

## 1. Introduction

**The State of Minnesota and the Minnesota Government Engineering Council (MGEC) are jointly conducting this third survey on direct compensation for certain classifications in the engineering field. The survey seeks input from both public and private employers, and will examine compensation paid to engineers, land surveyors, and engineering technicians. Your input is important! Please respond by January 28, 2017.**

**Your time and efforts are sincerely appreciated! As an incentive for completing the survey, we will send summary results of the information to everyone who responds.**

**The State of Minnesota will only release summary results and will not release private company identifying information. Your individual responses will remain confidential pursuant to Minnesota Statute 13.435 SALARY BENEFIT SURVEY DATA: "Salary and personnel benefit survey data purchased from consulting firms, nonprofit corporations or associations or obtained from employers with the written understanding that the data shall not be made public which is maintained by government entities are classified as nonpublic pursuant to section 13.02, subdivision 9."**

**Again, thank you for your participation in this survey!**

**SURVEY**

## 2. Unlicensed Engineer Descriptions

**THE FOLLOWING DESCRIPTIONS WILL PROVIDE YOU WITH AN OVERVIEW OF THE ENGINEERING CLASSIFICATIONS BEING SURVEYED. EXAMPLES REFLECT SOME TYPES OF WORK PERFORMED, BUT ARE NOT INCLUSIVE OF ALL DUTIES, AND MAY NOT BE PERFORMED IN ALL ORGANIZATIONS. You may want to print this page for a handy reference.**

**Engineer Graduate or Trainee:** Requires a bachelor's degree in the field of engineering. Beginner-level engineering work.

**Engineer Graduate 2:** Requires a bachelor's degree in the field of engineering and may include completion of the Fundamentals of Engineering exam. An employee in this class applies engineering skill and knowledge to engineering projects. Work may involve the supervision of technical employees and management of work projects. Typically has 1-3 years' experience in engineering. *Examples: Acts as project supervisor in charge of the design or construction phase of a highway construction project or assists in the supervision of several engineering projects. Reviews preliminary plans and specifications for sanitary sewer extension, municipal sewage treatment plans and solid waste disposal sites and facilities. Prepares water or air classifications and standards of quality based on present and future uses. Reviews plans for water supply systems and advises officials on operation of water treatment plants.*

### 3. Licensed Engineer Descriptions

**THE FOLLOWING DESCRIPTIONS WILL PROVIDE YOU WITH AN OVERVIEW OF THE ENGINEERING CLASSIFICATIONS BEING SURVEYED. EXAMPLES REFLECT SOME TYPES OF WORK PERFORMED, BUT ARE NOT INCLUSIVE OF ALL DUTIES, AND MAY NOT BE PERFORMED IN ALL ORGANIZATIONS. *You may want to print this page for a handy reference.***

**Senior Engineer:** Requires a bachelor's degree in engineering and a Professional Engineer License. Responsibilities may include coordinating the engineering activities, and/or the supervision of technicians, non-registered engineers or other para-professionals. Work may be periodically reviewed by a higher level engineer. *Examples: An employee in this classification leads a design squad for multiple projects simultaneously and or personally oversees multiple construction projects. Is a subject matter expert in specific areas providing technical support and expertise to others. Conducts investigations and technical reviews for pipeline safety, water systems, treatment systems, air quality, natural bodies of water, etc.*

**Principal Engineer:** Requires a bachelor's degree in engineering and a Professional Engineer License. Performs advanced engineering work. Duties include developing specific policies and procedures necessary to execute a program and coordinating the engineering activities of professional engineers, graduate engineers and technical support staff in the field or office. Work requires the independent selection of courses of action and the resolution of problems within the framework of broad engineering and administrative guidelines. Work is reviewed by an administrative supervisor for overall effectiveness and satisfactory completion of assigned projects rather than for engineering decisions. Likely to have three to five years of post-registration experience. Confers and communicates with industry, regulators and the public. *Examples: Oversees multiple senior engineers in design or construction. Developing specific policies and procedures to execute a program and coordinate engineering activities. Program level expertise in varying areas.*

**Administrative Engineer:** Requires a bachelor's degree in engineering and a Professional Engineer License. The incumbent is responsible for making expert technical engineering decisions in a particular area of expertise in the review, analysis and coordination of the activities of professional engineers and technical support staff in an assigned area of engineering responsibility and for ensuring that programs and procedures are effectively and efficiently administered in accordance with established engineering standards. Typically has at least ten years of experience in a specific technical area. *Examples: Deep subject matter expert. Major project manager for substantial risk and complexity. Directs the activities of a specific technical engineering program to ensure work is completed in an effective and timely manner.*

## 4. Engineering Para-Professional Descriptions

**THE FOLLOWING DESCRIPTIONS WILL PROVIDE YOU WITH AN OVERVIEW OF THE PARA-PROFESSIONAL ENGINEERING CLASSIFICATIONS BEING SURVEYED. EXAMPLES REFLECT SOME TYPES OF WORK PERFORMED, BUT ARE NOT INCLUSIVE OF ALL DUTIES, AND MAY NOT BE PERFORMED IN ALL ORGANIZATIONS. *Print page for a handy reference.***

**Engineering Specialist:** Does not require a bachelor's degree in engineering or a Professional Engineer License. Applies civil engineering knowledge and skills to engineering/surveying activities in a variety of engineering areas including the development of preliminary or detailed construction plans and or projects such as complex construction inspection oversight, mapping, etc. *Examples: Develops geometric layout, expert in engineering software such as Geopak and CADD. Project supervisor for smaller scale construction projects. Oversees construction work of contractors on smaller projects. Develops accurate land surveys. Develops agreements with other organizations. May be responsible for putting plan set together and supervising technicians. Conduct initial investigation into infrastructure system failures.*

**Engineering Specialist Senior:** Does not require a bachelor's degree in engineering or a Professional Engineer License. Under limited supervision, applies engineering skills to preliminary or final design of plans. Works on moderate to major scale projects, or other specialty engineering activities. Duties are similar to a Senior Engineer, but individuals in this position cannot sign the plans specification, or reports which must be reviewed and signed by a licensed engineer.. Work must be periodically reviewed by a licensed engineer. *Examples: Leads a design squad for multiple projects simultaneously. Oversees multiple construction projects simultaneously. May be a specific subject matter expert. Conducts investigations and technical reviews for pipeline safety, water systems, treatments systems and other areas. Responsibilities may include supervision of technicians, non-registered engineers or other para-professionals. Consults and coordinates with other organizations offering engineering expertise.*

**Radio Engineer 1:** Requires a first class federal radio-telephone license. Performs professional radio engineering work developing extension of the present radio system including engineering, cost studies and installation inspections, develops new radio communication systems and supervises system maintenance.

**Radio Engineer 2:** Requires a first class federal radio-telephone license. Performs radio communications system design, and supervision of system installation and maintenance work.

## 5. Land Surveyor Descriptions

**THE FOLLOWING DESCRIPTIONS WILL PROVIDE YOU WITH AN OVERVIEW OF THE LAND SURVEYING CLASSIFICATIONS BEING SURVEYED. EXAMPLES REFLECT SOME TYPES OF WORK PERFORMED IN POSITIONS, BUT ARE NOT INCLUSIVE OF ALL DUTIES AND MAY NOT BE PERFORMED IN ALL ORGANIZATIONS. *Print page for a handy reference.***

**Land Surveyor in Training:** Requires certification with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Land Surveyor in training. Beginner-level land surveyor work.

**Land Surveyor Senior:** Requires registration with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Land Surveyor. Applies professional skill and knowledge to surveying projects in the field or to projects of equal complexity in an office or specialized surveying experience. Supervise survey crews in collecting survey data, certifying land corners, boundary surveys, and right-of-way plats. *Examples: May be a project manager for multiple survey projects. Supervise survey crews and technicians. Duties may include: parcel mapping, platting, legal description writing. May oversee entire regional survey needs.*

**Land Surveyor Principal:** Requires registration with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Land Surveyor with approximately three to five years post-registration surveying experience. Similar duties to a Land Surveyor Senior but may work in an area of greater population or has more responsibility with higher profile projects or a larger number of projects. Responsible for developing and maintaining land surveying standards for the agency. This position may have official public contact outside the agency for property right's needs. Supervises other Land Surveyors and technical staff. Considerable knowledge of principles and laws in specialized field of surveying. *Examples: May be a project manager for multiple survey projects. Supervise multiple survey crews and technicians in collecting survey data. Duties may include parcel mapping, platting, legal description writing. Will oversee entire regional survey needs.*

**Land Surveyor Administrative Professional:** Highest level of specialized surveying work. Requires registration with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Professional Land Surveyor with approximately five to ten years post-registration surveying experience. Responsible for making expert technical surveying decisions in the review, analysis and coordination of land surveying activities of professional and technical support staff. Supervision is received from a higher level administrator in the form of conferences and review of reports and recommendations in terms of overall effectiveness of results achieved.

## 6. Employer Demographic Information

Please respond to the following demographic-related questions. Your response to these questions and any other questions in this survey will be kept in strictest confidence. Pursuant to Minnesota Statute 13.435 SALARY BENEFIT SURVEY DATA;

Any "salary and personnel benefit survey data purchased from consulting firms, nonprofit corporations or associations or obtained from employers with the written understanding that the data shall not be made public which is maintained by government entities are classified as nonpublic pursuant to section 13.02, subd. 9."

The State of Minnesota will only release summary results and will not release private company identifying information.

This information will be used to provide you with the results of the survey.

\* 1. Please complete the following information.

Contact Name:

Organization Name:

Address:

Address 2:

City/Town:

State:

ZIP/Postal Code:

Email Address:

Phone Number:

2. Are you a public or private sector employer?

- Public (City, Municipality)
- Public (County)
- Public (State)
- Public (other)
- Private

## 7. Demographic Characteristics

3. If city/town or county, what is the population of your city/town or county?

## 8. Direct Compensation

Following are questions and information related to annual salary. Please respond by January 28, 2017 using current data. Please consider answers that best fit the classification descriptions provided earlier in this survey. If you do not use formal salary ranges, please provide the minimum and maximum wages paid to your lowest and highest wage earners in the class. Please compute the average salary by adding salaries of individual staff in each classification and dividing by the number of staff in that category. Salaries should be reported as of January 1, 2017, and include base pay only. If converting from an hourly rate, multiply the hourly rate by 2088 hours.

**4. Engineer Graduate or Trainee:** Requires a bachelor's degree in the field of engineering. Beginner-level engineering work.

Number of Engineer  
Graduate or Engineer  
Trainee (NA if your  
organization doesn't have  
such a position)

Range Minimum

Range Maximum

Average Salary

**5. Engineer Graduate 2:** Requires a bachelor's degree in the field of engineering and may include completion of the Fundamentals of Engineering exam. An employee in this class applies engineering skill and knowledge to engineering projects. Work may involve the supervision of technical employees and management of work projects. Typically has 1-3 years' experience in engineering. **Examples:** Acts as project supervisor in charge of the design or construction phase of a highway construction project or assists in the supervision of several engineering projects. Reviews preliminary plans and specifications for sanitary sewer extension, municipal sewage treatment plans and solid waste disposal sites and facilities. Prepares water or air classifications and standards of quality based on present and future uses. Reviews plans for water supply systems and advises officials on operation of water treatment plants.

Number of Graduate 2  
Engineers (NA if your  
organization doesn't have  
such a position)

Range Minimum

Range Maximum

Average Salary



6. Senior Engineer: Requires a bachelor's degree in engineering and a Professional Engineer License. Responsibilities may include coordinating the engineering activities, and/or the supervision of technicians, non-registered engineers or other para-professionals. Work may be periodically reviewed by a higher level engineer. *Examples: An employee in this classification leads a design squad for multiple projects simultaneously and or personally oversees multiple construction projects. Is a subject matter expert in specific areas providing technical support and expertise to others. Conducts investigations and technical reviews for pipeline safety, water systems, treatment systems, air quality, natural bodies of water, etc.*

Number of Senior Engineers (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

7. Principal Engineer: Requires a bachelor's degree in engineering and a Professional Engineer License. Performs advanced engineering work. Duties include developing specific policies and procedures necessary to execute a program and coordinating the engineering activities of professional engineers, graduate engineers and technical support staff in the field or office. Work requires the independent selection of courses of action and the resolution of problems within the framework of broad engineering and administrative guidelines. Work is reviewed by an administrative supervisor for overall effectiveness and satisfactory completion of assigned projects rather than for engineering decisions. Likely to have three to five years of post-registration experience. Confers and communicates with industry, regulators and the public. *Examples: Oversees multiple senior engineers in design or construction. Developing specific policies and procedures to execute a program and coordinate engineering activities. Program level expertise in varying areas.*

Number of Principal Engineers (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

8. *Administrative Engineer: Requires a bachelor's degree in engineering and a Professional Engineer License. The incumbent is responsible for making expert technical engineering decisions in a particular area of expertise in the review, analysis and coordination of the activities of professional engineers and technical support staff in an assigned area of engineering responsibility and for ensuring that programs and procedures are effectively and efficiently administered in accordance with established engineering standards. Typically has at least ten years of experience in a specific technical area. Examples: Deep subject matter expert. Major project manager for substantial risk and complexity. Directs the activities of a specific technical engineering program to ensure work is completed in an effective and timely manner.*

Number of Administrative Engineers (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

9. *Engineering Specialist: Does not require a bachelor's degree in engineering or a Professional Engineer License. Applies civil engineering knowledge and skills to engineering activities in a variety of engineering areas including the development of preliminary or detailed construction plans and or projects such as complex construction inspection oversight mapping, etc. Examples: Develops geometric layout, expert in engineering software such as Geopak and CADD. Project supervisor for smaller scale construction projects. Oversees construction work of contractors on smaller projects. Develops accurate land surveys. Develops agreements with other organizations. May be responsible for putting plan set together and supervising technicians. Conduct initial investigation into infrastructure system failures.*

Number of Engineering Specialists (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

10. Engineering Specialist Senior: Does not require a bachelor's degree in engineering or a Professional Engineer License. Under limited supervision, applies engineering skills to preliminary or final design of plans. Works on moderate to major scale projects, or other specialty engineering activities. Duties are similar to a Senior Engineer, but individuals in this position cannot sign the plans, specifications or reports which must be reviewed and signed by a licensed engineer. Work must be periodically reviewed by a licensed engineer. Examples: Leads a design squad for multiple projects simultaneously. Oversees multiple construction projects simultaneously. May be a specific subject matter expert. Conducts investigations and technical reviews for pipeline safety, water systems, treatments systems and other areas. Responsibilities may include supervision of technicians, non-registered engineers or other para-professionals. Consults and coordinates with other organizations offering engineering expertise.

Number of Engineering Specialist Senior (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

11. Land Surveyor in Training: Requires certification with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Land Surveyor in training. Beginner-level land surveyor work.

Number of Land Surveyor Trainees (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

12. Land Surveyor Senior: Requires registration with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Land Surveyor. Applies professional skill and knowledge to surveying projects in the field or to projects of equal complexity in an office or specialized surveying experience. Supervise survey crews in collecting survey data, certifying land corners, boundary surveys, and right-of-way plats. Examples: May be a project manager for multiple survey projects. Supervise survey crews and technicians. Duties may include: parcel mapping, platting, legal description writing. May oversee entire regional survey needs.

Number of Senior Land Surveyors (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

13. Land Surveyor Principal: Requires registration with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Land Surveyor with approximately three to five years post-registration surveying experience. Similar duties to a Land Surveyor Senior but may work in an area of greater population or has more responsibility with higher profile projects or a larger number of projects. Responsible for developing and maintaining land surveying standards for the agency. This position may have official public contact outside the agency for property right's needs. Supervises other Land Surveyors and technical staff. Considerable knowledge of principles and laws in specialized field of surveying. Examples: May be a project manager for multiple survey projects. Supervise multiple survey crews and technicians in collecting survey data. Duties may include parcel mapping, platting, legal description writing. Will oversee entire regional survey needs.

Number of Principal Land Surveyors (NA if your organization doesn't have such a position)

Range Minimum

Range Maximum

Average Salary

14. Land Surveyor Administrative Professional: Highest level of specialized surveying work. Requires registration with the Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design as a Professional Land Surveyor with approximately five to ten years post-registration surveying experience. Responsible for making expert technical surveying decisions in the review, analysis and coordination of land surveying activities of professional and technical support staff. Supervision is received from a higher level administrator in the form of conferences and review of reports and recommendations in terms of overall effectiveness of results achieved.

Number of Administrative  
Land Surveyors (NA if  
your organization doesn't  
have such a position)

Range Minimum

Range Maximum

Average Salary

15. Radio Engineer 1: Requires a first class federal radio-telephone license. Performs professional radio engineering work developing extension of the present radio system including engineering, cost studies and installation inspections, develops new radio communication systems and supervises system maintenance.

Number of Radio Engineer  
1's (NA if your  
organization doesn't have  
such a position)

Range Minimum

Range Maximum

Average Salary

16. Radio Engineer 2: Requires a first class federal radio-telephone license. Performs radio communications system design, and supervision of system installation and maintenance work.

Number of Radio Engineer  
2's (NA if your  
organization doesn't have  
such a position)

Range Minimum

Range Maximum

Average Salary

17. For your most recent twelve month period (calendar, fiscal, other), please indicate the average amount of base pay increase as a percent. (Such increases may be due to COLA, steps, longevity, etc...that affect base pay.)

Engineer

Trainee/Engineer

Graduate

Engineer Graduate 2

Engineer Senior

Engineer Principal

Administrative Engineer

Engineering Specialist

Engineering Specialist  
Senior

Land Surveyor Trainee

Land Surveyor Senior

Land Surveyor Principal

Land Surveyor  
Administrative

Radio Engineer 1

Radio Engineer 2

18. Does your organization compensate for approved overtime hours over a standard work week for "exempt employees" as defined by the Fair Labor Standards Act?

*(State of MN: Exempt employees are responsible for managing and accounting for their own hours of work and must account for 80 hours each two week pay period. They may make adjustments in hours of work in subsequent work days and/or payroll periods. With prior approval they may receive straight overtime pay or accrue compensatory time.)*

No

Yes, straight time

Yes, time and a half

Other (please specify)

19. Does your organization provide additional compensation in addition to base pay (not overtime)?  
(State of MN: Achievement Awards - up to 35% of employees up to \$1,600 or a one step average range adjustment (3.95%))

- No
- Yes, Bonus
- Yes, Profit Sharing
- Yes, Achievement/Performance Awards
- Yes, Employer Paid Vacations
- Yes, Tickets to Entertainment Events
- Yes, Longevity or Experience
- Yes, Other

If yes, please identify and explain the benefit.

## 9. Closing

**Thank you for completing this survey! Your answers to this survey are greatly appreciated. As promised, we will send a summary of results once it is compiled.**

**If you have any questions or concerns, please contact Paul Christianson, Compensation Consultant, State of Minnesota, via email at [Paul.Christianson@state.mn.us](mailto:Paul.Christianson@state.mn.us) or telephone 651-259-3624.**