**MEMORANDUM**

**TO:** **Board of Aldermen**

**CC:** **Bola Akande, City Administrator**
**Citizens of Brentwood**

**FROM:** **Chris Thornton, Mayor**

**DATE:** **August 6, 2016**

**SUBJECT:** **Open Memorandum re Operational Infrastructure**

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I have written to you before encouraging you to support various infrastructure projects to benefit our City. As you know, I believe that streets, sidewalks, parks and other physical infrastructure are among the most important things we can provide our residents. Today, I am writing to encourage you to support the development of another type of infrastructure that I believe is equally important: our operational infrastructure.

I will start by briefly explaining what I mean by operational infrastructure.

Running our City on a day-to-day basis is more complicated than it may seem at first glance. Every day we provide a wide variety of services to our residents and perform an equally wide variety of tasks on their behalf. Some of these services are very visible; police and fire protection, maintenance of public parks, recreational opportunities, trash and recycling, etc. Other services are less visible, but no less important; business licenses, building and occupancy permits, collecting taxes, code enforcement, maintaining City property and vehicles, etc. In addition, the City must perform the same internal functions that any business of a similar size would perform; finance, accounting, human resources, legal, purchasing, asset management, etc. Suffice to say that running a City, even a relatively small city like ours, is a complex operation.

Operational infrastructure is the term I use to describe all of the processes, procedures, systems (and here I am not just taking about computers and/or software) and controls we use to carry out the day-to-day operations of the City. Please note that when I say day-to-day operations of the City, I mean any task we do or service we provide on a regular or routine basis, even if we don't actually do it every day.

Well, there's nothing like a definition that requires another definition, but I want to give you an idea what I am talking about when I say "processes, procedures, systems and controls". I think the easiest way to do this is to consider the entirely hypothetical example of a building permit. Please

keep in mind, I have no idea what our current building permit process is and any resemblance between this hypothetical and getting an actual building permit is entirely coincidental!

At a high level, our hypothetical building permit process might look like this: 1) Complete an application for a permit; 2) submit the application and the required fee to the building department; 3) review the application; 4) approve the application and issue the permit or return to applicant for clarification; 5) schedule follow up inspection; 6) complete follow up inspection. Sounds simple enough, however, with just a little bit of imagination we can see that, in reality, the process may not be this simple. For example, what type of building permit is being requested; structural, electrical, plumbing, fence, or sign? Is the fee the same for all types of permit? Who reviews the application? Does it depend on the type of permit being requested? What happens if the applicant's check bounces?

Similarly the procedures might look like this: 1) clerk review application form to ensure it is completely filled out and that all required information has been provided; 2) clerk issue receipt for payment of appropriate fee; 3) stamp form with date received; 4) if structural, fence or sign application put in Bill's inbox, if electrical put in Tammy's inbox; if plumbing put in Joe's inbox; 5) reviewer mark permit application as approved with date and time and put in clerk's inbox for issue. I could go on here, but I think you get the idea. Note that the procedures differ from the process, the process focuses on what happens and in what order and not so much on who does it or how. The procedures very much depend on what is being done (i.e. the process), but are much more focused on who does it and how.

Now let's look at the system. We got a bit of exposure to the system in the procedures, for example, we know that the clerk should put structural applications in Bill's inbox which suggests our "system" for keeping track of applications received is to look in Bill's inbox. Again, without too much imagination we can picture a system whereby the clerk assigns each application a number and enters key information into a log. Maybe we have a color code system where structural permits have a blue TPS cover sheet, electrical permits are yellow and plumbing are red. Perhaps Bill, Tammy and Joe have special inboxes for permit applications so they don't get mixed up with other things . . . you get the idea. The key thing to notice is how the system is to some extent separate from the process and the procedures. While we must know something of the process and the procedures to create a useful system, we can imagine many different systems that would work for the same process and procedures.

People tend to use the words process, procedure and system interchangeably. In the case of simple processes and procedures this may be correct. In the case of computerized systems, people tend to think that the system IS the process AND the procedure. Yes, well designed systems are highly integrated with an organization's processes and procedures, but I will bet you have had experiences where this isn't the case. Have you ever completed an online request form never to receive a response or even acknowledgement that your request has been received? Have you ever entered your account number on the telephone only to have someone answer and the first thing they ask for is your account number? Processes, procedures and systems are related, but definitely not the same thing. Ideally they all work together to make an organization function efficiently.

I haven't forgotten about controls. In general, controls are the portions of the process, procedure and system designed to ensure their proper function. Here again, people tend to think of computers and software, but this is a mistake. For example, a typical control in accounting is a procedure requiring two separate signatures in the process of issuing a check.

Now that we have an idea of what is meant by operational infrastructure, I want to discuss its importance running our City or indeed any complex organization.

Processes, procedures, systems and controls exist in every organization. More often than not, they develop over time, as people find better ways to do their respective jobs. As organizations change, particularly when they become more complicated, the operational infrastructure is strained and frequently struggles to support the needs of the organization. When this happens, the operations of the organization tend to become less efficient. More time and resources are spent performing the basic operations of the organization leaving less for new initiatives. Over time, the organization can stagnate; struggling to keep up with day-to-day operations. A well designed operational infrastructure can help prevent this by supplying the organization information about how well it is meeting its objectives.

So what are the characteristics of a well-designed operational infrastructure? Let's go back to our hypothetical building permit process. How can we determine if our operational infrastructure is meeting our objectives? We might want to know how many building permits we issue each month or maybe how long it takes to issue an electrical permit. A good system will allow us to quickly answer these questions and evaluate our process and procedures. If we are using a system based on paper forms, it may be difficult to answer these questions (and the follow up questions the answers will certainly generate). A computerized system may make it easier to answer these questions, but only if it is designed to capture key data at critical points in the process. A well designed operational infrastructure will allow the organization to quickly and easily get information about its operations.

The ability of computerized systems to collect and provide easy access to data has led some people to believe that an organization can become efficient by simply purchasing a "system". This belief is fostered by software companies who tout their products as "off the shelf" solutions for any organization's inefficiency. The truth is that there are many good software products available designed to meet the needs of organizations in virtually any enterprise, but none of them can be implemented "off the shelf". Unfortunately (or more likely fortunately) computers only do exactly what they are programmed to do. You have probably heard the expression "garbage in, garbage out". Nowhere is this more true than in computerized systems. If a computerized system is not set up specifically to support the organization's processes, procedures and controls, it will not provide information that is useful to the organization. Do a quick Google search and you will find hundreds of stories about organizations who tried to fix their problems by purchasing software systems. A computerized system must be specifically configured to implement the organization's processes, procedure and controls or it will become part of the problem, rather than part of the solution.

Like our streets and sidewalks, Brentwood's operational infrastructure is overdue for an update. The phenomenal success of our City over the last thirty years has increased the complexity of our operations and our operational infrastructure is staining to keep up. We need to update our operational infrastructure. Last fall the Board of Aldermen took an important first step in this direction by licensing the MyGov government software system. We need to implement this system. We need to review our day-to-day operations and document our processes, procedures and controls so we can configure the MyGov system to effectively support our basic operations.

Taking these steps will benefit our citizens in two important ways. First, it will allow us to provide better service to our citizens. We will be more responsive and have fewer instances where we "drop the ball". Second, we will become more efficient. We will be able to provide better service with

fewer resources. As we become more efficient, we can redirect those resources to improving our operations in other areas and taking on new initiatives such as the re-development of the Manchester Road corridor, making our community more walkable or creating a greenway connecting us to regional trail systems and nearby communities.

Like all infrastructure, operational infrastructure is an investment. We do not have the time and more importantly, the expertise to properly implement the MyGov system. Considerable effort will be required to analyze and document the processes, procedures and controls for our most basic operations. Fortunately, there are a number of firms with expertise in these areas. Unfortunately, their expertise and is in great demand and their services are not cheap. I believe that an investment in our operational infrastructure will greatly benefit our citizens now and in the future.

We have begun our consideration of the City's budget for 2017. I have asked City Administrator Akande to include significant capital investments for the implementation of the MyGov system in the 2017 budget. These capital expenditures will fund the development of a request for proposal for the implementation of the MyGov system and the implementation of the system to support many of the City's most basic day-to-day operations. They will allow us to identify and hire the expertise necessary to update key elements of our operational infrastructure so our citizens can begin enjoying the benefits I have outlined above. I encourage you to support these much needed investments in our operational infrastructure. I believe that these investments in our operational infrastructure are critical. Unless we take action to make our most basic, day-to-day operations more efficient, I do not believe we will have the resources necessary to take on the more exciting physical infrastructure projects we all want to see accomplished. I look forward to discussing this with you in the coming months.