

Electrical Inspector

SUMMARY/PURPOSE

To protect the community and property from hazard, injury, and destruction by ensuring that electrical work performed by all electricians and homeowners throughout the City of Duluth meets the standards required in the Minnesota Building Code, including the National Electrical Code, and other regulations.

SUPERVISION RECEIVED

For both one-of-a-kind and repetitive tasks, the supervisor makes specific assignments that are accompanied by clear, detailed, and specific instructions. Incumbents work as instructed and consult with the supervisor.

SUPERVISION GIVEN

Does not supervise.

ESSENTIAL DUTIES AND RESPONSIBILITIES

1. Oversee the work of electricians and homeowners in the City of Duluth through inspection of all electrical installations.
2. Verify contractors are licensed in accordance with Minnesota licensing regulations.
3. Inspect interior and exterior electrical light and power wiring, luminaires, appliances, equipment and materials used for compliance with codes and ordinances governing electrical work, ensuring all work is performed in a safe manner using approved methods, including testing all newly installed 15 and 20 amp receptacles with appropriate tools.
4. Review diagrams, prepared plans, and specifications to ensure that they meet established codes and regulations.
5. Determine conformance problems, issue notices regarding correction of defective work, advise on code compliant installation, and perform re-inspection.
6. Issue stop work orders when needed and conduct other enforcement action for code violations.
7. Ensure that all work is performed in a safe manner using approved methods.
8. Approve certification of final inspection when required.
9. Consult with Department of Labor and Industry and municipal Building Official as needed.
10. Operate City vehicle to, from, and around inspection sites.
11. Maintain computerized and written records of inspections made and actions taken, and produce written forms and reports as required.
12. Review permit applications and stated valuations for accurate permit fee determinations.
13. Attend training sessions and review technical and professional literature to upgrade knowledge necessary for effective job performance and to keep informed about developing technology, methods, and requirements.
14. Serve as a technical expert, conduct presentations, and provide information to other City divisions, contractors, engineers, architects, and the public regarding codes, ordinances, and proper methods governing electrical work.
15. Attend and participate in division meetings, and serve as a member of the Construction Services team.
16. Provide electrical-code-related technical expertise to the Construction Services & Inspections team, electricians, and others.
17. Perform inspections, review permits, and provide technical assistance in other construction areas as needed.
18. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
19. Other duties may be assigned.

JOB REQUIREMENTS

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are representative of the knowledge, skills, and abilities required.

1. Education & Experience Requirements

- A. A minimum of five (5) years of related training and/or full-time, verifiable professional experience as a licensed journeyman electrician or master electrician, including residential and commercial wiring.

2. License Requirements

- A. Possession of a valid Minnesota Master Electrician license by date of appointment and thereafter; or valid Class A Journeyman license by date of appointment and licensure by the state of Minnesota as a Master Electrician within two (2) years of hire and thereafter.
- B. Possess and maintain a valid Minnesota Class D driver's license or privilege.

3. Knowledge Requirements

- A. Expert knowledge of the terms, principles, practices, regulations, methods, techniques, tools, materials, and equipment used in electrical work.
- B. Expert knowledge of the National Electrical Code.
- C. Thorough knowledge of all applicable laws, rules, and standards regulating electrical construction and installation practices.
- D. Knowledge of state licensing requirements for electrical contractors, workers, and homeowners.
- E. Knowledge of the applicable provisions of Minnesota energy codes.
- F. Knowledge of proper inspection methods and procedures
- G. Knowledge of legal procedures involved in the enforcement of electrical codes and ordinances.
- H. Knowledge of math for the purpose of measuring, reviewing estimated valuations, and electrical equations.
- I. Knowledge of traffic rules and regulations.
- J. Knowledge of problem-solving and conflict-resolution techniques.
- K. Knowledge of applicable safety requirements.
- L. Knowledge of, or the ability to learn, City policies and procedures.

4. Skill Requirements

- A. Skill in inspecting electrical work for adherence to regulations, requirements, ordinances, and procedures.
- B. Skill in reading and interpreting electrical plans, specifications, blueprints, diagrams, and technical codes and ordinances.
- C. Skill in reviewing construction costs, including materials and labor.
- D. Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, mobile devices, and modern office equipment.
- E. Skill in managing one's own time and coordinating schedules with contractors, homeowners, and other inspectors.
- F. Skill in completing assignments accurately and with attention to detail.
- G. Skill in safe work practices and procedures.
- H. Skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

5. Ability Requirements

- A. Ability to apply advanced understanding of terms, principles, regulations, policies, and procedures to electrical inspections and assistance to contractors, homeowners, and coworkers.
- B. Ability to initiate and follow through on enforcement actions related to electrical code compliance.

- C. Ability to read and understand construction plans and other documents.
- D. Ability to read and write reports regarding electrical systems, codes, inspections and permits.
- E. Ability to maintain accurate and complete records.
- F. Ability to transport oneself to, from, and around various worksites.
- G. Ability to work indoors and outdoors all types of environmental conditions.
- H. Ability to manage multiple projects of varying complexities and coordinate and collaborate with coworkers.
- I. Ability to effectively listen, speak, write, and interact in a tactful and persuasive manner in one-on-one or group situations.
- J. Ability to remain calm and professional in adversarial situations.
- K. Ability to effectively explain codes, laws, and enforcement policies and produce written and visual materials that are easily understood by the intended audience.
- L. Ability to participate in training to update electrical knowledge and expertise.
- M. Ability to recognize safety hazards interpret safety rules and apply them to various hazardous situations.
- N. Ability to use a computer to maintain inspection records and write reports.
- O. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
- P. Ability to communicate and interact effectively with members of the public.
- Q. Ability to communicate effectively both orally and in writing.
- R. Ability to understand and follow instructions.
- S. Ability to problem-solve a variety of situations.
- T. Ability to set priorities and complete assignments on time.
- U. Ability to attend work as scheduled and/or required.

Physical Demands

The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as record boxes. The work may require specific, but common, physical characteristics and abilities such as above.

Work Environment

The work environment involves everyday risks or discomforts requiring normal safety precautions typical of places such as construction sites, offices, meeting and training rooms, libraries, residences, commercial buildings, or commercial vehicles (e.g., use of safe work practices with office equipment, avoidance of trips and falls, observance of fire regulations and traffic signals, etc.). The work area is adequately lighted, heated, and ventilated.

HR: LD	Union: Basic	EEOC: Skilled Craft Workers	CSB:	Class No:
WC: 9410	Pay:	EEOF: Housing	CC:	Resolution:

Electrical Inspector

PURPOSE: Conduct inspections, review permits, and provide technical assistance for commercial, industrial, and residential construction and building projects.

FUNCTIONAL AREAS:

1. Inspect electrical construction, installation, alteration, and repair in residential, commercial, and industrial buildings and facilities for compliance with building codes and ordinances governing electrical work.

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SUPERVISION RECEIVED

For both one-of-a-kind and repetitive tasks, the supervisor makes specific assignments that are accompanied by clear, detailed, and specific instructions. Incumbents work as instructed and consult with the supervisor.

SUPERVISION GIVEN

Does not supervise.

ESSENTIAL DUTIES AND RESPONSIBILITIES

1. Oversee the work of electricians and homeowners in the City of Duluth through inspection of all electrical installations.
2. Verify contractors are licensed in accordance with Minnesota licensing regulations.
Inspect interior and exterior electrical light and power wiring, fixtures, luminaires, appliances, and apparatus inside or running to buildings or structures, equipment and materials used for compliance with codes and ordinances governing electrical work.
3. * B. Inspect the quality of materials for, ensuring all work is performed in a safe manner using approved electrical installation methods, including testing all newly installed 15 and 20 amp receptacles with appropriate tools.
4. * C. Review diagrams, prepared plans, and specifications to ensure that they meet established codes and regulations.
- * D. Conduct maintenance inspections of existing industrial, commercial, and residential establishments or structures.
5. * E. Determine conformance problems, issue notices regarding correction of defective work, advise on methods of correction, code compliant installation, and perform re-inspection.
6. * F. Issue citations or orders to stop work that is in violation of the proper codes, orders when needed and conduct other enforcement action for code violations.
7. * G. Ensure that all work is performed in a safe manner using approved methods.
8. * H. Approve certification of final inspection when required.
9. * I. Consult with Department of Labor and Industry and municipal Building Official and State Electrical Board when necessary as needed.
10. * J. Operate City vehicle to, from, and around inspection sites.
2. Do related work as required.
- * A. Maintain computerized and written records of inspections made and actions taken.
11. * B. Write, and prepare produce written forms and reports as required.

12. ~~* C. — Review permit applications and estimate building costs stated valuations for accurate permit fee estimates determinations.~~
13. ~~* D. — Attend training sessions and review technical and professional literature to upgrade knowledge necessary for effective job performance and to keep abreast of new developments informed about developing technology, methods, and requirements.~~
14. ~~* E. — Serve as a technical expert, conduct presentations, and provide information to other City divisions, contractors, engineers, architects, and the public regarding codes, ordinances, and proper methods governing electrical work.~~
15. ~~* F. — Attend and participate in division meetings, and serve as a member of the Building Inspection Construction Services team on.~~
16. ~~Provide electrical-code-related projects technical expertise to the Construction Services & Inspections team, electricians, and others.~~
17. ~~* G. — Perform inspections, review permits, and provide technical assistance in other construction areas as needed.~~
- ~~* H. — Perform other related duties as assigned.~~
18. Be an effective team member by exhibiting self-motivation, supporting other employees in handling tasks, interacting effectively and respectfully with others, showing a desire to contribute to the team effort, accepting assignments willingly, and completing tasks within agreed upon timelines.
19. Other duties may be assigned.

JOB REQUIREMENTS

4. — To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are representative of the knowledge, skills, and abilities required.

1. Education and Experience: Requirements

- ~~A. H A. — Successful completion of a certified electrical apprentice program plus three (3) minimum of five (5) years of related training and/or full-time, verifiable professional experience as a licensed journeyman in the electrical trades. This experience must include three (3) years in electrician or master electrician, including residential wiring and three (3) years in commercial wiring; or equivalent training and experience.~~

2. License Requirement: Requirements

- ~~H A. — Possession of a valid Minnesota drivers license or privilege by the date of appointment and thereafter.~~
- ~~A. H B. — Possession of a valid Minnesota Master Electrician license by date of appointment and thereafter; or valid Class A Journeyman license by the date of appointment and licensure by the state of Minnesota as a Master Electrician within two (2) years of hire and thereafter.~~
- B. 3. — Possess and maintain a valid Minnesota Class D driver's license or privilege.

3. Knowledge: Requirements

- ~~A. H A. — ExtensiveExpert knowledge of Minnesota Building Code and other related codes, ordinances, laws, the terms, principles, practices, regulations, and manuals governing methods, techniques, tools, materials, and equipment used in electrical work.~~
- ~~B. H B. — ExtensiveExpert knowledge of safe the National Electrical Code.~~

HR: JG	Union: Basic	EEOC: Skilled Craft Workers	CSB: 19980203	Class No: 5104
WC: 9410	Pay: 31	EEOF: Housing	CC: 19980223	Resolution: 98-0137R

- C. Thorough knowledge of all applicable laws, rules, and proper methods of standards regulating electrical construction, and installation, and repair practices.
- D. ~~H~~ C. Knowledge of state licensing requirements for electrical contractors, workers, and homeowners.
- E. Knowledge of the applicable provisions of Minnesota energy codes.
- F. Knowledge of proper inspection methods and procedures
- G. ~~D~~. Knowledge of legal procedures involved in the enforcement of electrical codes and ordinances.
- H. ~~H~~ E. Knowledge of math for the purpose of measuring and computing construction costs, reviewing estimated valuations, and electrical equations.
- I. ~~H~~ F. Knowledge of traffic rules and regulations.
- J. ~~H~~ G. Knowledge of precautionary, safety, problem-solving and fire prevention methods involved in electrical work conflict-resolution techniques.
- K. ~~H~~. Knowledge of code applicable safety requirements.
- L. Knowledge of, or the ability to learn, City policies and inspection methods in other trade areas procedures.

4. 4. Skill: Requirements

- A. ~~H~~ A. Skill in inspecting electrical work for adherence to regulations, requirements, ordinances, and procedures.
- B. ~~H~~ B. Skill in reading and interpreting electrical plans, specifications, blueprints, diagrams, and technical codes and ordinances.
- C. ~~H~~ C. Skill in ~~estimating~~ reviewing construction costs, including materials and labor.
- D. Skill in the operation of office equipment including, but not limited to, general computer systems, job required software applications, the internet, mobile devices, and completion modern office equipment.
- E. Skill in managing one's own time and coordinating schedules with contractors, homeowners, and other inspectors.

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5. Abilities:

- F. ~~H~~ A. ~~Ability to establish~~ Skill in completing assignments accurately and maintain effective working relationships with attention to detail.
- G. Skill in safe work practices and procedures.
- H. Skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

5. Ability Requirements

- A. Ability to apply advanced understanding of terms, principles, regulations, policies, and procedures to electrical inspections and assistance to contractors, ~~workers, supervisors, peers, and the general public~~ homeowners, and coworkers.
- B. ~~H~~ B. Ability to initiate and follow through on enforcement actions related to electrical code compliance.
- C. Ability to read and understand construction plans and other documents.
- D. Ability to read and write reports regarding electrical systems, codes, inspections and permits.
- E. ~~H~~ C. Ability to maintain accurate and complete records.
- ~~H~~ D. Ability to effectively communicate with individuals and groups, both verbally and in writing.
- F. ~~H~~ E. Ability to transport oneself to, from, and around various ~~work sites~~ worksites.
- G. ~~H~~ F. Ability to work indoors and outdoors all types of environmental conditions.
- H. Ability to manage multiple projects of varying complexities and coordinate and collaborate with coworkers.
- I. Ability to effectively listen, speak, write, and interact in a tactful and persuasive manner in one-on-one or group situations.
- J. Ability to remain calm and professional in adversarial situations.
- K. Ability to effectively explain codes, laws, and enforcement policies and produce written and visual materials that are easily understood by the intended audience.
- L. Ability to participate in training to update electrical knowledge and expertise.
- M. ~~H~~ G. Ability to recognize safety hazards interpret safety rules and apply them to various hazardous situations.
- N. ~~H~~ Ability to use a computer to maintain inspection records and write reports.
- ~~H~~ I. Ability to frequently walk and climb and occasionally stoop, kneel, crouch, crawl, and reach overhead in order to conduct inspections inside and outside of buildings.
- O. ~~H~~ J. Ability to create and maintain a positive working environment that welcomes diversity, ensures cooperation, and promotes respect by sharing expertise with team members, fostering safe work practices, and developing trusting work relationships.
- P. Ability to ~~occasionally lift~~ communicate and interact effectively with members of the public.
- Q. Ability to communicate effectively both orally and ~~carry up~~ in writing.
- R. Ability to ~~40 pounds such as ladders for conducting overhead inspections~~ understand and follow instructions.
- S. ~~H~~ K. Ability to ~~work onside in inclement weather~~ problem-solve a variety of situations.
- T. ~~H~~ L. Ability to set priorities and complete assignments on time.
- U. Ability to attend work ~~on a regular basis~~ as scheduled and/or required.

* Essential job functions

~~H Job requirements necessary on the first day of employment.~~ Physical Demands

The work requires some physical exertion such as long periods of standing; walking over rough, uneven, or rocky surfaces; recurring bending, crouching, stooping, stretching, reaching, or similar activities; recurring lifting of moderately heavy items such as record boxes. The work may require specific, but common, physical characteristics and abilities such as above.

Work Environment

The work environment involves everyday risks or discomforts requiring normal safety precautions typical of places such as construction sites, offices, meeting and training rooms, libraries, residences, commercial buildings, or commercial vehicles (e.g., use of safe work practices with office equipment, avoidance of trips and falls, observance of fire regulations and traffic signals, etc.). The work area is adequately lighted, heated, and ventilated.

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