of the National Electrical Code is hereby amended to read as follows:

(a) Aboveground Conductors. They shall be installed in rigid metal conduit, in other approved raceways if encased in not less than three (3) inches of concrete, or as open runs of metal armored cable approved for the voltage and purpose.

In locations accessible to qualified persons only, open runs of nonmetallic sheathed cable, bare conductors, and bare bus bars may also be used.

(b) Underground Conductors. Conductors shall be installed in rigid metal conduit or in other approved raceway encased in not less than three (3) inches of concrete envelope. All such conductors shall be buried at not less than thirty (30) inches below finish grade and this depth shall apply to top of concrete envelope.

All high voltage conduits or ducts shall be maintained at a depth not less than six (6) inches below other utilities when such utilities are buried twenty-four

(24) inches or less below the finish grade.

SEC. 92.0725 RADIO AND TELEVISION EQUIPMENT - NATIONAL ELECTRICAL CODE ARTICLE NOT APPLICABLE

force on the thirtieth day from and after its passage.

Article 810 of the National Electrical Code shall not be applicable to the San Diego Municipal Code.

Section 6. This ordinance shall take effect and be in

APPROVED: JOHN W. WITT, City Attorney

By Don S. Peterson, Deputy

DSP:sl 1/22/70

		d adopted by the Council of The Cit	y of San I	Diego on	!	FEB 12 1970
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		AUTHENTICATED BY:		Mayor c	FRANK CU	JRRAN n Diego, California.
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FORM CC-1255 (1-69)

ATTORNEY (S)

\* City of San Diego 202 "C" Street Community Concourse City Administration Building San Diego, California 92101

# **CERTIFICATE OF PUBLICATION**

No.

IN THE MATTER OF

AN ORDINANCE AMENDING CHAPTER IX, ARTICLE 2
OF THE SAN DIEGO MUNICIPAL CODE BY ADOPTING
THE NATIONAL ELECTRICAL CODE, 1968 EDITION,
BY RENUMBERING, REPEALING AND AMENDING SECTIONS

OF AND ADDING SECTIONS TO THE ELECTRICAL CODE

RECEIVE CITY CLERK'S OFFICE 1970 FEB 24 PH 3: 36 SAN DIEGO, CALIF.

I, Aline Grandier Hornaday hereby certify that The Daily Transcript is a daily newspaper of general circulation within the provisions of the Government Code of the State of California, printed and published in the City of San Diego, County of San Diego, State of California; that I am the printed and published in the City of San Diego, County of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and published in the City of San Diego, State of California; that I am the printed and I am the printed and I am the City of San Diego, San Diego, State of California; that I am the printed and I am the City of San Diego, San Diego

ORDINANCE NO. 10235 (NEW SERIES)

to a true and correct copy of which this certificate is annexed was published in said newspaper on

February 20, 1970

I certify under penalty of perjury that the foregoing is true and correct, at San Diego, California, on

February 20, 1970

Signature

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WHEREAS, a committee composed of representatives of the electrical industry in the San Diego area have studied the 1968 Edition of the National Electrical Code, as promulgated by the National Fire Protection Association, and have recommended adoption thereof with suggested amendments; and WHEREAS, such amendments reflect the construction industry's practices and experiences in the metropolitan area; and WHEREAS, the Board of Appeals and Advisors recommended adoption of the 1968 Edition of the National Electrical Code with these amendments; and

and
WHEREAS, the 1968 Edition of the National Electrical Code, with amendments, has been adopted by the cities of Chula Vista, National City, La Mesa, and El Cajon; and
WHEREAS, the U. S. Department of Housing and Urban Development requires cities desiring to obtain approval of their "Workable Program" to have complete and up-to-date codes covering electrical work; and
WHEREAS, this requirement would be satisfied by the adoption of the 1968 Edition of the National Electrical Code and recommended amendments; and

where and where and the city of San Diego is desirous of promoting uniformity between neighboring cities in the metropolitan area to better regulate the electrical industry in general and promote consistency where practical and for the public's benefit: NOW, THEREFORE,

BE IT ORDAINED, by the Council of The City of San Diego, as

Section 1. That Chapter IX, Article 2, Divisions 1 and 6 of the San Diego Municipal Code be, and the same are hereby amended by renumbering the following sections as indicated below:

OLD .		NEW
SECTION NO.	TITLE	SECTION NO.
92.0101.10	DEFINITIONS	92.0700
92.0101.13	MEANS OF IDENTIFICATION OF	92.0701
	GROUNDED CONDUCTORS	05.0172
92.0101.14	BRANCH CIRCUITS — EXCEPTIONS	92.0702
92.0101.15	FEEDERS - COMMON NEUTRAL FEEDER	92,0703
92.0101.16	CALCULATION OF FEEDER LOADS INSTALLATION OF SERVICE-ENTRANCE	92.0704
92.0101.17	INSTALLATION OF SERVICE-ENTRANCE	92.0706
•	CONDUCTORS — WIRING METHOD	
· 92.0101.18	INSTALLATION OF SERVICE ENTRANCE CONDUCTORS — NATIONAL ELECTRICAL	92.0707
	CONDUCTORS — NATIONAL ELECTRICAL	
	CODE SECTIONS NOT APPLICABLE	
92.0101.19	BONDING JUMPERS	92.0709
92.0101.20	GROUNDING ELECTRODES — WATER PIPE	
92.0101.21	GROUNDING CONDUCTOR CONNECTIONS -	- 92.0711
	ATTACHMENT TO ELECTRODES	
92.0101.22	OPEN WIRING ON INSULATORS -	92.0714
	NATIONAL ELECTRICAL CODE	
50 5151 55	ARTICLE NOT APPLICABLE	
92.0101.23	RIGID METAL CONDUIT - WET	92.071 <b>7</b>
00.0101.04	LOCATIONS	00 0510
92.0101.24	RIGID METAL CONDUIT — REAMING	92.0718
92.0101.25	NUMBER OF CONDUCTORS IN CONDUIT	92.0719
92.0101.26 92.0101.27	RIGID NONMETALLIC CONDUIT	92.072 <b>0</b>
92.0101.27	ELECTRICAL METALLIC TUBING -	92.0721
92.0101.28	WET LOCATIONS	92.0722
92.0101.28	SWITCHES — ACCESSIBILITY AND GROUPING	94.0722
92.0101.29	TRANSFORMERS — LOCATION	92.0609
92.0101.29	TRANSFORMERS — LOCATION TRANSFORMERS — DISCONNECTING	92.060 <b>9.10</b>
. 82.0101.30	MEANS — DISCONNECTING	92.000 <b>9.10</b>
92.0102	DUTIES OF DIRECTOR OF BUILDING	92.0101.16
. 52.0102	INSPECTION	24.0101.10
92.0103	AUTHORITY OF DIRECTOR OF BUILDING	92.0101.15
. 0=:0100	INSPECTION	04.0101.19
92.0105	INTERPRETATION	92.0101.10
92.0106	BOARD OF APPEALS AND ADVISORS	92.0101.14
92.0107	RESPONSIBILITY	92.0101.13
92.0108	PROHIBITIONS	92.0101.18
92.0606	SERVICE DISCONNECTING MEANS	92.0708
92.0609	WIRING METHODS	92.0715
92.0615	DIRECT BURIAL CABLE	92.0716
92.0621	TRAILER PARKS — ADOPTION OF	92.0101.17
	CAT TECONIA ADMINISTRO ANTIE CODE	

92.0606 SERVICE DISCONNECTING MEANS 92.0715 92.0609 WIRING METHODS 92.0611 TRAILER PARKS — ADOPTION OF 92.011.17 CALIFORNIA ADMINISTRATIVE CODE 92.011.17 CALIFORNIA ADMINISTRATIVE CODE Municipal Code be, and the same is hereby amended by repealing Section 92.0623. SWIMMING POOLS — GROUNDING CONDUCTOR.

Section 3. That Chapter IX. Article 2. Divisions 1, 3, 4, 6, and 7 of the San Diego Municipal Code be, and the same are hereby amended by amending Sections 92.0101, 92.0101.14, 92.0301, 92.0303, 92.0309, 92.0401, 92.0608, 92.0612, 92.0610, 92.0701, 92.0715, 92.0720, and 92.0722 as renumbered in Section 1 above to read as follows:

SEC. 92.0101 STANDARDS FOR INSTALLATIONS AND MATERIALS; NATIONAL ELECTRICAL CODE ADOPTED

(a) The National Electrical Code, 1968 Edition, a USA Standard, published by the National Fire Protection Association, three printed copies of which are filed in the office of the City Circk as Official Document No. 730370 be, and the same is hereby adopted as part of the Municipal Code of The City of San Diego, except as hereinafter modified, amended, repealed, or deleted; and by reference thereto is made a part hereof as though fully set out herein.

(b) The requirements of the National Electrical Code shall apply to all residential, commercial, and industrial installations. All electrical installations that are under the furisdiction of the California Division of Industrial Safety shall also comply with requirements of Title 24, Part 3, of the California Administrative Code.

SEC. 92.0101.14 BOARD OF APPEALS AND ADVISORS

When a question involving the interpretation of the intent and purpose of any provisions of this Article or the suitability of alternate materials and types of construction is presented to the Director of Building Inspection, he may request the Board of Appeals and Advisors to investigate such matters under the procedure established in Section 90.01 of this Cept. Material Safety is a structure or premises nor shall any alteration or addition be made in any such existing wiring,

installations.

SEC. 92.0303 SPECIAL OWNER'S PERMIT

The Director of Building Inspection may issue to a property owner or his duly assigned agent a permit authorizing said individual to install, alter, change, or repair electrical wiring in, or about his own property.

The permittee shall be subject to all rules and regulations applicable to electrical wiring in the City of San Diego.

Submitted plans shall show a single line diagram of secondult, and wire sizes. Electrical calculations shall acompany all submitted plans.

SEC. 92.0401 FEE SCHEDULE

(a) The fees prescribed in this article must be paid to The City of San Diego for each electrical installation for which a permit is required by this Section and must be paid before any such permit is issued, except as hereinafter provided.

(b) Whenever it shall be necessary to make an extra inspection trip because the applicant for any permit gives an incorrect address or wrong location in obtaining a permit required by this article, a fee of Two Dollars (\$2.00) shall be paid for correcting the address or location given in such permit.

(c) The fee for an electric wiring inspection requested by an owner of his premises, shall be Seven Dollars (\$7.00) per hour or a minimum of Five Dollars (\$5.00) for any fraction of an hour.

(d) For each inspection trip made necessary by reason of deficient or defective work, a fee of Three Dollars (\$3.00) shall be paid by the permittee. (d) For each inspection trip made necessary by reason or defective work, a fee of Three Dollars (\$3.00) shall be paid by the permittee.

(e) There shall be a fee of Two Dollars (\$2.00) for each permit issued (not refundable) in addition to the following fees:

1. For each lighting, small appliance, or general purpose 2-wire branch circuit, not including lighting fixtures or motors rated larger than 1/5 H.P. connected thereto. (Not more tha 15 utilization outlets permitted per lighting or general purpose branch circuit.) For the purpose of this Section a multi-wire branch circuit contains as many 2-wire branch circuits as there are ungrounded conductors.

(a) 0-20 amps, fee per circuit

1 - 10 circuits each \$1.50

11 - 30 circuits each \$1.25

31 - 50 circuits each \$75

71 - 90 circuits each \$75

71 - 90 circuits each \$25

Over 100 circuits each \$25

Over 100 circuits each \$25

(c) 40 amps branch circuit each \$3.50

(d) 50 amps branch circuit each \$3.50

2. Lighting fixtures including porcelain lamp holders each \$3.50

2. Lighting fixtures including porcelain for carnivals, fairs, etc., Christmas tree lots and similar locations \$4. Motors, generators, transformers, etc., including circuit wiring and controls thereto.

(a) For each H.P., KW, or KV-A or fraction thereof per unit not over five (5)

For each additional H.P., KW, KV-A or fraction thereof per unit not over five (5)

For each additional H.P., KW, KV-A or fraction thereof per unit not over five (5) For each additional H.P., KW, KV-A or fraction thereof

(b) Maximum fee to be paid for any one piece of equipment shall not exceed Twenty-Five Dollars (\$25.00). For the purpose of this Section, equipment such as transformers, capacitors, rectifiers, etc., which are electrically interconnected and operate as one unit shall be considered to be a single unit.

5. Heating, laundry, and cooking equipment, etc., including circuit wiring and controls thereto.

(a) For each KW or KV-A or fraction thereof per unit not over five (5)

Per unit over 5 KW, KV-A or fraction thereof

(b) Maximum fee to be paid for any one piece of equipment shall not exceed Twenty-Five Dollars (\$25.00).

6. Inspection of equipment, materials exempt from testing laboratory approval (Mun. Code Section 92.1104) at applicant's request request

7. The fees for gas tube lighting, neon and/or incandescent lamp signs, shall be as follows:

(a) Neon signs:

For not to exceed one (1) sign including two (2) transformers and/or sign flashers

For each additional transformer and/or sign flasher therefore

.SEC. 92.0309 APPLICATION FOR PERMIT

(a) Application for a permit, describing the work to be done, shall be made in writing to the Director of Building Inspection. The application shall be accompanied by such plans, specifications, and schedules as may be necessary to determine whether the installation as described will be in conformity with the requirements of this article. If it shall be found that the installation as described will in general conform with the requirements of this article, and if the applicant has compiled with all provisions of this article, a permit for such installation shall be issued; provided, however, that the issuance of the permit shall not be taken as permission to violate any of the requirements of this article.

(b) Electrical plans shall be submitted for the following types of installations:

(b) Electrical plans shall be constallations:

1. All commercial and industrial installations.
2. Apartment buildings containing three (3) or more units and having electric heating cables.
3. Apartment buildings containing four (4) or more units but having no electric heating cables.
Submitted plans shall show a single line diagram of service, feeders, conduit, and wire sizes. Electrical calculations shall acompany all membershall plans.

For each additional transformer and/or sign flasher therefor

For each additional sign on same building 1.50

(b) Permit fees for gaseous tube outline lighting, decorative lighting and/or formed for advertising purposes shall be based on the following:

First two (2) transformers and/or flashers therefor 3.00

For each additional transformer and/or flasher 5.00

(c) Incandescent lamp signs:

For each ligan requiring inspection before erection 5.00

(c) Incandescent lamp signs including sign flashers 2.00

1 to 10 lamp holders for each sign 2.51

1 to 25 lamp holders for each sign 5.00

26 to 50 lamp holders for each sign 5.00

101 to 200 lamp holders for each sign 7.00

101 to 200 lamp holders for each sign 8. Fees for busways, trolley ducts and similar equipment or trolley duct operating at a maximum of 120-240 volts single phase 2.55 Each 20-foot section or major fraction thereof for busway or trolley duct operating at a maximum of 240 volts phase ach 20-foot section or major fraction thereof for busways trolley duct operating at a maximum of 600 volts phase

Fees for service installation.

(a) For each service installation not exceeding 600 oits, including one (1) electric meter, the fee shall be

(a) Size of feeder conductor (copper or equivalent aluminum):
Not larger than No. 1 AWG
Not larger than No. 4/0 AWG
Not larger than S00 MCM AWG
Larger than 500 MCM AWG

(b) For the purpose of this Section, the meaning of the term "Feeder" shall be to mean any single set of electrical conductors exceeding ten (10) feet in length and used to serve more than one set of fuses circuit breakers. 11. Fee for installing, replacing, relocating, or reinstalling a switchboard or for addition to an existing switchboard, shall 15. In no case shall the additional fee prescribed herein be Compensation Insurance, shall be installed in conformance with California Administrative Code, Title 24, Part 3 (Basic Electrical Regulations).

SEC. 92.0613 USE OF NONMETALLIC CONDUIT

(a) Where ducts or conduits cross under public property they shall be installed to a depth determined by the City Engineer.

(b) Galvanized heavy wall metal elbows shall be used to turn up conduit above the ground level. Approved fittings shall be used when connecting metal conduits to nonferrous conduits.

(c) All nonmetallic conduit joints which are factory-made or machinemade in the field, need not be coated with a water proofing compound before sleeve couplings are made. All coupled joints shall be tightly fitted.

(d) Direct earth burial types of nonmetallic conduits or ducts shall be installed in earth reasonably free of stones or other debris which may. cause damage to said conduits or ducts, unless suitable means are provided to protect them against damage.

(e) Nonmetallic underground conduit runs, when not encased in concrete and having a radius less than thirty-six (36) inches, shall turn through heavy wall steel elbows. Such steel elbows shall be painted with an asphalite base preparation or equivalent protective coating against corrosion.

SEC. 92.0822 WIRING IN EXISTING OR RELOCATED BUILDINGS OR STRUCTURES

(a) The provisions contained in Section 92.0101 of this Code shall apply to all existing or relocated buildings or structures in addition to the requirements of this Section.

(b) All buildings or structures moved into the City from other outside areas, shall have their wiring conform to the provisions of this article, unless deemed otherwise by the Director of Building Inspection.

(c) All relocated buildings or structures shall have service equipment conform to the provisions of Section 92.0708, if service equipment is relocated.

(d) Additions to or alterations in old wiring shall be made in com-(c) All relocated buildings or structures shall have service equipment conform to the provisions of Section 92.0708, if service equipment is relocated.

(d) Additions to or alterations in old wiring shall be made in compliance with the provisions of this article.

(e) Outlets added to existing branch circuits, including existing outlets, shall be rated at not less than one and one-half (1½) amperes each. Circuits to which outlets have been added shall not contain outlets whose number will exceed 80 percent of the branch circuit rating.

(f) Each room in a relocated dwelling shall be provided with not less than two (2) convenience outlets equally spaced. Receptacles which are a part of a fixture or switch outlet shall not count.

SEC. 92.0708 SERVICE DISCONNECTING MEANS

Division J, Article 230 of the National Electrical Code is hereby amended by repealing Sections 70(b) and 70(g). In Division K, repeal Exception No. 4 of Section 90.

A service switch shall be provided for each set of service entrance conductors. It shall be located at the nearest readily accessible point to the entrance of the service entrance conductors.

Exception. Service entrance conductors of less than 300 volts may supply more than one individual service switch provided:

(a) All service switches shall be grouped at the nearest readily accessible point of entrance and shall be accessible at all times to all consumers.

(b) Not more than one service switch of this group is for the same accessible point of entrance and shall be accessible at all times to all consumers.

(b) Not more than one service switch of this group is for the same class of service for the same consumer.

(c) Where the number of service switches at the same location exceeds six (6), the entire current shall be taken through one main, fusible switch or circuit breaker.

In a multiple occupancy building, each occupant shall have access to his disconnecting means. A multiple occupancy building shall have service equipment for the same class of service grouped in a common, accessible place, except when more than one service is permitted in accordance with Section 230-2. The total number of service switches for each class of service shall not exceed six (6) for each set of service drop or underground conductors.

SEC. 92.0715 WIRING METHODS

(a) Nonmetallic wiring methods may be used only in residential-type dwellings when such buildings do not exceed two (2) stories in height. Nonmetallic wiring methods are not permitted within Fire Zone No. 1.

(b) Article 334 of the National Electrical Code is hereby amended as follows:

Type AC cable is not permitted for use in general wiring and the same closure.

(b) Article 334 of the National Electrical Code is hereby amended as follows:

Type AC cable is not permitted for use in general wiring except that it may be fished through inaccessible areas when necessary to install wiring without causing disturbance to the finish of any portion of a building or structure.

SEC. 92.0720 RIGID NONMETALLIC CONDUIT

Section 2, Article 347, of the National Electrical Code is hereby amended by adding a new subparagraph (g) to read as follows:

(g) Ducts placed under a concrete floor located within the walls of a building shall be not less than six (6) inches beneath the bottom of the floor slab. When deemed necessary, the Director of Building Inspection may allow or require other means of protection against physical damage to nonmetallic raceways.

SEC. 722 SWITCHES — ACCESSIBILITY AND GROUPING
Section 8, Article 380, of the National Electrical Code is hereby amended as follows:

(a) Switches and circuit breakers, so far as practicable, shall be readily accessible and shall be grouped. They shall be installed so that the top of a fuse or the center of the grip of the operating handle of the switch, circuit breaker, or other control device, when in its highest position, will not be more than six and one-half (6½) feet above the floor or working platform.

(b) Snap switches used to control lighting branch circuits operating in excess of 150 volts to ground shall not be grouped in a common enclosure unless a permanent metal barrier is installed between every two switches.

(c) All switch outlet plates shall be permanently engraved with the branch circuit voltage if such voltage exceeds 150 volts to ground.

Section 4. That Chapter IX, Article 2, Division 6 of the San Diego Municipal Code be, and the same is hereby amended by adding Section 92.0624 to read as follows:

SEC. 92.0624 LOW VOLTAGE LIGHTING SYSTEMS

(a) Low voltage lighting systems, other than portable types, which are served from a supply source in excess of twenty-five (25) volts and/or fifty (50) volts-amps shall comply with all regulations applicable to general wiring methods.

(b) Underground conductors installed for low voltage lighting systems, other than portable types, shall be burled at a depth not less than ten (10) inches and shall be Type UF or equivalent.

(c) Transformers for use with low voltage lighting systems and which do not have current limiting characteristics shall be provided with suitable overcurrent protection and such protection may be in the primary or secondary side.

Section 5. That Chapter IX, Article 2 of the San Diego Municipal Code be, and the same is hereby amended by amending the title of Division 7, and by adding Sections 92.0705, 92.0713, 92.0723, 92.0724 and 92.0725 to read as follows: ne, and the same is hereby amended by amending the title of Division 7, and ys adding Sections 92.0705, 92.0713, 92.0723, 92.0724 and 92.0725 to read follows:

DIVISION 7

MODIFICATIONS TO NATIONAL ELECTRICAL CODE
SEC. 92.0705 CLEARANCE OF SERVICE DROPS
Section 24(a), Article 230, of the National Electrical Code is hereby amended by adding the following:
Exception No. 3. In no case shall a service head be placed more than eighteen (18) inches back of the exterior wall facing the utilities serving line unless deemed impractical by the serving agency.

SEC. 92.0713 CONTINUOUS RIGID CABLE SUPPORTS—
NATIONAL ELECTRICAL CODE
Article 318, of the National Electrical Code shall not be applicable to the San Diego Municipal Code.
SEC. 92.0723 MOBILE HOMES—NATIONAL ELECTRICAL CODE
ARTICLE NOT APPLICABLE
Article 550 of the National Electrical Code shall not be applicable to the San Diego Municipal Code.
SEC. 92.0724 HIGH VOLTAGE—WIRING METHOD
Section 3, Article 710, of the National Electrical Code is hereby amended to read as follows:

(a) Aboveground Conductors. They shall be installed in rigid metal conduit, in other approved raceways if encased in not less than three (3) inches of concrete, or as open runs of metal armored cable approved for the voltage and purpose.

In locations accessible to qualified persons only, open runs of nonmetallic sheathed cable, bare conductors, and bare bus bars may also be used.

(b) Underground Conductors. Conductors shall be installed in rigid metal conduit or in other approved raceway encased in not less than three (3) inches of concrete envelope. All such conductors shall be buried at not less than thirty (30) inches below finish grade and this depth shall apply to top of concrete envelope. All such conductors shall be buried at not less than thirty (30) inches below finish grade and this depth shall apply to top of concrete envelope. All such conductors while the shall be maintained at a depth not less than six (6) inches below other utilities when such utilities are buried twenty-fou AUTHENTICATED BY: FRANK CURRAN, Mayor of The City of San Diego, California. JOHN LOCKWOOD. City Clerk of The City of San Diego, California. By ELFA F. HAMEL, Deputy. W-212