

2022 Budget

Staff Engineer Justification Report

Submitted by: Dan Koski, Director of Public Infrastructure
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Staff Engineer

Currently the Engineering Division of the Department of Public Infrastructure has five full time technical staff consisting of the Engineering Division Manager, a GIS Land Records Analyst, an Engineering Technician III, a Surveyor Technician, and an Engineering Stormwater Technician. In light of the increased workload related to both the number of projects being completed annually, as well as planning for future capital projects and daily technical inquiries, as well as an urgency related to knowledge transfer and succession planning, there is a definite need for an additional position. In order to address those needs, while striving to keep costs to a minimum and operate in the most efficient manner possible, we are proposing adding a Staff Engineer position. This person would perform many of the same duties as the existing technical staff, including assisting with design, construction inspection, performing estimates, and regulatory compliance issues. As a graduate engineer, this person would also be qualified to earn their Professional Engineering license by the State of Wisconsin, and thus be in a position to learn the duties of the Engineering Division Manager. They would then be instrumental to succession planning.

History

The historical aspect of how the workload has been spread across the department is a bit complicated since there have also been varying levels of projects completed annually corresponding to budgetary constraints. However, in recent years the amount of work has increased substantially while staffing levels within the Division have remained static, thereby putting a significant level of demand and stress on existing staff. It is noteworthy though to examine the staffing levels prior to reductions as we are nearing the pre-staff reduction workload. Therefore, staffing levels are presented as a means of providing perspective on the relative workloads and current responsibilities.

Prior to 2012

Engineering Division Staffing Level

- Deputy Director of Public Works -1
- Civil Engineer II - 1
- Engineering Technician - 1
- City Survey Technician - 1
- Engineering Aide III - 1
- Engineering Aide II - 3
- Stormwater Aide - 1
- Administrative Assistant – 2
- Clerk II – 2 (0.5 FTE) = 1 FTE

Total = 12 FTE

2012 to present

Engineering Division Staffing Level

- Engineering Division Manager - 1
- GIS Land Records Analyst - 1
- Engineering Technician III - 1
- Surveyor Technician - 1
- Engineering Stormwater Technician - 1
- Administrative Assistant – 1.5

Total = 6.5 FTE

As can be seen, this represents a net reduction of 5.5 FTE positions while the workload has increased dramatically in recent years. As will be shown in the next section, the result is an extensive backlog of work that needs to be completed.

Work Load

History shows us that the work load, especially related to the reconstruction of infrastructure this Division of DPI is responsible for has increased substantially in the past several years. While we continue to use RIE events to streamline workflow, balancing workload priorities has resulted in longer response times for contractor and engineer requests, project estimates, capital planning and project design. As a result, our backlog of work has continued to grow, while at the same time we struggle to meet daily tasks. There is a big need for year-round support, as well as a need for succession planning. As it stands, our Surveyor Technician has been forced to work a large amount of overtime in order to compensate and complete project designs in time for construction. See attached spreadsheet for a report of his hours for the time period from 2017 to August 1, 2021. Included in the spreadsheet are overtime hours and costs for other Engineering Staff as well, since this position would directly impact each of these and contribute to savings in this area. Total overtime costs for this time period for this staff is \$127,130.09. Again, the most significant is due to design work performed by the City Surveyor, and this would be a significant and sustained savings through the addition of this position. In addition to the added expense, there is definitely a concern over the extreme volume of work and resulting potential for burnout in the Division as a result of this quantity of overtime.

The following is a list of some of the backlogged items requiring attention. This is not an exhaustive list.

- T.V. Reports and Videos. The seasonal employees are reviewing the reports and videos and making notes and documenting what they see, but we really need someone more knowledgeable or experienced to determine or make decisions on when work should be programmed and what type of work should be done (Relay, CIPP Relining, spot repair, spot liner, etc.).

- Storm Inlets have been neglected for over 10 years. No maintenance is being done until they fail. The Staff Engineer would inspect and make recommendations for which ones to repair, replace or just have maintenance work completed.
- Stormwater Management Ordinances have not been updated since the DNR Revisions.
- The Engineering Manual has never been fully updated since it was first used in 2003.
- The Standard Specifications have not been reviewed and updated in years.
- Review and make changes to Chapter 7 of the Municipal Code.
- Start working on future projects ahead of time, such as storm sewer design for reconstruction projects like Custer St., Reed Ave., etc. Look at other possible geometric changes such as bike lanes, etc.
- Work with DPI – Operations to assist and determine which streets should be crack filled and seal coated, along with when, and develop a 3-5-year list.

It is important to note that while there is a substantial amount of backlog this person could help catch up on, there is also more than enough current daily work to sustain the position going forward. Some examples of other areas where they can help:

- ROWAY Permitting
- DNR Permit Applications (Sanitary Sewer Extensions, WRAPP, Chapter 30, wetland, etc.)
- Oversized Loads
- Road Closure Notices
- Estimates for all projects
- Parking Issues or any Public Safety Committee Issues.
- Assist with data collection for PI Committee meeting issues.
- Review pavement condition ratings to provide proposed lists of streets for seal coating or other treatments.
- Site Plan Reviews, including following up on permits for those site plans.
- Review Pay Estimates.
- Attend Progress Meetings as needed. Waldo in 2019 – 2020 and Rapids Road in 2019 are recent examples.
- Prepare Class I Notice Contracts and also obtain the necessary quotes for these contracts.
- Coordinate and review televising reports

This position would also play an important role with respect to Succession Planning. As we do not have a younger engineer to train for possible succession when the Engineering Division Manager retires, this person could fill that role. It is crucial to get such a person hired sooner rather than later, as the knowledge base needed to become a competent Engineering Division Manager takes years to accumulate. In addition, our Engineering Technician position will be retiring possibly as early as the first quarter of 2023. This would give adequate time for knowledge transfer in this area as well. Also, our Survey Technician, who performs the bulk of the street design work, is looking to retire in 3 – 5 years. It is extremely rare to have a surveyor perform this amount of design, so the Staff Engineer would be assuming those duties. It is imperative to get the knowledge transfer timeline going in this area as well.

Position or Job Description

The job description for the Staff Engineer position is attached and outlines the essential and non-essential job functions, desired qualifications and abilities, as well as the physical demands to perform this job for the City of Manitowoc.

An email from Carlson Dettman from 2020 establishing the Grade for this position is also attached, as is the correspondence from the City Finance Department outlining the Fiscal Impact.

The cost to the city to pay wages and benefits for this position will be an added request for 2022. It is estimated that this position would be an additional \$79,640.86 – 88,586.22, depending on candidate, as the numbers given represent the fiscal impact range from Hire Rate to Market Rate.

Summary

This proposal provides a snapshot of the shortfall in staffing to complete work that is required to be performed to keep our Engineering Division. If you would like more specific information on current work load and work-time tracking feel free to contact me. Please consider accepting my recommendation to fund this this full-time position.

Thank you for taking the time to consider my proposal.