FIRE STATION RENOVATIONS
Advisory Committee Capital Subcommittee
March 30, 2021

The Capital Subcommittee of the Advisory Committee held a public hearing on March 4th at 5:00 p.m. to discuss a proposal for the renovation of four fire stations and the possible replacement of Station 5 (Babcock Street). Such renovations are intended to extend the useful life of the existing stations for approximately 20-30 years. Attending the hearing were Subcommittee members John Doggett, Harry Friedman, Amy Hummel, Carol Levin, Pam Lodish, and Carla Benka. Also in attendance were Chief John Sullivan, Building Commissioner Dan Bennett, Director of Public Buildings Charlie Simmons, Deputy Town Administrator Melissa Goff, Brookline Firefighters Local 950 President Paul Trahon, Brookline Firefighters Local 950 Co-chair of the Human Relations Committee Patricia Cripe, Advisory Committee member Cliff Brown, and Fred Levitan and other members of the public.

At the end of the hearing, the Subcommittee determined that it did not have sufficient information to vote and moved to continue its discussion to March 12th at 10:45 a.m., at which time it voted as set forth below.

Background

There are five fire stations in Brookline: Station 1 (Washington Street and Route 9); Station 4 (Route 9 and Reservoir Road); Station 5 (Babcock Street); Station 6 (Hammond Street); and Station 7 (Washington Square). Together they house five Engines, two Ladders, one "Quint", one (unstaffed) light rescue, and two ambulances, owned and operated by Fallon Ambulance. Each station provides living, cooking, and sleeping quarters as well as administrative office space. Depending on the station, there can be between 4-5 personnel with or without 2-3 paramedics, to 9-11 personnel occupying a station at any given time.

In 2013, a study with schematic designs was undertaken by CBI Consulting, Inc. CBI focused on the conditions of four fire stations (Station 5 on Babcock Street was not part of the study) and what would be needed to maintain the integrity of the floors and buildings themselves to accommodate newer, larger fire equipment. The work outlined in the CBI report included flooring, shoring, beams, columns, and structural work. It also included recommendations for the HVAC systems, generators, lighting, and life safety as well as mechanical, electrical, plumbing (MEP) systems.

The report broke the work into three categories: (1) structural, (2) life safety systems, and (3) MEP. The recommended approach was to fund all required structural work in the first year ($625,000 was approved in FY12), then fund life safety systems by stations as prioritized by the Fire Chief (FY13 – FY15), and then undertake the MEP work (starting in FY17).

As the MEP work began, additional funding was requested for the industrial cleaning of the firehouses and reconfiguration of their spaces to mitigate potential environmental hazards in the stations. It should be noted that this type of project has been and continues to be implemented in Boston, Newton, Cambridge, Auburn, and other communities to address the growing concern with cancer-related illnesses in the fire service.

The existence of carcinogens – both gas and particulates – throughout fire stations has been recognized for a number of years. While it was known that exposure to particulate matter is a result of exposure to fires and that fire fighting gear worn during a fire carries particulate matter back to the firehouse, subsequently contaminating living quarters, research conducted within recent years has focused on the air quality within firehouses.

Acknowledging the studies that looked at chemical exposure on the fireground, a research associate at the Harvard T.H. Chan School of Public Health decided to look at air quality in three older Boston firehouses and a newly constructed firehouse in Arlington. Based on her research, she concluded that "the building layout and design had the potential to influence exposure at the firehouse, despite every single one of the firehouses in the study having some form of diesel capture system to collect fire truck exhaust." Peak times of fine particulate matter from diesel exhausts were found in the living quarters of the older fire houses when the truck left and returned from a call, while in the new firehouse there was not "an abundance of fine particulate matter in the living quarters."[1]

As one Brookline firefighter said, "At least personal protection equipment provides me with protection when I'm fighting a fire but nothing protects me once I'm back at the station."

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[1] "Researcher looking for link between firehouses and high incidences of cancer among firefighters" Craig Semon, [Worcester] Telegram and Gazette, November 28, 2018.

Existing funds in a special appropriations account were used to engage the engineering firm of Garcia, Galuska, & DeSousa (GG&D) to produce a study that included an environmental zoning analysis, review of various code requirements and potential code issues impacting future renovations of the fire stations, a hazmat survey, existing conditions report on fire safety, plumbing, water, natural gas, and compressed air systems, and cost estimates. Cost estimates for Fire Stations #1 and #5 were used as a basis for determining cost estimates for the other three stations.

The report recommended implementing environmental zone updates which included painting all walls and ceilings; replacing all acoustic/porous ceiling tiles; and replacing all soft furniture, including window treatments, beds, mattresses, and fabric partitions. It also recommended installing gasketed doors; HVAC modifications; relocation of equipment; and installation of eye wash stations and sinks. Finally, it proposed specific cleaning procedures to be used throughout all firehouses for all non-porous surfaces and ductwork.

Heavy emphasis was placed on the installation of enhanced HVAC equipment to create pressurized controls between working and living spaces and to create zones along with the implementation of enhanced policy and procedural decontamination standards and habits. Specifically, negative and positive pressure differences between the zones would limit the flow of contaminants between the garage or contaminated working areas of the stations, a pass-through zone of neutral or reduced contamination and the contamination-free living quarters. As proposed, there would be need to be some changes to the physical structure of some stations to create the needed flow from zone to zone.

Total cost for the project as of April 2019 was estimated at $7,129,297.

Following on the heels of this first report, GG&D was engaged again, this time to address the long overlooked and long overdue need to integrate and accommodate female firefighters (in Brookline, the first female firefighter was hired in 1998) in fire houses that were designed during eras when the profession included only men. Although some well-intentioned changes have been made in the past few years to address these needs, there has been insufficient funding to implement the types of changes necessary to make the spaces for male and female firefighters equitable.

GG&D was asked to propose changes to the interior layout of all stations that specifically addressed privacy equity in bathroom and changing facilities for the current number of female firefighters, with the further request that such redesigned spaces would have the flexibility and capacity to accommodate an anticipated growing female workforce in the future. They were also asked to review male and female "bunks" from a logistics standpoint.

Although lactation spaces were not directly addressed in GG&D's second report, representatives of the Human Relations Committee of Brookline Firefighters Local 950 has expressed concern on a number of occasions with the lack of acceptable accommodations at all fire stations for lactating firefighters, noting that a dedicated, self-contained pod along the lines of those designed by Mamava (www.mamava.com) should be considered in any new construction.

The projected cost of renovating all of the stations, based on the second GG&D study, increased to $21,538,540 and took into account Fossil Free Fuel HVAC systems and electrical service upgrades.

Discussion

As noted, the Capital Subcommittee met two times to discuss the Fire Station program, largely because the updated cost estimates for the project, received by Chief Sullivan from GG&D just hours before the first hearing, reflected an increase of $1,354,865 from the November 2019 estimate (for a total cost of $22,893,405) and presented the option of replacing, rather than renovating, Station 5, so that the projected cost for a new Station 5, plus four renovated stations, now totaled $40,635,948.

Further discussions conducted by GG&D, Hastings Consulting Inc. (code compliance consultants for this project), and members of the Building and Fire Departments pertaining to the layout and construction of Station 5 concluded that although built in 1965 and therefore the "newest" of the five stations, it does not lend itself to renovations, and that spending in excess of $3 million dollars for renovations would still not result in a building that would have parity with the other stations once they were upgraded. The floor plan of Station 5 has little flexibility; the kitchen is too small; the structure is built on slab and therefore lacks a basement, thus making HVAC renovations more difficult; and there is no second floor on which to locate

sleeping quarters to distance them from the apparatus bay. The air quality and lack of air movement contribute to an unhealthy environment, and although diesel exhaust recovery systems are attached to the exhaust pipes of all trucks, there is still residual when trucks pull out of the station and when they return.

During the discussion of replacement vs. renovation, it was suggested that the parking lot on Babcock Street be "swapped" with 49 Babcock Street as a site for a new station. This would allow the existing Station 5 to remain operational during the construction of a new facility.

Identifying a new site for Station 7 (Washington Square) was also discussed, largely because the existing station is so old (built in 1898) and its site so constrained. However, in the view of subcommittee members, taking a property, particularly a developed one, by eminent domain would be problematic not only because of the expense but also the likelihood of delaying the start of the badly needed work. However, it was noted that an undeveloped Washington Square site might offer an opportunity for relocating the station.

Lastly, the Subcommittee discussed the projected population growth and other factors that can impact public safety, to confirm that they are being taken into consideration as plans for the fire stations are developed. The growth in South Brookline in the near-term, due to the expansion of Hancock Village, raises the question of whether the department as currently structured will have the capability to serve the southern portion of the town. In response, Chief Sullivan stated that adding a ladder truck in South Brookline should be considered, and his recommendation would be to locate it at Station 4, at the corner of Reservoir Road and Route 9. The Chief noted his agreement with the 2019 IAFF analysis that found that housing a ladder truck at the centralized location of Station 4 would increase the department's 6-minute ladder response capabilities in South Brookline. In addition, the IAFF analysis found that placing another company at that location would improve response capabilities through the town.

The IAFF's findings dovetail nicely with the Fire Station project. If the project moves forward, Station 4 will be first on the list to be upgraded and at the same time it will be redeveloped into a two-company facility so that it can serve as the "swing" station while other stations are being renovated. At the end of the entire project, because of its redesign, it will have the capacity

to accommodate a ladder company. An additional company, to be fully functional, translates into hiring 20 additional firefighters.[2]

In terms of timing, as presented, plans call for the Fire Station Renovation Program to be completed over a course of five to seven years. Each station would need to be vacated during the renovation, with the exception of Station 5 if a new station were to be built on the nearby site. The apparatus and personnel from the affected station would be temporarily reassigned. The renovation of each station is currently estimated to take between 8-18 months, depending on the size and complexity of the project.

Given the projected project cost, a debt-exclusion ballot question would need voter approval in order to have sufficient funding to undertake the project.

Members of the Capital Subcommittee expressed support for the planned renovations, the replacement of Station 5, and the exploration of "swapping" the site of the current Station 5 with the Babcock Street parking lot. The Subcommittee also noted that Section 3.7.2 ("Project Procedures") of the Town's by-laws calls for a specific set of steps, including the review and approval of the feasibility study, schematic design, and design development stages by the Building Commission, and the appointment of a Committee of Seven by the Select Board. Funds currently in the Fire Station Renovations Special Appropriations (CIP) account are thought to be sufficient to develop the replacement of Station Five beyond the initial concept of a three-bay, two-story structure with living quarters and administrative space.

<u>Recommendation</u>
A unanimous Capital Subcommittee voted to support the renovations of Stations 1, 4, 6, and 7 and the construction of a new Station 5 and encouraged the submission of the GG&D Master Plan with conceptual drawings to the Building Commission, using available CIP funds to pursue the next immediate step(s) in the process as outlined in the Town's by-laws.

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[2] It should be noted, however, that in terms of staffing, Chief Sullivan's first priority is to use a federal "Safer" grant to hire four Chief's aides, to serve as incident command technicians. Their function is to assist a chief with accountability, safety, and communications on the fire ground, a role that is essential to the safety and wellness of fire fighters.

Additional Information

Garcia, Galuska & DeSousa, Inc., *Brookline Fire Stations Guidelines/Master* Plan, April 12, 2019

Garcia, Galuska & DeSousa, Inc., *Brookline Fire Stations Guidelines/Master* Plan, November 21, 2019

Brookline Firefighters Association Local 950 and Brookline Fire Department, *Emergency Services Response Analysis and Risk Assessment* October 2019

Brookline Fire Department, *Administrative Standard Operating Guideline: Lactation Breaks*

Acts of 2017, Ch. 54, *An Act Establishing The Massachusetts Pregnant Workers Fairness Act*