

SZÉKELY ENGINEERING

A Tale of Three Projects and Two Agencies, as Introduced by a Disaster, or, the Government Definition of an Elephant, and Why I Pro-Cert When Possible – Part III

So, in case you are unaware of the reference in the title to this series, the government definition of an Elephant is a Mouse built to Government Specifications, which leads us to the last project, and the second agency to be discussed in this series of articles.

The Federal Clean Water Act of 1972, amending the 1948 Federal Water Pollution Control Act had the EPA publish the first edition of their Cross Connection Control Manual in 1973, an explanation of the hazards associated with backflow from users to the water distribution system, remediation thereof, and an outline for local administration of cross connection control. In 1981, the NYS Department of Health issued the first edition of their Cross Connection Control Manual, the last supplement to which of "Guidelines for Designing Backflow Prevention Assembly Installations", was revised in 1992.

Back when [NYCDEP's CCCU](#) was first formed and headed by a non-engineer, I went to one of his presentations on how to comply with the City's backflow prevention filing of plans for approval requirements, with him lamenting that Professional Engineers and Architects seemed to be unable to provide the most rudimentary device clearance information on their plans, forcing his employer to issue their NYC Supplement to the NYS Department of Health Handbook for Cross Connection Control.

This publication, the earliest copy of which I have on hand (from 2008) comprises 31 pages, has grown in its latest iteration to 100 pages and is now called the NYC Cross Connection Control Program Handbook. This renaming is apparently important because I was told by a senior CCCU employee the City didn't have a program for cross connection control back then, when I showed him plans of mine approved by his agency for a backflow preventer installation in 2012, which had been presented in exactly the same way as my plans then under consideration had just (a couple of months ago) been disapproved – again.

As a matter of fact, after the CCCU Chief directed the aforementioned employee to respond to my email complaining of the fact that the plans reviewer (typically) disapproved plans for not showing information which was in fact shown, often not more than a few inches away from his comment asking for the information to be shown, he (the senior employee), after asking how he could help me, proceeded to quote chapter and verse from their handbook as though it were the Bible, directing me how information had to be presented to suit their sensibilities.

At the conclusion of that telephone call, I sent him an email with the 5 bullet points I understood had to be addressed to finally get the plans approved, with the request he review my revised plans informally before

passing them on for formal review. When he received my plans, his reply that he would be passing my submission to the reviewer forthwith led me to suspect my addressing of the remaining bullet points in my email would prove to be fruitless – which it was.

But before I get to the results of that latest review, you might be wondering what it was in my plans which had caused them to be disapproved up to that point, and there were two substantive deficiencies. It turned out my initial submission for a backflow preventer was only for the one building of the three in that block and lot in which a new boiler had been installed per my plans and specifications, but each of the buildings had its own domestic (. . . not so fast – explanation later) water service, so I had to submit plans for backflow preventers in each of the them, as well as for a sprinkler service in one of the buildings serving sprinklers in all three buildings. Also, the BFP's now had to be lead free.

As to the other "deficiencies", the owner had signed in the incorrect box on the application form, and my plans allegedly did not show the size, type, and state (new or existing) of the water service(s), all of which was in fact shown, but not in the manner prescribed by DEP's handbook. You see, the industry standard use of light linework for existing, heavy for new, and light dashed for removal, and line sizes inscribed in the linework, were apparently not discernible by, or, in the case of the line sizes, invisible to, the reviewer, as that's how my approved 2012 plans and the subject plans presented the work.

Oh, and did I tell you that I only found out 5 months after the package was submitted that it had been reviewed one month after it was submitted, and that it sat in DEP's offices for another three months before it was mailed back to me, and then took another month in the mails to reach me, and that had I not queried DEP regarding its status, it might still be sitting in their offices? Of course, this was during the Covid-19 lockdown of last year, so I suppose there may have been some reason for the grossly extended time frame.

So, after I prepared and submitted a package to account for four water services in three attached buildings, and now that DEP had its act together to receive e-mailed applications for remote review, the next disapproval only took a bit over a month to reach me.

Notwithstanding the fact that the submitted .pdf's, being vector format files, could be zoomed in ad infinitum without loss of resolution, my site plan was deemed hard to see, and I was again informed it didn't indicate size, type, and state of the water services (which it did). Not only that, but I was informed my site plan had to show all the services, which it also did.

In a later proved to be futile attempt to compensate for the apparently poor eyesight of the reviewer, I had provided a larger scale key plan on each building's BFP drawing to make it easy to relate each building's plans to the site plan which also appeared on each sheet, and this time the reviewer claimed the

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BFP I selected for the sprinkler service didn't have approval for the required authority. I expect my pointing out in my reply that it did, with references to the authority's website for confirmation, didn't exactly endear me to him.

While my response was within two days, after, once again, more than a month, I inquired of the CCCU Chief as to the application's status, to which I received an autoreply that he was (again; this was not the first such reply I'd received from him) on emergency leave, directing me to contact one of two persons, with the senior employee referred to earlier being the one who responded that he'd check with the reviewer and get back to me, with the result the application was once again disapproved – almost another week later.

This time, the reviewer managed to convince himself that the unsigned by the owner application form I included in the e-mailed package was the one he should have been looking at instead the signed and dated one the owner had included in the original snail-mailed package. We also began an ongoing disagreement as to whether the 2" service to one of the buildings was a domestic or a combination service – there was a roof tank dedicated to the standpipe system serving the three buildings that was filled by a pump in the cellar which spilled to the tank with no piping interconnection to the standpipe. Not that the nomenclature mattered (except to those for whom dogma is everything) since the BFP was before the pump.

After a false start or two, the senior employee and I connected for the phone call which led to the 5-bullet point email that was supposed to put the application to bed.

It didn't, of course, which led to me sending a certified mail restricted delivery letter with attachments comprising a total of [24 pages to the Commissioner of DEP](#), pointing out that none of the "deficiencies" were a danger to the NYC water supply system, which he of course passed on for action to the CCCU Chief who had been on emergency leave for the past six months. I then had a delightful video conference with him and my client, and the senior employee and plan reviewer in silent attendance, wherein he proceeded to repeat his requirements of selective conformance to his agency's handbook, as he had related them to me in an earlier one-on-one video conference, stressing that my plans had also to be understood by apparent cretins in other divisions of DEP, in addition to a contractor, to whom they would be perfectly clear.

Not only that but with the CCCU receiving a thousand applications a month, I was told they were hard pressed to do their jobs. I dunno, with my online discovery there were a score or so of employees, say, half of whom were plans reviewers, and 20 workdays a month, the load worked out to about 5 reviews of a 5-to-6-page application package per reviewer per day.

All told, including the seven months it took for my client to approve my proposal for the change in scope to account for three buildings, approval was finally received last month after 7 or 8 reviews over two years, where what I had shown on 3 drawings, now required 8.

There's more, but I'm out of room.