



SALEM FIRE DEPARTMENT

CHIEF OF DEPARTMENT LAWRENCE D. BEST

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January 15, 2021

Mr. Ross Moldoff, Planning Director
Salem Town Hall
33 Geremonty Drive
Salem, New Hampshire 03079

REF: Response for RKG Associates, Inc. - Tuscan- Central Village/Rock Office District
Impact Meeting

Dear Director Moldoff,

Thank you for sending the Fire Department a copy of the “Tuscan Village Master Plan – Update” and memo GPI #404016, dated November 23, 2020. I would also like to Thank you for setting up the December 18, 2020 zoom meeting between the Fire Department and Lawrence Cranor of RKG Associates, Inc. We appreciated the questions and dialogue that occurred with Mr. Cranor, as we discussed the impacts of the development and the Fire Department’s needs.

I have reviewed our previous correspondence regarding the impact that the Tuscan Village development project and I am writing this memo to provide a review/update of the anticipated impact that this project will have on the services provided by the Salem Fire Department and Inspectional Services division.

Background:

Many of our concerns are the same now as they were in 2016 when we began providing feedback on the project. The Fire Department staff has submitted several memos outlining our concerns and what the anticipated impacts to the Fire Department and Inspectional Services will be beginning in July of 2016.

The scope of the Tuscan Village development is becoming clearer with the presentation of the updated master plans for the Central Village and Rock Office District there continues to be little doubt that this project will have an impact on the services that we provide.

With regards to the format of this memo, as we have done in the past, we have rolled in some points from Phase I of this project, as it is important to consider the totality of the project and the impact it will have on the services that the Fire Department and Inspectional Services provide.

NFPA Standard 1710- Organizational and Deployment of Fire Suppression Operations, EMS, and Special Operations in Career Fire Departments:

History & Purpose:

The 1710 Standard was originally released in 2001. There have been four revisions since that time with the most recent update occurring this year in 2020.

The standard is applicable to substantially all Career fire departments and provides the minimum requirements for resource deployment for fire suppression, EMS and Special Operations while addressing firefighter occupational health and safety.

The 1710 standard addresses structure fires in three hazard levels. These include low hazard (residential single-family dwellings), medium hazard (three-story garden apartments or strip malls) and high hazard structures (high-rise buildings height is greater than 75 feet).

Deployment/Arrival Per NFPA 1710-

Response Time-

- First Fire Engine or EMS Unit arrival on scene in 4 or less minutes
- Second Fire Engine arrival on scene in 5 or less minutes
- Initial Full-First alarm assignment arrival on scene in 8 or less minutes

On-Scene Staffing-

- For low hazard occupancies (residential single-family dwellings)- 17 Firefighters/Officers
- For medium hazard (three-story garden apartments or strip malls)- 28 Firefighters/Officers**
- For high hazard (high-rise buildings height is greater than 75 feet)- 43 Firefighters/Officers

**Most responses to the Tuscan Village for fire incidents will fall into the medium hazard category.

Company Staffing-

- Staffing for Engine Companies = 4 Firefighters/Officers*
- Staffing for Ladder Companies = 4 Firefighters/Officers*
- Staffing for Basic Life Support (BLS) Ambulance Incidents = 2 Firefighter/EMTs
- Staffing for Advanced Life Support (ALS) Ambulance Incidents = 4 (2 Firefighter/EMTs & 2 Firefighter/Paramedics) *

*Note the Salem Fire Department staffs Engine and Ladder Companies at 3, which is one less than the NFPA 1710 standard. In addition, for ALS Ambulance Incidents, the Salem Fire Department does not always have the ability to meet the standard of 4 providers. A typical ALS response is 2 Firefighters/EMTs and 1 Firefighter/Paramedic. This can change depending on company availability (simultaneous responses), personnel deployment and district/location.

Operational Staffing:

Although the FD hired 8 firefighters in 2018, it is anticipated that as the Tuscan project is built out in its entirety, there will be a need to hire additional firefighters and fire dispatchers in order to meet the needs of the entire community. The development of the Tuscan project is going to increase the number of emergency responses for fire and EMS incidents.

Looking back at the early reports for Tuscan project it was estimated that the number of emergency responses for the FD would increase by over 800 incidents annually. This number was established prior to the scope of the project changing to include a large medical facility, and now recent changes of from a 165-bed assisted living facility and twenty 55-year-old and over housing units to a 260-unit market rate 5-story residential apartment building (building 7100). The change of use from a 2-floor 45,000 sf retail to a 3 floor 18,000 sf medical office use (building 1500). The change of use from a 3-floor 142,000 sf retail/office use to a 6 floor, 250,000 sf retail/residential use (building 3000). The change of use from a 2-floor, 115,000 sf retail use to a 5-floor, 200,000 sf retail office use (building 4000). And a change of use from 4-5 floor, 475,000 sf office use to a 3-4 floor, 867,700 sf Life Sciences-Office-Manufacturing-Research and Development use (buildings 5200-5400).

After reviewing these changes, it is estimated that there will be an increase of 326 +/- living units and 900,000 +/- sf of additional space.

The number of residential units have increased significantly, which equates to additional risk and exposure given the number of people that will be living in the Tuscan Village. The new Life Sciences Office-Manufacturing-Research and Development is an unknown at this time with regards to the type of occupancies that might be located in these facilities. Because of this we are unable to evaluate any special needs for responses. However, the sheer mass of these buildings, in addition to the other buildings in the central district area will require additional staffing and apparatus for appropriate responses.

With the help of the Salem Community Development & Planning Department we have reviewed our annual response incident data for known land use and occupancies. After this review we concur that the estimated annual incident responses will increase by the 800 incidents or more, which is an approximately 15% annual increase.

If we take this estimated 15% annual increase in incidents and equate it to our current on-duty shift staffing of 17 members, this will add an additional 2.55 or 3 members per working Group for a total of 12 members. The minimum staffing for an additional fire truck would be 3 members.

In addition, if we take this estimated 15% annual increase in incidents and equate it to our current Dispatch Center staffing of 5 full-time and 2 part-time dispatch members, this will add .83 or 1 member total for Dispatch Center.

The estimated annual cost for a full-time Dispatcher is \$91,546 for salary and benefits.

Because of these facility changes it is anticipated that our emergency incident call volume will increase even more.

Inspectional Services Staffing:

As we have stated in the past, the impact of the Tuscan development is here now. As you know, the multiple phases of the Tuscan Village project boasts to be the largest project that Salem has ever seen. In fact, it is likely the largest project in Southern New Hampshire. The Tuscan Village project is already having a major impact on the Inspectional Services Division, including plan review, permitting, and inspections.

In looking at the proposed master plan update provided by the developer, its aggressive nature reveals that they intend to begin construction on what is not already in progress early next year in 2021. That means, plan reviews will need to be conducted, permits will need to be issued, and inspections will be needed shortly thereafter.

As has been stated in the past, I am recommending that we address this issue before it becomes a problem. We currently are faced with the challenge of filling vacant Inspectional Services Division positions. The current job market has made the employee candidate pool small and fiscally challenging to meet the wages of the construction job market. We have been in a situation before where we did not have enough staff to complete our work, and it resulted in complaints and unsatisfied customers. That is not something we are used to at Salem Fire Department. We strive to provide an excellent product with a high level of customer service, every time.

The Inspectional Services Division will need additional staff in order to continue to meet the inspectional needs of the Community. The estimated annual cost for a full-time building inspector is \$118,471 for salary and benefits.

In addition, there will be a future need to better support the Health Officer. Currently there is only one Health Officer for the whole Town of Salem. As the Tuscan Development comes on-line, there will be additional inspections that will need to be conducted by the Health Officer. Initially, to better support the necessary work of the Health Officer, it would be our recommendation that a part-time Health Officer be hired. Using a 24 hour a week work schedule with no benefits, the estimated annual salary would be approximately \$34,000.

Fire Facility:

In the past we have focused on the need for a west-side fire/EMS facility. Recently the FD has undertaken the task of addressing all our facility needs including the need for a new Fire Headquarters soon and a west-side fire/EMS facility as the Tuscan Village project is constructed and occupied, at which time the full impact of the development will be felt. The timing of the construction will clearly outline this need to move forward with the planning, construction and staffing of a west-side fire/EMS facility.

The Town has long pondered the construction of a fire/EMS facility on the west-side of the community. The Tuscan project, as well as many others that have occurred (or are occurring) on the west-side of the community will have a demonstrated impact on service delivery. Fire station locations have a bearing on the entire community, not just one area of town. The reason for this is simultaneous emergency calls. In a perfect world, if we only had to handle one emergency call at a time, we could evenly spread out our resources across the town and as the calls come in, deploy the closest unit, as necessary. When the next emergency call came in, the caller could be assured that the closest unit would once again be available. However, this is not the case. When an emergency call from a particular district is processed, the closest unit is dispatched. While that call is on-going and another emergency call comes in for the same district, a unit from another district must be pulled from its primary district to cover the second emergency call. When the third emergency call comes in while those two are still being handled, that unit may need to be pulled from another district, and so on. The moral of the story is that the best way to deploy fire and EMS resources is by putting them in the areas where they are necessary. Our simultaneous call rate is currently 65%, meaning that 65% of the time when we are handling one emergency call, we are handling at least one other call (two calls), and 35% of the time we are handling three or more emergency calls at once. In Salem, approximately 50% of the calls are generated from district 1 (central); 10% in district 2 (north); and 20% in each of the other areas (south and west). Building a fire facility on the west side is prudent and makes sense for a proper fire and EMS service delivery model.

With the development of the Tuscan Village and adding approximately 800 or more additional annual incidents means we will be traveling from the Main Street Station towards the west side. It would make sense to also have a station on the west side of the development (Lowell Rd/Rt. 38) so incidents can be handled from multiple directions. As a reminder, this situation is pre-existing, but will be worsened by the Tuscan Village development. An increase of 800 annual incidents is approximately a 15% increase in annual call volume.

The estimated cost for a west-side fire/EMS facility is \$14,000,000 and \$26,000,000 depending on the size and scope of the station. If you equate the estimated annual incident increase of 15% (800 calls) to the cost of a new west-side fire/EMS facility that could be attributed the Tuscan Development would be an estimated \$2,100,000 - \$3,900,000.

Apparatus:

Again, as we have stated in previous correspondence and with the master plan update, it is clear that the increased height and size (area) of the buildings in the Tuscan Village Central and Rock Office Districts of the development will need to be taken into consideration.

There are several multi-story buildings within the Tuscan Village Central and Rock-Office district project. These multi-story buildings increase the need for a second aerial ladder apparatus in order to gain access to upper floors/living units and roof tops.

The cost for an additional aerial ladder apparatus is approximately \$1,500,000. The cost for an aerial ladder increases an estimated 3% annually. Again, if you equate the estimated annual incident increase of 15% (800 calls) to the cost of a new aerial ladder apparatus that could be attributed the Tuscan Development would be an estimated \$225,000.

The staffing that would be needed for the deployment of this second aerial ladder apparatus would be 3-4 Firefighters/Officers. There are 4 working groups at SFD so this would equate to a total of 12-16 additional Firefighters/Officers.

In addition, there most likely will be the future need to staff another ambulance full-time because of additional call volume. To staff an ambulance, would require 2 Firefighter/EMTs/Paramedics per working group, for a total of 8 Firefighter/EMTs/Paramedics.

The total additional Firefighters/Officers/EMTs/Paramedics to staff these two additional pieces of apparatus would be 20-24 members. The estimated annual cost for a Firefighter is \$120,653. The total estimated annual cost for 20-24 additional Firefighters is \$2,413,060 - \$2,895,672. Again, if you equate the estimated annual incident increase of 15% (800 calls) to the cost of additional Firefighters that could be attributed the Tuscan Development would be an estimated \$361,959 - \$434,350.

Both apparatus and members associated with staffing them would be deployed to a new west-side fire/EMS station.

Summary:

With the update of the Master Plan for the Tuscan Village Central and Rock Office Districts, the Fire Department continues to get better understanding what the future impact will be, how it will be felt and tentatively when it will be felt based on the construction and development plan. It is important to recognize that there already has been an impact from the Tuscan development on all the services provide by the Fire Department. Some needs, such as certain staffing, training and equipment is immediate, and some staffing, training, equipment, and apparatus needs are in the future as the development progresses. The apparatus replacement schedule will need to be altered as well to account for the additional fire/EMS facility.


- **Estimated annual cost for a full-time Dispatcher is \$91,546; estimated cost that could be attributed to the Tuscan Development being \$13,731.**
- **Estimated annual cost for a full-time Building Inspector is \$118,471.**
- **Estimated annual cost for a part--time Health Officer is \$34,000.**
- **Estimated cost for a west-side fire/EMS facility is \$14,000,000 and \$26,000,000; estimated cost that could be attributed to the Tuscan Development being \$2,100,000 - \$3,900,000.**

- **Estimated cost for an aerial ladder apparatus is \$1,500,000; estimated cost that could be attributed to the Tuscan Development being \$225,000.**
- **Total estimated annual cost for 20-24 additional Firefighters is \$2,413,060 - \$2,895,672; estimated cost that could be attributed to the Tuscan Development being \$361,959 - \$434,350.**

- **Total estimated costs = \$18,157,077 – \$30,639,689**
- **Total estimated costs that could be attributed to the Tuscan Development = \$2,723,561 – \$4,595,953**

Thank you for the opportunity to comment.

Respectfully,



Lawrence D. Best
Chief of Department

Cc; Chris Dillon, Town Manager
Bill Scott, Asst. Town Manager
Nicole McGee, Finance Director
Senior FD Staff
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