



City of Grand Island

Thursday, August 29, 2013

Special Meeting - Updated

Item I-2

**#2013-295 - Consideration of Approving 1 Full Time Equivalent
Land Surveyor for Public Works for 2013-2014 City Budget**

Staff Contact: Jaye Monter, Finance Director

Council Agenda Memo

From: Jaye Monter, Finance Director

Meeting: August 29, 2013

Subject: Consideration of Approving 2 Full Time Equivalent Employees (FTE) for Public Works for the 2013-2014 City Budget

Item #'s: I-2 & I-3

Presenter(s): Jaye Monter, Finance Director

Background

At the August 13, 2013 Study Session and the August 27 public hearing, we discussed the changes in the Full Time Equivalent Employees (FTEs) included in the 2013-2014 proposed budget for the City of Grand Island. Public Works is requesting two departmental FTE changes to improve efficiencies and continuing department growth.

Discussion

Please review memo from John Collins, Public Works Director.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Approve the recommendation for requested FTE's and changes.
2. Modify the request to meet the policy direction of the Council.

Recommendation

City Administration recommends that the Council approve the 2013-2014 FTE requests.

Sample Motion

A motion to approve the FTE requests and changes as recommended.

DOLLAR SUMMARY OF 2014 FTE CHANGES				
Department/Fund		Position	Amount	FTE
EMERGENCY MANAGEMENT	126	Senior Public Safety Dispatcher	41,735	0.50
		Public Safety Dispatcher	64,246	1.00
		Public Safety Dispatcher	(63,347)	(1.00)
	215	Senior Public Safety Dispatcher	(40,439)	(0.50)
		Public Safety Dispatcher	(64,251)	(1.00)
		Public Safety Dispatcher	11,804	0.18
		Public Safety Dispatcher	(19,474)	(0.25)
		Public Safety Dispatcher	14,140	0.18
	216	Public Safety Dispatcher	50,567	0.82
		Public Safety Dispatcher	61,218	0.82
		Public Safety Dispatcher	(56,036)	(0.75)
		TOTAL EMERGENCY MANAGEMENT:	163	0.00
POLICE	123	Police Officers	313,503	5.00
		Community Service Officers	63,886	2.00
		TOTAL POLICE:	377,389	7.00
METROPOLITAN PLANNING ORG	225	MPO Planning Manager	97,740	1.00
		TOTAL METROPOLITAN PLANNING:	97,740	1.00
PUBLIC WORKS	330	GIS Coordinator	88,144	1.00
		Registered Land Surveyor	97,860	1.00
		TOTAL PUBLIC WORKS:	186,004	2.00
PARKS - HPSP	44801	Office Coordinator	64,739	1.00
		Seasonal Worker Customer Service/Facility Operations	(9,605)	(0.50)
		TOTAL PARKS:	55,134	0.50
UTILITIES - ELECTRIC	520	Civil Engineer I/II	118,146	1.00
		Utilities Electrician	101,424	1.00
		TOTAL UTILITIES:	219,570	2.00
		TOTAL CITY:	936,000	12.50

Public Works

As stated several months ago, one of the most important goals for the Department of Public Works (DPW) is to rebuild the Engineering Division so that it is properly staffed both with the necessary skill sets and numbers to accomplish the objectives set by the City. There will still be a need for consultants to provide skills that are not needed as frequently (such as those required in the dewatering study) and for work exceeding the capacity of staff (it is better from both an economic and productivity view to never have more staff than required for the continuous work load). The three basic skill sets missing are Traffic Engineering, Surveying, and GIS. The DPW Engineering Division is performing work in these areas, but has no one specializing in them (I.E. Professional Traffic Operations Engineer (PTOE), licensed Land Surveyor (LS), or Certified and Degreed Geographic Information System Specialist (GIS Specialist)). Note that there are many other needed skill sets not present (such as structural engineer, geotechnical engineer, hydraulic engineer, etc.), but the work load for these will remain too small to be cost effective until the City is much larger; for the next few decades it is more cost effective to consult these out as needed.

Work in the DPW Engineering Division falls into 3 broad categories:

- Support – activities that support the community such as providing the location of a sewer tap or preparing final documents for permanent storage. These activities are often border line between sub-professional and clerical, and typically handled by sub-professional engineering staff in most government operations, though clerical staff often supplements this effort. This seems to be the area of primary focus for the GI DPW Engineering Division prior to 2011. Note that occasionally professional or paraprofessional level skills are required for these tasks.
- Study and Design – Developing plans, surveys, Request for Qualifications (RFQ), Request for Proposals (RFP), Bids, Standards, Studies, and other engineering activities necessary to produce projects and protect both public and private infrastructure. In addition to various professional engineering skill sets, CADD, GIS, Survey and other paraprofessional skill sets are necessary to accomplish the City's objectives. The lack of expertise in this area is the primary reason for DPW's past failures: poor consultant performance, excessive construction fees, projects designed but not built, poor base and other materials on streets, poor drainage, inappropriate choice of solutions, etc.
- Construction – activities required to continue projects to completion, beginning when the final design is complete, or after bids are awarded, depending on whether staff or contractors will complete the work. Poor inspection is responsible for the early failures of infrastructure, high maintenance frequency and increased repair costs. In some cases the City has not received what was purchased. Depending on the type of project professional and/or paraprofessional

skill sets are needed, though with proper guidance, some tasks (such as observation) can be successfully completed by sub-professionals.

Properly staffing the Engineering Division is the best opportunity to correct the problems the City has experienced, and to reduce total infrastructure related costs. Realization of savings will be difficult until past deficiencies have been corrected, such as those related to Wastewater or drainage. Note that fixed cost will increase with staff, but consultant cost will diminish with their utilization, contractor cost and maintenance/repair cost will diminish with better designs and closer inspections.

At this time the weakest area in the Engineering Division is data collection and compilation necessary for proper engineering analysis. The most needed skill set is GIS, which should be provided by a GIS Specialist responsible for:

- Compiling feature/property needs and developing data structures to accommodate them.
- Developing data collection contracts to collect data for such things as pavement management, traffic signs, and drainage.
- Acquiring or developing software and reports to support network analysis needed by the engineers. Note that network analysis is needed to develop system wide plans for handling traffic flow or creating a series of drainage projects to correct the drainage without simply moving the problem from one location to another. There will still be a need for modeling and master plans from consultants (some software and skill sets are too expensive and or too infrequently needed), but this makes implementation easier, and a real review of things such as the Summerfield drainage issues or Highway 281 accidents possible.
- Ensuring new data is entered as it is available; out of date information leads to poor decisions.
- Interfacing with the Utilities and County GIS staffs to ensure efforts are coordinated and data validation occurs.
- Automating ancillary tasks such as determining where sanitary sewer connections are located and what fees are associated with connecting.

Surveying is the next most critical missing skill set, and the need will increase if the City decides to adopt and enforce drainage regulations at the lot or subdivision level. To provide this it is necessary to establish a Licensed Land Surveyor responsible for:

- Completing the surveys necessary for developing projects with staff. A surveyor with assistance from sub-professional staff will be able to complete many of the surveys needed for staff designs, but consultants will be needed to handle some

when the workload is excessive. This position will be especially effective for the many small projects where survey data is needed quickly for studies/designs.

Work is cyclical, so there will be some down time; this will be spent inspecting construction projects, a function where we are significantly understaffed, and handling some ancillary duties. The quality of inspection services we have received from consultants has been inconsistent, and has contributed to some failures. Design usually costs 8% to 12%. Assuming minimal cost, the value for 2012 was \$248,000 and for 2013 is projected to be \$290,000, which would have otherwise been contracted. This equates to saving about four dollars for every dollar spent on the engineer. Note that this accounts for about half of his time; the remaining effort is spent on more general tasks such as reviewing subdivisions, developing/revising standards, responding to public requests, etc....

We were able to hire a CADD Operator with good CADD skills, but with a power background rather than the needed to with road, drainage and pipe design. It usually takes 5 years or so to become proficient in this area. The expectation is that some savings will be recognized over the next year, and increase for several years. This position also adds value to the division by improving the skill level and methodology of other CADD utilizing staff.

2014 Budget Decisions:

Add GIS Specialist

This position is needed for current work. It is possible and cost effective to contract specific projects, but setting appropriate tasks for such projects and handling the daily and/or urgent tasks is difficult to contract in this area because the service is not readily available. The position in IT that was responsible for providing GIS services to DPW was replaced with a different position. The Utilities Department GIS Technician has been helping DPW get by, but has informed us that they do not have time to continue, and reminded us that continuing is inappropriate since they are an enterprise fund. Availability of data is limited, but the cost of the position performing the full range of duties should be less than the cost of contracting those duties that lend themselves to contracts.

Add Land Surveyor

This position is needed for current work, but will become essential if drainage regulations are established. It is relatively easy to contract most of the current needs, though the process makes quick surveys impossible. The expectation is that there will be some cost savings from performing many of the project surveys with staff, and that a staff surveyor will allow us to better respond to the small requests (difficult at this time).

Delay Traffic Engineer

At some point hiring a Traffic Engineer will be recommended. It is not advisable at this time because:

- The Engineering Division cannot handle the effort to integrate this position. Focus needs to remain on better developing the design function which includes a number of ancillary tasks (revising standards, developing processes, etc.).
- Without an existing traffic unit, establishing the MPO will be work intense, and the Engineering Division will have to devote significant resources to this.
- We may be able to acquire much of the traffic data and analysis as we develop the MPO documentation.

There are two primary factors involved in developing organizations are skill sets and capacity. As mentioned two years ago, missing skill sets was the most critical issue in the Engineering Division, and addressing this deficiency has been our main objective. After the missing skills are filled, capacity should be addressed.

- Capacity involves setting the number of staff at a level to handle the minimal work load. As indicated in the chart of Capital Funding and Expenditures, the workload is too volatile to determine the minimal workload at this time. Since 2000 Public Works has been budgeted as much as \$12M and spent as little as \$0. Additionally, the productivity of the Engineering Division is still increasing as we set processes and change staff. Once productivity stabilizes, the City should set a stable level of funding, after which the optimal level of staffing can be determined.
- DPW regularly writes legal descriptions and locates property pins, though there is no surveyor on staff. This is inappropriate, and there is risk from increased liability and from increased project cost.
- Collect survey information for small drainage related issues that is frequently needed to determine problems and develop solutions.
- Assist with enforcement of drainage regulations (should these be established) by inspecting subdivisions as they are constructed and lots as grading is complete, and by performing site inspections in response to drainage complaints.

The final missing skill set needed to complete a small managing municipal engineering group is that of a certified Professional Traffic Operations Engineer (PTOE). Support from a GIS Specialist will greatly enhance the effectiveness of this position.

- The primary purpose of a PTOE is to perform traffic studies for speed limits, traffic signs, traffic signals, pedestrian crossings, trails, parking, ADA, and such. These are necessary to improve safety and efficiency as traffic changes with the City's growth. The PTOE would assume the work currently performed by existing engineering staff and be able to handle larger and more in depth studies.

Consultants would still be needed for large corridor studies where the effort of data collection or of the cost analysis tools are prohibitive.

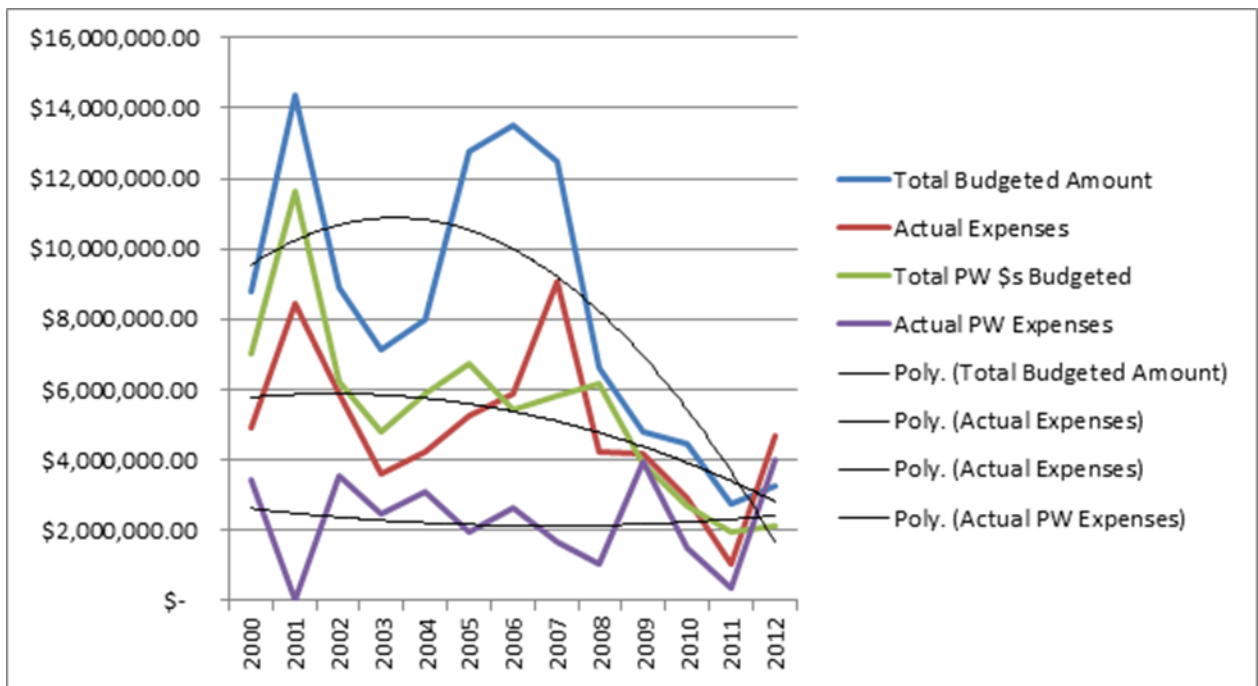
- The PTOE would provide the traffic analysis necessary for the planning required by the MPO. Note that communities large enough to become an MPO usually have an established Traffic Engineering Program which usually assumes primary responsibility for establishing the MPO, and provides the traffic models and data that allow the MOP staff to develop the required plans and documents.
- The PTOE would be responsible for the geometric studies necessary to prevent and/or correct issues such as the head to head left turn lanes on Highway 281 that contribute to collisions.

Once these basic skill sets have been acquired the City will have to decide whether the Engineering Division should remain a managing group with some production capability, or if it should be expanded to handle the majority of the design and/or construction projects typically needed by the City.

If the City decides to continue with a managing group, these three positions will be all that is needed for many years until the City grows to the point of needing more focused experts in areas such as structures or drainage.

If the City decides to expand the Engineering Division to optimize expenses, some additional engineers and support staff may be needed. The number depends on the number of projects desired and funded by the City. The goal will be to have sufficient staff with skill sets to handle the minimum work load, and to contract the remaining work. Properly managed, this will maximize the quality and minimize cost.

Adding positions to an engineering group creates a great deal of overhead. Salaries are such that it is always very difficult and often impossible to higher experts with the desires skills, making it necessary to train new staff. Training takes time from key staff, reducing productivity. We cannot expand engineering to the proper staffing immediately; several years are needed to complete this process. The savings trend will continue to rise, but may drop for a time after each new hire.



Note that this chart only reflects City funding, and is not inflation adjusted; it should only be used to illustrate the volatility of funding and productivity.

John Collins, P.E., Grand Island Public Works Director/City Engineer

RESOLUTION 2013-295

WHEREAS, the Grand Island City Council approves a schedule of full time equivalent positions as part of the City's annual budget process; and

WHEREAS, the Engineering Division of the Public Works Department has requested the addition of a Registered Land Surveyor; and

WHEREAS, the addition of a licensed Registered Land Surveyor will provide for a City employee to establish right-of-way, write legal descriptions and perform survey work on City projects; and

WHEREAS, the Engineering Division of the Public Works Department will increase its current FTE schedule by one (1).

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the Mayor is hereby authorized to execute the aforementioned changes to the City FTE Schedule.

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Adopted by the City Council of the City of Grand Island, Nebraska on August 29, 2013.

Jay Vavricek, Mayor

Attest:

RaNae Edwards, City Clerk

Approved as to Form	☐ _____
August 28, 2013	☐ City Attorney