Electrical Code

CHAPTER 29

ELECTRICAL CODE.

Article I. In General.


The National Electric Code 2014-2017 Edition, is hereby adopted as the Electric Code of this municipality for establishing the minimum regulations governing the conditions and maintenance of all electrical service and appliances regarding all property, buildings, and structures, providing the standards for electrical service and appliances and other physical things and conditions essential to ensure that structures are safe, sanitary and fit for occupation and use. Each and all of the regulations, provisions, penalties, conditions, and terms of the National Electric Code are hereby
referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions, and changes, if any, prescribed herein. The National Electric Code, printed in book or pamphlet form, is hereby incorporated by reference in addition to all amended editions as though printed in full herein, insofar as such code does not conflict with the Statutes of the State of Nebraska or other specific model codes adopted by the City of Hastings. One copy of the National Electric Code is on file at the office of the Municipal Clerk and is available for public inspection at any reasonable time. The provisions of the National Electric Code shall be controlling throughout the municipality and throughout its extraterritorial zoning jurisdiction.


29-102. Duties of electrical inspector; assistant electrical inspector.

The electrical inspector shall act under the direction of the Development Services Director and shall have supervision of all electrical installation work in the City, and shall perform such duties as are prescribed in this Chapter. He shall have the right, during reasonable hours, to enter any building in the City for the performance of his duties.

The electrical inspector shall inspect all electrical installations and the installation and construction of the electric system to ensure compliance with the requirements of this Chapter and with any additional conditions set forth in any permit.

The electrical inspector shall inspect all electrical distribution systems from the weather head, or point of attachment to the supplying utility, in the City, and investigate all cases reported to or referred to him, of the use of unsuitable material or workmanship on any job of electrical work, or the violation of the provisions of this Chapter, and report such fault or violation to the Development Services Director for further action.

Assistants to the electrical inspector shall be appointed by the Development Services Director after examination and recommendation by the merit service commission. Any assistant to the electrical inspector shall have such powers and duties as are assigned to him by the electrical inspector.

The electrical inspector shall have the authority to cause the turning off of all electric current and to cut or disconnect in cases of emergency any wire where such electric current is dangerous to life and property or may interfere with the work of the Fire Department. The Chief of the Fire Department or person in charge at times of fire, as well as the electrical inspector, or either of them, shall have the power to at once cause the removal of all wires or the turning off of all electric current where the circuits interfere with the work of the Fire Department during the progress of a fire.


29-103. Inspections generally; correction of defective installations.

The electrical inspector shall make inspections of any electrical wiring, appliance installations or connections upon request in order to ascertain whether the electrical wiring or appliance installation requirements have been or are being violated. Should the electrical inspector, upon making such an inspection as requested, find an unsafe or unsatisfactory installation, he shall have the authority to shut off the appliance or service at the meter. He shall tag the unsafe or unsatisfactory installation and he shall notify (1) the installer immediately if the job is a new installation or (2) the owner, agent, tenant or one in charge of the property to cause said unsafe or unsatisfactory installation to be remedied within a specified time and not exceeding ten days, if it is not a new installation. Failure to make such corrections, changes or repairs or failure to notify the inspector to make re-inspections, within the specified time after receiving such notification to comply therewith, shall be considered as maintaining an unsafe electrical installation and violating the requirements of this Section. In such case, the inspector shall make such re-inspections of the premises as the inspector deems reasonable and necessary and report his findings to the Development Services Director who shall, in turn, cause action to be taken in the proper court to secure compliance with this Section, in which case the penalties set forth in Section 29-117 shall apply. It shall be the duty and the responsibility of the installer or one making the corrections, changes or repairs, to notify the inspector within forty-eight hours after completion of the correction, changes or repairs and request a re-inspection. Request for inspection shall be made by the installer at the office of the electrical inspector not less than eight working hours in advance of inspection.

(Code 1973, 12-3; Ord. No. 1896, 2240, 2562, 4441-6/2015)
29-104. Installation of new apparatus; compliance with chapter.

All electric apparatus shall be installed strictly in accordance with the provisions of this Chapter. Upon completion of the installation of any electric apparatus, the installer installing the same shall notify the electrical inspector who shall inspect such electric apparatus and the installation thereof, and, if all of the provisions of this Chapter have been complied with, then the electrical inspector shall issue a certificate of approval, which certificate shall certify that such apparatus has been installed in accordance with the provisions of this Chapter. No electric apparatus shall be used until inspected by the electrical inspector and a certificate issued by him approving same and permitting its use. (Code 1973, 12-4; Ord. No. 1896, 4441-6/2015)

29-105. Disconnecting means, circuit breakers, etc.

(1) Required. A single means of disconnecting all ungrounded conductors in the building from the service entrance conductors shall be provided.

(2) Location. The disconnecting means shall be located at a readily accessible point nearest to the entrance of the conductors, either inside or outside the building wall.

(3) Approval. The disconnecting means shall be of a type approved for service equipment and for prevailing conditions.

(4) Types permitted.

The disconnecting means for ungrounded conductors shall be a manually operable switch or circuit breaker or the air-break or oil immersed type, equipped with a handle or other suitable operating means, positively identified and marked, for mechanical operation by hand.

A push-button type of electrical remote control may be used in addition to the manual handle.

(5) Externally operable. All enclosed service switches or circuit breakers shall be externally operable. It is recommended that where the current of a single circuit, or group of circuits is separately metered, as in apartment house installations, devices be installed in a convenient location to control each separately metered installation, such devices being enclosed and the switch or circuit breaker being externally operable.

(6) Indication of type. The disconnecting means shall plainly indicate whether it is in the open or closed position.

(7) Equipment. Service equipment installations up to and including two hundred amperes may be installed anywhere in the City without a main disconnecting means prior to the meter equipment. A disconnecting means shall be supplied on central air conditioning units. Manufactured or harness-type wiring systems not bearing the Underwriters Laboratories label for the entire system shall not be installed in residential or commercial installations.

(8) Rating. Residential service disconnecting means shall have a rating not less than the load to be carried determined in accordance with Article 220 of the National Electrical Code. In general the service disconnecting means shall have a rating of not less than one hundred amperes where a switch or a circuit breaker is used. All existing sixty ampere residence electrical service shall have no more than eight connecting branch circuits.

(9) Conductors serving additional buildings. In a property comprising more than one building under single management, the conductors supplying each building served shall be provided with a readily accessible means, within or adjacent to the building, of disconnecting all ungrounded conductors from the source of supply. In garages and outbuildings on residential property, the disconnecting means may consist of a snap switch, suitable for use on branch circuits, including switch controls at more than one point.

(10) Disposal units and dishwashers – Residential Use. Disposal units and dishwashers shall be installed with a fused disconnecting means within access of the unit, and both units will be installed with GFCI/AFCI protection. The disconnecting means may be with a cord and plug connection under
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the sink inside of the cabinet. The disposal unit and dishwasher may be installed on the same 20Amp
circuit, and wired with a single duplex receptacle that is split wired for switching the disposal.-

29-106. Installation of electric meters.

Electric meters shall be installed as near as practicable to the point where the service enters the
building and should be so located as to be readily accessible for examination, reading and
replacement. An electric meter shall not be placed where it will be subject to damage. It shall be
located at a minimum of fifty-four inches to a maximum of seventy-five inches above grade. The
measurements are to be made to the center of the meter. Meters for single family homes shall be
located outside of the building. Meters for other buildings shall be located outside of the building or in
an approved meter room to which Hastings Utilities and emergency first responders have 24/7
access.


Approved metallic conduit shall be used in new construction or extension wiring in the installation
of all electric apparatus in all commercial and industrial buildings and structures.

Non Mixed-use Buildings and Structures (Residential Only):

(1) Approved non-metallic cable may be used in all multi-family dwellings and related
accessory buildings or garages. Conduit or approved metallic cable shall be used where subject to
physical damage.

(2) Approved non-metallic cable may be used in other residential structures with private
garages where the floor area of the same will permit the storage of not more than four vehicles.
Conduit or approved metallic cable shall be used where subject to physical damage.

Mixed-use Buildings and Structures—(Buildings with a commercial or retail space on the main floor
and apartments above):

(1) Approved non-metallic cable may be used in multi-family units located on floors above a
mixed-use (or commercial) building or structure where all of the following conditions are met:

(a) The building is not more than three stories in height. For the purposes of this section,
a basement shall be considered a story.

(b) Dwelling units shall be separated from other dwelling units and the commercial or
mixed-uses below by fire barriers as prescribed by the City's Building Code.

(c) Lighting, emergency lighting; exit signs and any other required corridor Life-safety
equipment or devices shall be on a separate branch circuit in approved metallic cable or conduit.

(d) Any and all wiring for any common areas that are accessible to the public shall be
done in approved metallic cable or conduit.

(e) Conduit or approved metallic cable shall be used where subject to physical damage.

(2) Buildings with a commercial or retail space and residential space on the same floor shall
be completely wired in approved metallic cable or conduit, unless the commercial space takes up
less than 10% of the space on the floor, and a 2 hour fire separation is provided between the
residential space and the commercial or retail space.

29-108. Enclosing of service wires.

Approved non-metallic cable may be used in other residential structures with private
garages where the floor area of the same will permit the storage of not more than four vehicles.
Conduit or approved metallic cable shall be used where subject to physical damage.

Service wires for all electrical installations shall be enclosed in approved metallic conduit from service entrance head to main disconnect device or meter; provided however, when the service mast is used to support the service drop to the building or structure, the mast shall be a minimum of 2-inch (2") rigid metallic conduit (RMC) or 2-inch (2") intermediate metallic conduit (IMC).
(Code 1973, 12-9; Ord. No. 1896, 4441-6/2015)

29-109. Light in stairways.

All stairways in apartment houses and apartments over business sections shall have a light. This light shall not be on a pull chain or a switch.

29-110. Support of objects on conduit wires or fixtures prohibited.

In commercial or residential installations, it shall be a violation of this Code to support any foreign object or installation on conduit, wires or fixtures.
(Code 1973, 12-12; Ord. No. 1896, 4441-6/2015)

29-111. Extension cords, heating devices, etc.

All extension cords, portable cords for lamps, heating devices and electrical appliances shall be reinforced portable cords for their respective uses, and shall not exceed six feet in length.

29-112. Starting motors across the line.

Motors up to thirty horsepower in one motor may be started across the line. Up to fifty horsepower motor with a fluid drive or pressure relief device may be started across the line also.

29-113. Placement of sheet metal, etc., near wiring.

Any person and any contractor desiring to place any sheet metal, insulation or other material, in construction, repairing or improving any building or structure, within six inches of any electric wire not installed in approved conduit for use in connection with electric light, heat or power, shall, before proceeding with the execution of such work, notify the electrical inspector who shall inspect the same and cause all wires to be placed in a safe and secure condition.

29-114. Gasoline stations.

Wiring of service stations or petroleum dispensing stations shall be in accordance with the National Electrical Code as adopted by the City.
(Code 1973, 12-17; Ord. No. 1896, 4441-6/2015)

29-115. Mobile home courts and camps.

Every mobile home court or camp shall be equipped with electric power. All mobile home courts and camps shall comply with this Chapter and shall be inspected by the electrical inspector.


Every new building when constructed and whether or not electrical power will be installed in said building, shall be provided with a concrete encased grounding electrode, hereinafter referred to as a Ufer ground. Ufer grounds shall be any one of the following:

(1) Twenty feet of #4 rebar (1/2 inch diameter) placed in the concrete foundation of the building. Lap splices shall not be less than 8 inches and shall have a minimum of two wire ties. A minimum of 4 inches of the rebar shall be exposed above the sole plate, slab or foundation, accessible for bonding. The stub shall be painted green to identify it as the ufer ground.
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(2) A bare #4 AWG copper wire 20 feet long placed in the concrete foundation of the building. A minimum of 4 inches of such wire shall be exposed above the sole plate, slab or foundation, accessible for bonding.

(3) Twenty feet of #4 rebar as described in item 1 above, attached to a #4 AWG with an approved bonding clamp may also extend from the rebar and be exposed a minimum of 4 inches above the sole plate, slab or foundation and accessible for bonding.

If wall coverings, including but not limited to, wood sheeting, paneling, gypsum board, oriented strand board, FRP, plywood or other finishes will be installed, the power ground bonding point shall be made accessible by installation of an access panel, two gang plaster ring or the like.

When using the incoming water service as the ground point in any new installation, remodel or service change, the attachment to the metal water service must be made within 5’ of the entrance of the water service to the building, and the water meter must be jumped with approved clamps.

(Ord. No. 4441-6/2015)

29-117. Spring loaded devices. Limitations.

Electrical devices provided with spring loaded connections (back stab connections) shall not be used unless such devices are also provided with screws and follow plates. Wire connections to such devices shall not utilize the spring loaded connections.

(Ord. No. 4441-6/2015)

29-118. Bonding of metallic raceways.

Any new or reworked metallic raceway shall have a correctly sized equipment grounding conductor installed in that raceway.

(Ord. No. 4441-6/2015)

29-119. Disposition of fees collected under chapter.

All fees collected under the provisions of this Chapter shall be credited to the General Fund of the City.


29-120. Penalties.

Any person upon whom a duty is placed by the provisions of this Chapter, who shall fail, neglect or refuse to perform such duty or who shall violate any of the provisions of this Chapter, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be punished as provided by this Code. If the defendant is a licensed electrician the judgment of the conviction may also include a provision for the revocation of the defendant's license for such time as the court shall determine. If the license of any defendant is thus revoked, the court shall furnish, or cause to be furnished, the Examining Board for Electricians and the City Clerk certified copies of the judgment of conviction.


Reference: As to general penalty, see Section 1-109 of this Code.

Article II. Permits.

29-201. Installation permit -- Required.

No wiring or electrical apparatus shall be installed until a permit has been obtained.

A permit shall be obtained whenever more than three existing electrical devices are replaced or added, including devices that are being changed for the purposes of increasing energy efficiency. This is to include receptacles, switches, lighting outlets and equipment that is hard wired, and is all inclusive of any residential, commercial or industrial facility. Replacement of three or fewer such devices shall be considered normal repair and maintenance and shall not require a permit.
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**Require Electrical contractors to obtain a permit when they are upgrading electrical devices that are more energy efficient in and around structures. If the contractors are replacing 3 or fewer existing devices it would be considered repair work and not require a permit.**

A permit shall be obtained whenever a roof top unit, furnace or air conditioner or any combination of these are being replaced or added to any home, retail, commercial or industrial facility.

Any electrical conduit that is ran in any commercial facility for more than three devices will require an electrical permit and subsequent inspection, including conduit ran for the purpose of housing low voltage system conductors.

A permit shall be obtained whenever a new fire alarm system is being installed in a facility, or modifications are made to an existing fire alarm system that consist of more than 3 devices.

A permit shall be required for any repair or up-grade to an electrical service from the utility service supply drop to the service panel, including the utility supplied meter socket.


**29-202. Same -- Filing of plans; inspection fees.**

No permit shall be issued until an applicant has filed a plan with the Electrical Inspector and paid an inspection fee as set forth in the most recent Council fee resolution.


**29-203. Same -- Issuance; inspection fee for work completed prior to obtaining permit.**

If the plan submitted complies with this chapter in all respects, upon payment of the inspection fee, the electrical inspector shall issue a permit for the installation thereof. Any installation completed for which a permit has not been taken will be inspected and an inspection fee double the rate shown above will be assessed against the installer.


**29-204. Reinspection fees.**

A re-inspection fee may be assessed for each inspection or re-inspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

This section is not to be interpreted as requiring re-inspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or re-inspection.

Re-inspection fees may be assessed when the inspection record card is not posted or otherwise available on the work site, the approved plans are not readily available to the inspector, for failure to provide access on the date and time for which inspection is requested, or for deviating from plans requiring the approval of the Building Inspector.

In instances where re-inspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.


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**Article III. Electricians.**

**29-301. Examining board.**

There is hereby created an Examining Board for Electricians which shall comprise the electrical inspector, City Engineer, two appointees from the local electrical trades group, and one member from the City Council all to be selected by the Mayor and approved by the City Council. One of such appointees shall be a certified electrical contractor and one shall be an accredited employee or member of a firm duly authorized and certified to install electric wiring and equipment. The electrical inspector shall be secretary of the Examining Board for Electricians and shall have custody of all records of the same. The Examining Board for Electricians is hereby authorized, empowered and
directed to prescribe, amend and enforce rules and regulations consistent with this Chapter for the examination of journeyman electricians and master electricians. Each appointment shall be for a period of two years with the term of office to expire the first day of July after the full two year period has been served or in the case of the city councilperson, until his or her term of office as councilperson ends, whichever comes first. Vacancies shall be filled by the appointive power to serve for the balance of the term of the member of the Board whose position becomes vacant. Each member of the Board shall receive ten dollars for each meeting.


No person shall engage in or work at the business, trade or calling of an electrician in the City until he or she shall have been certified as an electrician, qualified with the Examining Board for Electricians for such work, and paid all applicable fees and occupation taxes.


29-303. Same -- Application.

Application for certification shall be made in writing to the electrical inspector at the office of the City Engineer upon blanks furnished by that office, which shall show the name, residence and business location of the applicant, and such other information as may be required, including copies of any current licenses that the applicant may hold. If the applicant is applying to take one of the tests for electrical license in the City of Hastings, they also must provide proof of verifiable experience from any of their employers that will amount to 4 years spent as an apprentice prior to testing for the Journeyman’s license, or 2 years spent as a Journeyman prior to testing for the Master’s license.


29-304. Apprentices.

It shall be unlawful for any person to work as an electrician's apprentice without first obtaining an electrician's apprentice certification. Upon payment of the certification fee as set forth in the most recent Council fee resolution to the Development Services Department, and the filing of a written application with the electrical inspector, or his deputy, shall issue to any person over eighteen years of age, and engaged in learning the trade of electrician, an annual apprentice's certificate which shall expire on April 30th after its issuance. Such apprentice's certificate shall not be transferable and shall entitle the holder thereof to act as an electrician's apprentice to a certified electrician. It shall be unlawful for an apprentice electrician to do or perform any act of electrical installation, repair or maintenance without the personal supervision of a certified journeyman or master electrician in actual physical attendance at all times the work is being done or performed; and it shall further be unlawful for any certified journeyman or master electrician employing any apprentice electrician to assign work to be done and performed by the apprentice in violation of the foregoing provisions.

No corporation, firm or partnership shall be allowed more than three apprentice electricians to each master or journeyman electrician employed by the corporation, firm or partnership on any one given job or project.


29-305. Journeyman or Master Electrician -- Examination; issuance of certificate.

An applicant for a journeyman electrician certificate shall have worked under the supervision of a certified journeyman or master electrician, for a period of four years, before being eligible to take a journeyman electrician's examination. An applicant for a master electrician's certificate shall have worked under the supervision of a master electrician, for a period of two years, before being eligible to take a master electrician's examination.

Before the applicant shall be certified as a journeyman or master electrician, as the case may be, he shall have a certificate or a license granted by the State Electrical Division or he shall submit to an examination to determine his fitness and competency to engage in the business or trade of electrical work, which examination shall be given by the Examining Board for Electricians, as hereinabove provided. Upon the payment of the required certification fee, such applicant, after having by such examination shown himself to the satisfaction of the Examining Board for Electricians, to be fit, competent and qualified to act as a journeyman electrician or master electrician, as the case may be,
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shall be certified by the Electrical Inspector who shall deliver to the applicant a certificate signed by
the Electrical Inspector.

An applicant failing to pass an examination shall not be eligible for the re-examination until six
months shall have elapsed after the previous examination. Should he fail after the third examination,
he shall not be eligible for a period of one year thereafter to take an additional examination. He shall
pay an examination fee for each re-examination required.

Any person certified as a journeyman or master electrician by State of Nebraska, or the cities of
Grand Island, Nebraska or Kearney, Nebraska shall be exempt from taking the foregoing
examination and, provided the applicant is otherwise qualified pursuant to this Code, be issued an
equivalent certificate upon application and payment of all applicable fees and occupation taxes.

It shall be unlawful for any apprentice, journeyman or master electrician to work in the jurisdiction
of the City of Hastings without first obtaining from the office of the Electrical Inspector, a certificate,
either by examination or by providing credentials as provided in this section and paying the applicable
fee as set forth in the most recent Fee Resolution approved by City Council.

29-306. Same -- Fees.

The fees to be charged for certification and examination under this Chapter shall be as set forth in
the most recent Council fee resolution.


A partnership or corporation shall be certified as eligible for a master electrician's certificate upon
payment of the certification fee and filing with the electrical inspector of an application upon forms
prescribed by the electrical inspector showing that a certified master electrician is a member of the
firm or an officer of the corporation and will at all times be in actual charge of and responsible for the
installation, removal or repair of all electrical work done by the firm or corporation. The certificate of
a firm or corporation shall terminate automatically upon the withdrawal from the firm or corporation of
the master electrician listed upon the application.

29-308. Certificates.

All certificates required by this Chapter shall expire on April 30th following date thereof and shall
not be assignable. If certification and registration fees are not paid within thirty days of expiration,
the certificate shall be automatically revoked.

29-309. Same -- Renewal.

Certificates, at the time of their expiration, may be renewed upon recommendation of the
Examining Board for Electricians without an examination upon payment of the required fee.

Any person certified under the provisions of this Chapter as a journeyman electrician or master
electrician who does not renew his certification for a period of one month after the expiration of same,
shall pay the examination fee required by this Article, and submit himself to an examination by the
Examining Board for Electricians before such person can be certified.

29-310. Same -- Revocation generally.

The City Council by a majority vote shall have the power to revoke any journeyman electrician's or
master electrician's certificate upon the recommendation of the Examining Board for Electricians, if
the same was obtained through error or fraud or if the recipient thereof is shown to be grossly
incompetent or has a second time willfully violated any of the provisions of this Chapter, including the
National Electrical Code adopted by the City. This penalty shall be cumulative and in addition to the
penalties prescribed for the violation of the provisions of this Chapter. If a certificate is revoked, the
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holder of the same may not apply for certification until one year from the date of such revocation.

29-311.  Same -- Material or supply dealers.

Any person engaged in dealing in materials or supplies, but not engaged in the installation, alteration, repair or removal of appliances shall not be required to be certified under this Article.

29-312.  Permitting name to be used by another.

No certified electrician shall allow his name to be used by another person, directly or indirectly, to obtain a permit for the installation of any electrical work. If any certified electrician violates this provision, the City Council shall forthwith revoke the certificate issued to such electrician and, in addition to having his certificate revoked, such electrician may be prosecuted under this Code for such violation.

29-313.  Insurance.

The holder of any certificate under this Chapter shall secure and maintain during all times that the certificate is in effect, bodily injury and property damage liability insurance coverage with limits of at least $300,000.00. The certified electrician shall furnish the City Clerk with a certificate of such insurance coverage, which certificate shall note that the insurance coverage shall not be terminated except upon ten (10) days' written notice to the City of Hastings.

The policy of insurance required by this Section shall be purchased at the expense of the applicant, shall be in effect for at least one year from May 1 of the current year and shall provide coverage of products, hazards and completed operations. Cancellation of a policy shall automatically suspend the certificate of applicant until a substitute policy has been obtained and a certificate of that fact has been filed in the office of the City Clerk.

29-314.  Installation by uncertified electricians.

It shall be unlawful for any person to cause or permit any job of electrical connections incident to any property owned, managed or controlled by such person, unless the electrician performing such work has been certified as required by this Article and has received a permit from the City electrical inspector for the particular work.

29-315.  Non-resident contractors.

In addition to charging and collecting the fees provided for in the most recent Council fee resolution, the electrical inspector shall require from any nonresident person performing a contract or completing a job within the jurisdiction of the City (1) satisfactory evidence that the applicant is qualified, and (2) a set of plans and specifications for the work to be performed. Any nonresident contractor shall provide to the electrical inspector a list of employees who will work on that jobsite, and the qualifications or license from the jurisdiction which has licensed each employee.