

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 I

On March 26th, 2015 a [gas explosion at 121 Second Avenue](#) on the Lower East Side of Manhattan completely destroyed it, and in the subsequent fire, the two buildings adjacent to it.

As an example of generals fighting the last war, and reacting with their usual perspicacity, the NYC Department of Buildings and their crack personnel have therefore left the residents of a 16 story 32unit apartment building on Park Avenue without domestic gas service for going on 4 years now.

You see, the explosion occurred because of an illegal tap into a gas service via a rubber hose, ([where the perpetrators ended up going to prison for their actions](#)) and the way to prevent such a thing from ever happening again must be to simply never again allow gas piping within a building unless there are no joints in the piping. Well, that might not be the overtly declared solution, but that's where it's headed, notwithstanding the fact that the Code doesn't call for welded pipe until the system pressure is over 5 psig.

Never mind that domestic gas piping system pressures are so ridiculously low and that pressure testing of completed domestic gas systems is so high that virtually the only way for a re-occurrence of the event would be as a result of similar illegal work.

What are those pressures, you ask?

Well Con Edison delivers domestic gas at a pressure in the neighborhood 0.15 psig (4" of water gage) and threaded pipe carrying domestic (up to ½ psig) gas is to be tested to hold a pressure of 3 psig (10-20 times more than it'll ever see) for a half-hour.

But wait, there's more. Since a threaded gas piping system from ½ to 5 psig being tested at 50 psig for a half-hour proves the system can withstand 330 times more than it'll see when carrying domestic gas at .15 psig, NYCDOB's basing their adamant refusal to abide by their own standards regarding no piping in stairs (particularly when dealing with gas piping – there exist other reasons for keeping any utilities out of a stair) is a sterling example of bureaucratic tunnel vision.

And the building still without gas service?

It all started when Con Edison's discovery of a leak in their gas main in the street led to testing of the gas riser within the then 92-year-old building and the subsequent discovery of leaks therein as well.

So, I designed a new gas riser in the service stair with new branches to the dwelling kitchens, providing a 2-hour enclosure completely around the piping to separate it from the stair in accordance with [NYCDOB Buildings Bulletin 2013-006](#), which explicitly

addresses the manner in which gas piping is permitted to be installed within stairs.

Well, as a result of the Contractor misunderstanding our Covid-19 necessitated clarification phone conversation in lieu of a site meeting, piping was not installed as called for on my plans, and when it was seen by FDNY personnel responding to a fire in a dwelling unit which had nothing to do with the work in progress in the stair, they notified DOB who issued a stop work order for non-compliance with plans.

I [Pro-Cert](#)'d the plans as is my wont because of the lack of diligence or competence, among NYCDOB plans examiners, lamented, *without exception* by every design professional I know, and once the stop work order was issued, I was treated to an audit of my plans, the objections to which were the proof of that lack.

Because of a previous experience on one of my projects where I met with the Borough Director to straighten out issues with my drawing presentation and drawing numbering – I had the nerve to include ancillary electrical and plumbing work on a mechanical drawing as [permitted by Code](#), giving it an MEP drawing designation as [permitted by the NYCDOB Bulletin](#) regarding filing – which devolved into “do it as I tell you because its within my power to force you”, I was loath to meet with the plans examiner to lift the stop work order, but I gave it a try in the hope a design professional would be more rational than a clerk.

I should've known better.

When I got to the meeting and was told we had to wait for the attendance of the Chief Plumbing Inspector, I began to suspect my hope was misplaced, as was initially confirmed when the drawing I'd brought never had hands laid on it, let alone unfolded and looked at. While we were waiting for the inspector's arrival, the plans examiner patronized me with stories of his previous life as a design professional in the mining industry, pointing out that plans examiners had to consider things we unwashed in civil society would never think about, such as, what would happen if the stair were to be removed in the future. Huh?

But that was just a warmup. When the inspector arrived, they played good cop bad cop, with the inspector telling me outright he “wasn't a fan” (!?!?) of Bulletin 2013-006 and the plans examiner suggesting the need to file a thousand-dollar construction code determination request form [CCD1](#) with my (now revised for better constructability) plans, as a means to clear the audit objections.

My client went for it, and the negative results thereof resulted in my writing a three-page certified mail letter, with attachments, to the NYCDOB Commissioner after an Architect client of mine told me he went through the process three times on one of his jobs with a nearly identical gas piping issue, but

plumbing inspectors in the field rejected the work, and told his client they would continue to do so, notwithstanding the ultimate approval of the plans by the Borough Commissioner.

Four days later, when I received a call from an apparently senior plumbing enforcement division employee at DOB who was tasked with responding by the direction of the Commissioner, I once again got my hopes up, and they were, once again, in vain.

After I again spoke with him 6 days after that to clarify what I needed to submit, and how I had to do it, so as to show the CCD1's negative findings were in error – notwithstanding NYS Education Law which allows Architects to play Engineer, and vice versa, all of the former with whom I've ever dealt professionally (with the possible exception of one person) are so far out of their depth when doing so that it would be laughable were it not for the resulting negative consequences of their lack of knowledge – I phoned him again for his email address that I could send him a package for his review preliminary to my submitting it formally.

I had to make that request via voicemail as he was apparently unavailable to answer his phone. I then left voicemails twice more with the same request, to which I received no answer.

So, I sent emails to a half-dozen or so addresses I constructed from his name and my knowledge of NYCDOB email addressing conventions, receiving “addressee unknown” responses to every one of them.

The guy seemed to have fallen off the face of the earth, and my client in frustration hired another engineer to instead design a gas riser to run outside the building – I expect the occupants of the building may therefore discover a reality of interruptible gas service this winter – presuming of course, the new riser is installed by then, but I just checked with the building's managing agent and discovered there remain additional bureaucratic hurdles needing to be surmounted before that can occur.

Earlier, I mentioned the fact the building was 92 years (now 94) years old, because, during the good cop bad cop interplay, the plumbing inspector pounced upon my revelation that the existing leaky gas riser rose in the elevator shaft as a Code violation compounding an already dangerous situation, completely oblivious to the fact that when it was built, there was (and remains) gas piping throughout every dwelling unit for lighting.

All DOB's supposed concerns has to do with piping joints leaking over time, together with an apparent ignorance of the difference (at one time shared by me) between a piping union and coupling, where the former is more leak prone as it relies on (machined or not) ends of pipe being pulled hard against each other as the fitting makes up the joint, whereas the latter relies on each of the two sections of pipe to be joined being threaded into the fitting, providing the pressure tightness alluded to in the description of testing at the beginning of this piece.

Stay tuned to Part II for more.

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