

## Highway Technician III

Pennington County is looking for a motivated individual interested in helping us shape the future of our community. If you are interested in working outdoors and in the construction industry, we have an opening for a Highway Technician III. Work on construction projects including construction inspection, surveying, and design.

Applications will be received until December 15, 2023, no later than 10:00 a.m. for a full-time position open in the Pennington County Highway Department. Applicants should have extensive knowledge and fundamental understanding of surveying and general civil engineering activities and concepts. Position requires a Vocational Certificate/Degree and a minimum of 3 years' experience highway technical or engineering work. A detailed job description and application can be obtained at the Office of the County Engineer at 250 125<sup>th</sup> Avenue NE (behind Westside ,Motors) in Thief River Falls, Mn, via email [ljmarquis@co.pennington.mn.us](mailto:ljmarquis@co.pennington.mn.us) or online at: <https://co.pennington.mn.us>: click on "Employment".

Pennington County offers 11 paid holidays, excellent health insurance, vacation and sick leave. The 2023 Pay Range for the position is \$24.58 to \$30.77.

Pennington County is an Equal Opportunity Employer



## POSITION DESCRIPTION PENNINGTON COUNTY

### SECTION I: GENERAL INFORMATION

<b>Position Title:</b> Highway Technician III	<b>Department:</b> Highway
<b>Immediate Supervisor's Position Title:</b> County Engineer	<b>FLSA Status:</b> Non-Exempt
<b>Job Summary:</b>	
<p>Under the direction of the County Engineer, the Highway Technician III is responsible for implementing civil engineering principles, procedures, methods and operations consistent with current surveying and civil engineering technology standards. Essential job functions include performing the full range of engineering technician duties, as a journey level classification involved in the collection of survey data, performing construction inspections, preparing permits, drafting and preparation of design plans.</p> <p>The Highway Technician III differs from that of Engineering Technician II in that the Highway Technician III is expected to be more and fully experienced in all major activities associated with the expectations of Engineering Technician, is generally assigned more difficult and involved projects, and may be asked to assist in the training, monitoring and coordinating work activities of Engineering Technician I and/or II, as delegated.</p>	

### SECTION II: ESSENTIAL DUTIES AND RESPONSIBILITIES

- Prepares detailed dimensional drawings and design plans. Prepares proposal and specifications for projects. Calculates project materials; determines watershed area and assists in calculating hydraulic capacities of culverts; and determines soil properties for projects. Utilizes CAD software in designing of road and ditch projects.
- Conducts construction, preliminary and general surveying projects to obtain design and survey data concerning project sites. Surveys road alignments; road profiles; cross sections; elevations for benchmarks; performs staking for construction projects; and other surveying duties associated with construction projects. Records and analyzes data on angles, distances, reference points, monumentation and recording of various topographical features.
- Conducts bridge inspections.
- Conducts construction inspection on various engineering and maintenance projects in order to monitor project progress and to ensure contractors are performing project activities in accordance with project plans, material specifications, environmental permits and construction safety standards.
  - a) Inspects project activities to assure conformance with construction project plans and specifications.
  - b) Performs tests and analysis of project materials to assure project specifications and standards. Prepares reports detailing test results and verifies test results are within acceptable tolerances and specifications.
  - c) Verifies traffic control and general safety requirements at project sites.
  - d) Completes logs of daily and weekly logs of construction activities and progress.
  - e) Verifies final contract quantities.



- f) Provides routine decisions concerning testing requirements and when testing should occur.
- Coordinates, leads, instructs or monitors the activities of temporary or less experienced engineering technicians assigned larger survey, construction or inspection projects.
- Operates survey equipment utilized by the department.
- Operates a variety of hand tools, hand axes, shovels, hammers, picks or other tools.
- Performs other duties of a comparable level or type, as required.
  - a) Attends state training sessions and obtains certifications as required by County Engineer and as needed to learn additional engineering functions, activities and requirements.
  - b) May perform the duties of Highway Equipment Operators, as needed and delegated by Engineer

**SECTION III: WORK REQUIREMENTS AND CHARACTERISTICS**

<b>EDUCATION/KNOWLEDGE REQUIREMENT: Minimum education required to perform adequately in position could reasonably be attained only by completing the following:</b>			
<b>REQUIRED EDUCATION/TRAINING (choose one)</b>		<b>DEGREE INFORMATION: Type of degree: (B.S., M.A., etc.)</b>	
less than high school diploma		AA Degree	
High school diploma or GED.		<b>Major field of study or degree emphasis:</b>	
1 year college	x	2 years college	Civil Engineering Technician program.
3 years college		4 years college	
1st year graduate level		<b>Essential knowledge and specialized subject knowledge required to perform the essential functions of the job:</b> <ul style="list-style-type: none"> <li>▪ Knowledge and fundamentals understanding of surveying and general civil engineering activities and concepts.</li> <li>▪ Understanding and knowledge of higher-level mathematics, algebra and geometry.</li> <li>▪ Knowledge and use of computer operations, engineering design software (e.g. CAD) used in engineering design, drafting and documentation.</li> <li>▪ Knowledge of construction material testing and inspection procedures for aggregate, concrete and bituminous materials.</li> <li>▪ Knowledge of MNDOT design and construction requirements, guidelines and standards.</li> <li>▪ Knowledge of general business productivity software and computer operation.</li> <li>▪ Knowledge of department operating procedures and processes impacting the performance of job assignments</li> </ul>	
2nd year graduate level			
Doctoral Degree			
<b>Required Work Experience in Addition to Formal Education/Training:</b> Minimum of 3 years experience highway technical or engineering work.			





<b>LICENSE/ CERTIFICATION</b>	<b>Identify licenses/certification required:</b> Requires a valid Class D driver's by the State of MN. May require certifications in MNDOT Bituminous Street I & II; Grading and Base I & II; Bituminous Plant; Aggregate; Bridge Inspection, Erosion and Storm Water Management, depending upon job assignments and at the direction of the County Engineer.
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<b>RESPONSIBILITY FOR DIRECT SUPERVISION OF THE FOLLOWING POSITIONS</b>	
Titles of Positions Directly Supervised	# of Employees
<b>TOTAL</b>	

<b>INDIRECT SUPERVISION:</b>	
<b>Number of employees indirectly supervised:</b> Temporary technicians, I's or II's.	<b>Total:</b>

<b>ESSENTIAL SKILLS REQUIRED TO PERFORM THE WORK</b>	<b>Skilled in:</b> <ul style="list-style-type: none"> <li>• Establishing and maintaining effective working relationships with contractors and the public over projects concerns, questions, enforcement of plan/project specifications; and the exchange of information.</li> <li>• Proficient in survey and inspection responsibilities and duties.</li> <li>• Project management, organizational and judgment in dealing with contractors.</li> <li>• Proficient in operating survey equipment and using and applying computer aided design programs/applications, business productivity software (e.g. word processing, spreadsheet, presentation programs, etc.).</li> <li>• Proficient in drafting preliminary design plans and documentation of survey information and data used in plan design, analysis and project specifications.</li> <li>• Monitoring and observing project activities and conditions which may impact progress or on-site circumstances that require the attention of County Engineer involving possible change orders and revisions.</li> <li>• Operating and applying materials testing equipment.</li> <li>• Preparing and presenting technical, engineering and narrative reports, construction diaries/logs, department files and records.</li> </ul>
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<b>HAZARDOUS WORKING CONDITIONS:</b> <i>The essential duties of the work are performed under various physical hazards or environmental conditions noted.</i>	<b>Unusual or hazardous working conditions related to performance of duties:</b> The essential duties of the job involve exposure to disagreeable outside weather and related conditions (e.g. cold, heat, dust, fumes, wet, steep terrain, woods, insects, etc.), performing duties in and around traffic or moving construction equipment, construction sites, woods and wetlands.
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**PHYSICAL JOB REQUIREMENTS: Indicate according to essential duties/responsibilities**

<u>Employee is required to:</u>	Never	1-33% Occasionally	34-66% Frequently	66-100% Continuously
Stand			x	
Walk			x	
Sit		x		
Use hands dexterously (use fingers to handle, feel)			x	
Reach with hands and arms			x	
Climb or balance		x		
Stoop/kneel/crouch or crawl			x	
Talk or hear				x
Taste or smell	x			
Physical (Lift & carry): up to 10 pounds				x
up to 25 pounds			x	
up to 50 pounds		x		
up to 75 pounds		x		
up to 100 pounds	x			
more than 100 pounds	x			

**PHYSICAL JOB REQUIREMENTS: Indicate according to essential duties/responsibilities**

Physical requirements associated with the position can be best summarized as follows:

**Medium Work:**

Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to lift, carry, push, pull or otherwise move objects in the performance of the job.

**SECTION IV: CLASSIFICATION HISTORY AND APPROVAL**

This Position Description reflects an accurate and complete description of the duties and responsibilities assigned to the position.

  
Department Head's Signature

2/29/12  
Date

**Classification History:**

Prepared 8/2011 by BCC.