

# *How I Survived Building a Fire/Rescue Station*

## *Part One*

*Moderated by Ken Newell, AIA  
Stewart-Cooper-Newell Architects*

If you've ever built a new home, you know how stressful and time consuming the process can be. Magnify that experience by four to twenty thousand square feet, along with over forty firefighters and you get an idea of how challenging the process of designing and building a new station can be. Since experience is the best teacher, learning from a "survivor" of this process is extremely beneficial.

At a recent FIERO (Fire Industry Equipment Research Organization, [www.fierofirestation.com](http://www.fierofirestation.com)) Fire Station Design Symposium, Ken Newell moderated a panel discussion of fire officials who had recently navigated the process of designing and building a new station. This article is the first of two that will present essential questions about the process and the panel's answers.

The panel members included:

Chief Don Adam – Lehigh Acres Fire Control and Rescue District, Florida (an all paid department with 109 members)

Div. Chief Mike Caudill – Rock Hill Fire Department, South Carolina (an all paid department with 106 members)

Chief Marty Dailey – Thomasville Fire Department, North Carolina (an all paid department with 61 members)

Chief Len Needham – Bahama Fire & Rescue, North Carolina (a volunteer department with 75 members)

### *What was your source of funding for the project?*

**Needham:** As a VFD we have very limited resources for funding such a significant project. During the process we found that our department qualified for USDA/Rural Development financing. They offer very good rates for a longer than normal payback period. However, the paperwork required for anything involving the government is a nightmare. So we opted to get our construction loan through a local bank and then convert our final loan through USDA/Rural Development.

**Dailey:** We had to do a lot of begging. No, seriously, we spent several years presenting our needs to the city council which lead to the City appropriating enough funds through the budget for the two stations we built.

**Adams:** In Florida we utilize impact fees. But the impact fees don't result in sums of money at one time large enough to build stations. So we took out a loan through a commercial bank and we're repaying the loan with our yearly impact fee allocation.

**Caudill:** Our City issued bonds and we're repaying that bond money with the impact fee money and special purpose tax money as it comes in.

***Did any of you survey the firefighters living in older stations to see what they liked and disliked to influence your design decisions?***

**Caudill:** We formed a building committee that spoke with each company in the department. This took us a little bit of time, but we were able to find out what they would like to see in a new fire station and what they wouldn't like to see.

**Adams:** We did the same thing as Chief Caudill with our committee. We also continually made available to the entire department progress design drawings so they could provide input back to committee members.

**Needham:** We had a building committee that did most of the work with the architect, but we didn't just leave it to the committee. We wanted to bring everybody in so everybody could have their input. That way everybody had a feeling that was their station...they built it and they were part of the design.

***What process did you use to find and select the Architect?***

**Adams:** Florida law requires that we send out Requests For Qualifications to all interested Architects. We then had to process the Architects responses to the RFQ as required by our procurement policies. We then interviewed a handful of Architects and finally selected one.

**Caudill:** We sent RFQs out to everyone listed as an architect in Charlotte and Columbia. The responses were all checked for thoroughness and we tossed out the ones that did not give us the information we asked for. We narrowed it down to the final few selections and then had those firms come in for a presentation in front of our architectural selection committee. From those interviews we selected our Architect.

**Dailey:** Like Chiefs Adams and Caudill, we were required to go through the RFQ process and make sure they were processed correctly. We limited our search to Architects who had a great reputation for designing fire stations. It was very important to us that we find a firm that had successfully completed a lot of fire stations.

**Needham:** Since we are a private, non-profit organization, we were not required to go through a mandatory RFQ process. We started looking for potential Architects about 4 or 5 years before we were ready to proceed with the project. I looked for people who supported the fire services. I started going to state fire conferences and investigated the different design firms who were putting on design programs at the conferences. I also spent time looking at fire station designs by the Architect we were considering. After a lot of discussion, we finally hired the Architect we wanted.

***What surprised you most about the design process?***

**Caudill:** What surprised me the most personally was all the little things and thoughts that went behind the design...the way the building looked on the outside. After hearing the Architect describe why our building looked like it was proposed, everything just seemed to make sense.

**Needham:** I was most surprised by the many different things the Architect actually recommended that could cut cost from construction. I guess that was one benefit from having an Architect that had worked on a lot of stations. For instance, our property had a lot of slope. So we were able to save a lot of money by designing a station plan that stepped down from the admin area to the truck bays.

**Dailey:** I guess what surprised me most is what we got for the amount of money that we were allowed to spend on the projects. We had a very conservative council and they were very adamant about keeping costs down. The designer was able to get us the most facility for the dollars spent.

**Adams:** What surprised me most was the increase, significant increase, in the cost of building the station from when we first budgeted it until we actually bid it. Because of five major hurricanes the year before, the cost of materials went up drastically. We had to reduce the size of a lot of the building areas that we wanted, as well as go back to our City officials for more money.

*The gender and privacy issues have become such an issue in station design, particularly regarding bunk rooms and toilet/shower areas. How did you arrive at the bunk room and toilet/shower design that you ended up with?*

**Adams:** The building committee requested individual bunk and shower areas from the beginning. For us, the privacy issue was bigger than the gender issue.

**Caudill:** On previous stations, we had set our standard for bunks and toilet/showers. We use individual, unisex toilet/shower rooms. That way, we always have exactly the right number, no matter what our gender ratio is. We divide the large bunk room into individual cubicles for the line firefighters so that we have full visual privacy and partial sound privacy. We do provide individual sleep room/offices for our officers.

**Dailey:** Our department also decided to go with the individual sleep rooms and individual toilet/shower rooms, but with a slight twist. We use the "cold sheet" bedding system. Our sleep rooms have three beds in them but only sleep one person at a time. That way, linens don't have to be changed with every shift and nobody has to sleep behind someone else. Having three beds per room also gives us flexibility in those occasional emergency events when you have to sleep more people in the station than planned for.

Next issue we will continue this account of the panel discussion.