

# Job Description

## Human Resource Use Only

Position Number: 10033

Step/Grade: J

Effective Date: 06-2016

Revision Date: 05.2026

### POSITION IDENTIFICATION

**Position Title:** Surveyor/Engineering-Technician  
**Department:** Department of Public InfrastructureWorks  
**Status:** Full-~~T~~ime HourlyNon-exempt  
**Workweek:** Monday - Friday

### SUPERVISORY RELATIONSHIPS

**Reports to:** Engineering Division Manager  
**Directly Supervises:** Seasonal Employees

### POSITION PURPOSE

This position performs a variety of paraprofessional work in Civil Engineering requiring considerable skills and advanced knowledge in digital ~~AutoCAD~~ (CADD Open Site Designer survey software) and hand drafting, advanced surveying (including preliminary survey work and data collection, stake out and as-builts), complex construction inspection and engineering design calculating quantities, writing special provisions ~~in the office and in the field~~. Employees in this class must be familiar with assessment policies, applicable ordinances and ~~State~~ State statutes, state and local construction specifications, and have a deep understanding of construction means and methods. This position is expected to perform routine tasks independently ~~with reference to a supervisor only when difficult or unusual problems occur~~. Acts as Senior Survey Crew Chief, supervises two ~~two~~ summer seasonal engineering students and is involved with the interviewing and hiring process for the seasonal employees.

### ESSENTIAL DUTIES

- Coordinate and perform all surveying activities, including property, boundary, topographic, construction staking, as-built, line, and grade surveys
- Determine property rights and ensure code compliance
- Prepare and review legal descriptions, plats, maps, site plans, deeds, and survey documents
- Draft site layouts and designs using CADD and GIS systems
- Maintain and update the City benchmark system and ArcGIS database
- Interpret and revise construction plans to reflect field conditions
- Establish locations and elevations for construction of streets, utilities, sidewalks, and related infrastructure
- Perform topographic, route, and lot surveys to support project design
- Calculate and coordinate staking and layout for municipal projects
- Supervise survey crews and ensure compliance with City ordinances and regulations
- Produce accurate construction drawings using CADD (OpenSite Designer/MicroStation) and GIS

- Prepare reports, documentation, and correspondence using standard office software
- Update construction plans and complete as-builts using robotic total station data collection
- Perform engineering calculations, including alignment, grading, and pipe flow analysis
- Train staff in engineering design software and surveying practices
- Prepare special assessments, cost estimates, and bid quantities for public works projects
- Oversee cross-sectioning and topographic survey operations
- Represent the City at public meetings, including Public Informational Meetings (PIMs) and agency coordination
- Conduct final inspections and prepare punch lists for completed projects
- Inspect construction work for compliance with plans, specifications, and contract requirements
- Verify material quantities and ensure adherence to project specifications
- Conduct field investigations and prepare technical reports
- Interpret plans and provide information to property owners, developers, and stakeholders
- Collaborate with City departments to resolve field issues such as drainage, utilities, and traffic concerns
- Review sewer inspection reports and recommend repair or replacement strategies
- Review and approve Certified Survey Maps (CSMs) and plats of survey
- Coordinate utility locating services and verify underground infrastructure marking
- Assist with pavement condition ratings (PASER/WISLR) and related reporting
- Review and provide feedback on subdivision plats and roadway design plans
- Meet with businesses and residents regarding upcoming construction projects
- Prepare drawings and plans for various City departments
- Locate and mark City right-of-way and property lines
- Adjust grades and design elements in the field to address construction challenges
- Support project research through data collection, plan review, and field records analysis
- Coordinate with public agencies, utilities, consultants, and contractors
- ~~Maintain and manage survey and inspection equipment~~ Coordinates, directs and performs surveying such as property surveys, field, site, as-builts, line and grade surveys
- ~~ite, as-builts, line and grade surveys~~
- ~~Determines property rights and code compliance~~
- ~~Prepares, reviews or directs the preparation of legal descriptions, plats, maps and site plans, property surveys, deeds and topographic maps~~
- ~~Drafts site surveys, layout & design~~
- ~~Disseminates survey information to appropriate individuals~~
- ~~Prepares survey reports~~
- ~~Maintains City's benchmark system by running new/existing bench mark circuits in the field and updating the Arc GIS for public use.~~
- ~~Interprets, adjusts, and revises construction plans to meet existing field conditions~~
- ~~Sets location and elevation for construction of sidewalks, sewers, watermains, streets; including curb & gutter, integral concrete pavement and asphalt pavement, ponds, driveways, electric power pole lines etc. for contractors, MPU and City crews~~

- ~~Establishes State plane & Manitowoc County Coordinate system coordinates of points for mapping areas of the City~~
- ~~Makes topographic, route, and lot surveys prior to making construction plans~~
- ~~Calculates methods of staking and layout for municipal projects and/or improvements~~
- ~~Coordinates staking and layout~~
- ~~Effectively supervises subordinates and directs compliance with all City ordinances and regulations~~
- ~~Performs advanced drafting of sewer, street, sidewalk, ponds, traffic signals and other construction projects while displaying accuracy and neatness using Computer Aided Drafting and Design (CADD) System (Open Site Designer - Micro Station) and GIS system~~
- ~~Uses a personal computer to prepare various documents using Excel spreadsheet, word processing, email, database and web related programs~~
- ~~Assists with the maintenance of the geographic information system (Arc GIS)~~
- ~~Updates original construction plans from field notes and completes as-builts using a Robotic Total Station in the field for data collection and exporting to CADD to complete all finals/as-builts~~
- ~~Performs engineering calculations accurately including super-elevation, spiral alignment and pipe flow (CFS) & vertical and horizontal curves/alignment.~~
- ~~Trains personnel in use of Engineering Design software~~
- ~~Prepares special assessment cost for projects~~
- ~~Oversees and directs cross-sectioning/topography work of all survey crews~~
- ~~Plots, surveys, and draws field notes to scale showing alignment, topography/topography, and profile~~
- ~~Represents the City's interests at various public meetings with both internal and external customers (PIM), DOT and other State agency meetings~~
- ~~Maintains status in Associations and keeps methods and means up to date with respect to accepted standards and technological improvements~~
- ~~Performs final walk through inspections and prepares punch lists along with the City Inspector at the completion of Public Works Projects~~
- ~~Inspects construction of streets, sewers, curb and gutter, bridges, ponds, signals and sidewalks for compliance with the plans and specifications~~
- ~~Determines if material and quantities used comply with contract specifications~~
- ~~Conducts field investigations and writes necessary reports~~
- ~~Estimates bid quantities and construction costs for sewer and paving projects~~
- ~~Interprets plans and drawings to interested property owners, developers, consultants, surveyors, other engineers, etc. who desire information regarding right-of-way lines, proposed and existing sewers, street widths, sidewalk set-backs, etc.~~
- ~~Works directly with personnel from the Department of Public Infrastructure's Operations and Parks Divisions to resolve field problems including sewer backups, drainage complaints, traffic issues, signage and current and future public projects~~
- ~~Reviews televising inspection reports and videotapes for sanitary and storm sewers and makes recommendations as to which sewers need repair or replacement~~
- ~~Checks and reviews all CSM's (Certified Survey Maps) & Plat of Surveys from surveyors (RLS)~~

- ~~• Works with the City's hired locator for marking the City's underground utilities, including sanitary sewer, storm sewer, sewer laterals, traffic signals and City private utilities (Electric, fiber & TV cameras). Also, updates the contract and verifies monthly invoices. Assists with locator to field verify sanitary/storm laterals using CADD and televising reports/videos to properly mark the laterals or sewer mains in the field.~~
- ~~• Assists in preparation of the biennial field update (pavement condition ratings) of the City's PASER-WISLR information for WISDOT. Rates all the streets, alley ways and cemetery roadways in the City~~
- ~~• Reviews/comments/red line on all Subdivision Plats, proposed/reconstruction road plans from Surveyors, Consultants & Engineers~~
- ~~• Meets one on one (Public Relations) with all businesses and some residential prior to all road reconstruction projects/contracts.~~
- ~~• Creates plans/drawings on CADD for other City departments~~
- ~~• Locates/Marks all City R/W (right of way) lines and City property lines for City Forester for trees and for any other encroaching items within City lands~~
- ~~• Establishing/re designing grades in the field during construction when problems arise with the design vs field change/conditions with City personnel and contractors.~~
- ~~• Attends Public Informational Meetings (PIM) for reconstruction projects by setting up drawings/ plans and profiles, maps, and aerial photos~~
- ~~• Completes Does research & data collection for all projects/contracts with the City and private consultants by looking up plans/maps/inspection notes/site plans, TV video, etc.~~
- ~~• Works with and assists the Public, DOT, DNR, Railroad, Consultants, MPU electric/water, AT&T, WPS, TDS, Comcast, and all Contractors~~
- ~~• Maintains/orders all survey & inspection equipment.~~

• ———

## OTHER DUTIES

- Other duties as assigned

## MINIMUM POSITION QUALIFICATIONS

<b>Education:</b>	Minimum requirements include an Associate Degree in Surveying or Civil Engineering or any equivalent combination of experience and training which provides the required knowledge, skills, and abilities for the position as determined by <del>Management</del> <u>the City</u> .
<b>Experience:</b>	Three years or more experience as a crew chief is preferred.
<b>Certifications/Licenses:</b>	Must possess a valid motor vehicle operator's license issued by the State of Wisconsin. Must be trained in confined space entry.

## KNOWLEDGE, SKILLS, & ABILITIES

- Ability to read, interpret, and prepare legal descriptions
- Proficient in Microsoft Word, Excel, Access, email, CADD, ArcGIS, and Windows
- Ability to interpret design/specification manuals, ordinances, laws, codes, and construction plans

- Strong written and verbal communication skills
- Ability to prepare drawings from field notes
- Experience preparing surveys, plats, site plans, reports, budgets, and title documents with proper formatting
- Ability to interpret maps, plans, deeds, easements, aerial photos, and related documents
- Effective communication with staff, consultants, contractors, and the public
- Strong math skills (algebra, geometry, trigonometry) and engineering calculations
- Ability to read charts and graphs
- Exercises sound judgment, professionalism, and problem-solving skills

~~Ability to read, interpret and write legal descriptions. The candidate should have experience in the use of personal computers. Ability to utilize personal computer programs including Microsoft Word, Excel and Access, email, CADD, ARCGIS and experience with the Windows Operating System is necessary. Ability to read and interpret design manuals, specification manuals, City Ordinances, State laws, building codes, and any other necessary codes or regulations; ability to read and interpret construction plans and specifications; ability to present facts and recommendations effectively in written and oral form; ability to prepare drawings from field notes. Ability to prepare a variety of documents such as legal descriptions, plats of surveys, certified survey maps, subdivision plats, site plans and certified survey map reviews, budget requests and projections, title searches, field notes, and various reports using prescribed format and conforming to all rules of punctuation, grammar, diction and style. Ability to use and interpret surveying text, standard specifications, tax key, subdivision, zoning, flood plain, topographic, and certified survey maps, building, utility, and construction plans, deeds, easements, mortgages, aerial photos, and policy and procedure manuals. Ability to communicate effectively with consultants, surveyors, contractors, attorneys, architects, title companies, the County Register of Deeds, City personnel, and the general public to convey or exchange information including giving assignments and/or directions to subordinates and receiving instructions from supervisors. Must have the knowledge of algebraic equations, geometry, and trigonometric mathematical procedures and the ability to perform advanced engineering calculations accurately. The ability to read and interpret charts and graphs, etc. Must exercise good judgment at all times; must have the ability to maintain a professional attitude and a reasonable demeanor during all conversations; must have the ability to discuss and resolve problems in a tactful and professional manner. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.~~

## **BACKGROUND CHECKS**

Condition of Employment

## **PHYSICAL DEMANDS**

**Manual Dexterity:** While performing the duties of this job, the employee is regularly required to stand, walk, use hands and fingers to handle or feel; reach with hands and arms; stoop, kneel, carry, twist, crouch; talk and hear. The employee is occasionally required to sit, climb, balance, or smell, and may be required to work in high places.

**Physical Effort:** The employee must regularly lift and/or move up to 25 pounds, frequently lift and/or move up to 50 pounds, occasionally lift and/or move more than 100 pounds.

**Working Conditions:** While performing the duties of this position, the employee is regularly exposed to outdoor weather conditions; regularly walks over uneven terrain such as construction sites; in close proximity to heavy construction equipment and trucks during site inspection work. The noise level in the office work environment is generally low; however, exposure to very loud noises may occur during the surveying and/or inspection of construction sites as well as being exposed to fumes and airborne particles. The employee must be able to adjust from one schedule to another at short notice and be able to maintain attention to task in overtime situations. Ability to work under adverse weather conditions.

---

This position description has been prepared to define the general duties of the position, provide examples of work and to detail the required knowledge, skills and abilities as well as the acceptable experience and training for the position. The description is not intended to limit or modify the right of any supervisor to assign, direct, and control the duties of employees under supervision. The City of Manitowoc retains and reserves any and all rights to change, modify, amend, add to or delete from any portion of this description in its sole judgment.

erves any and all rights to change, modify, amend, add to or delete from any portion of this description in its sole judgment.

This job description is not a contract for employment.

The City of Manitowoc is an equal opportunity employer, in compliance with the Americans with Disabilities Act. The City will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer.