

Comparative Analysis of Costs LFD Career Firefighter Staffing

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May 6, 2007

Draft 1.2

The Larchmont Village Board has considered and operationally tested several ways to organize and schedule the career firefighters employed by the Village within the Larchmont Fire Department. Recently the Board proposed a new approach involving the employment of a paid fire chief. The purpose of this study is to compare the costs of the options available to the Board.

The Five Options

This study defines five alternative approaches, and compares them based on the consistent underlying assumptions about salaries and other factors affecting costs. When an approach involves a unique assumption that distinguished the approach from the others, the difference is specified and explained.

The basic objective of all of the scenarios is to deploy a team of paid firefighters around the clock within Larchmont Village Hall, so that they can carry out functions such as the operation of apparatus to respond to alarms, elements of dispatching, and certain maintenance functions related to readiness for firefighting. The following are explanations of the five scenarios.

- **Constant Three Firefighters:** This approach was in place during the 1980s and 1990s and probably long before that. The schedule provides for three career firefighters on duty at all times – typically a lieutenant or captain and two firefighters. Overtime is used when necessary to assure that three firefighters are always on duty. The one captain works within the shift schedule but is also responsible for overall scheduling.
- **TMFD Code Two:** This is a variation on the Constant Three strategy, and it is the current approach used at the Weaver Street Firehouse of the Town of Mamaroneck Fire District. The key difference is that during the night shift, if one firefighter is on some form of leave (such as calling in sick) then the shift functions with two firefighters and a volunteer drives the third apparatus in response to any alarm. If two career firefighters are on leave, then overtime is used to bring in one career firefighter to assure that at least two are on duty – hence the expression “code 2.” In principle, this could be the Larchmont Fire Council’s preferred approach. It is not currently practical, however, because it would require a labor agreement change that would permit volunteer firefighters to operate fire apparatus.
- **Operations Captain:** This approach was implemented by the Village Board in the late 1990s and is the current approach for LFD today. The basic enhancement of the Constant Three approach is to add a Captain as a 4th career firefighter, typically on four day shifts during each week. When the other three scheduled firefighters are on duty, the

Operations Captain provides for a fourth firefighter to respond to alarms. If one of the three scheduled firefighters is on leave, the Operations Captain serves as one of the three firefighters, thereby avoiding some overtime expense. Because the Operations Captain is on duty during much of the regular office hours for other Village employees, liaison for fire department administration is enhanced. In addition, the Operations Captain is expected to provide supervision over the career firefighters who rotate through the day shifts when the Operations Captain is on duty, thereby improving consistency of job performance.

- **Paid Fire Chief:** The Village Board recently proposed to hire a paid fire chief. This fire chief would be in charge of the entire fire department. The Chief would be available, when on duty and sometimes when not on duty, to respond to alarms. The Chief would serve as a liaison to the Village administration and would supervise the paid and the volunteer firefighters. However, because the chief would not be a member of the firefighters union, the chief would not be able to drive fire apparatus. As a result, the Village would have to schedule three career firefighters to assure apparatus response, based on a schedule like the “Constant Three” approach described above.
- **Paid Fire Chief, Revised Contract:** This is a variation on the Paid Chief approach above. The difference is that it assumes a labor contract change, permitting the paid chief to operate fire apparatus. This change would permit the paid chief position to function like the Operations Captain on certain days when one of the three scheduled career firefighters is on leave. There are advantages and disadvantages to this concept, including a potential command problem at a fire -- whether the paid chief would function as the incident commander or as the operator of one of the three fire engines. There is also an uncertainty as to whether the necessary labor agreement change would actually be achieved.

Summary of Conclusions

This study comes to several conclusions about costs, and also raises some issues that should be considered by the Board as it reviews the options that are available. The following is a summary of key conclusions about costs:

- Compared to the TMFD Code Two approach, the Paid Chief approach would cost an additional \$327,163 annually. If a labor agreement change could be achieved, this cost difference could be reduced to \$274,162, based on reductions in overtime costs when the paid chief would replace one of the three firefighters on duty.
- Compared to the Operations Captain approach currently in place, the Paid Chief approach would cost an additional \$72,514, which could be reduced to \$19,813 if the labor agreement could be changed to permit the paid chief to operate fire apparatus.

These conclusions could change slightly depending on assumptions in the analytical model about rates of leave and overtime utilization. However, since the same assumptions apply to all five scenarios, changes in the comparative differences in costs would be minimal.

The costs of the Paid Chief option, compared to the Operations Captain approach, correspond roughly to an estimate circulated by the Board at a Board meeting in April. There were three aspects of that estimate that are different from this estimate.

- The first is that Board's estimate also assumed that some firefighters in expensive positions would retire and be replaced by some inexpensive starting firefighters. This may or may not happen, but, the savings associated with the replacements could apply to any and all of the options, not just the Board's preferred option. Combining the Paid Chief cost with the offsetting short-term savings of a retirement masks the magnitude of the comparative costs of the Paid Chief plan over time.
- The second difference is that the estimate did not specify any assumption as to whether the chief would operate fire apparatus and therefore sometimes replace the regularly scheduled firefighters on shifts.
- The third difference is that the Board's estimate only compared the cost of the Paid Chief option to the current Operations Captain approach. Since that approach has not worked as expected, it is reasonable to assume that the Village would not perpetuate it in the event that the paid chief approach is not implemented. The cost should be compared to all of the options available to the Board, because such a comparison defines the full cost implications of the decision to be made.

Issues for the Village Board

Based on the cost analysis, several issues become apparent. The Board should consider these issued as they make further decisions about how to proceed.

The labor agreement is a significant factor, and therefore the new agreement should be negotiated and finalized before costs and benefits can be accurately evaluated. To the extent that labor cost savings or other benefits are associated with a strategy, it is important to ascertain with a high level of confidence whether changes can actually be achieved in the forthcoming labor agreement. For example, it is important to determine whether a change could be achieved whereby the paid chief and/or the volunteers would be permitted to operate fire apparatus. A related issue is whether, if they are permitted to operate fire apparatus, the agreement would, in any way, constrain the Village's right to reduce the numbers of career firefighters on duty. Another issue involves whether the paid firefighters will take on new duties.

If the economics of the Paid Chief option depend on labor agreement changes, the changes should be negotiated before the acts on the plan.

The availability of trained and experienced volunteer firefighters is essential. All of these strategies assume that the substantial majority of firefighting personnel responding to fires are volunteer firefighters. If any strategy results in a significant loss in volunteer firefighters, all of the economic assumptions for that strategy become invalid, and major additional costs need to be taken into consideration.

Potential benefits need to be identified and weighed against estimated costs. The additional cost of the operations captain or the paid chief is an investment in improved performance. The improve performance should be explained in practical and financial terms.

Even without a change in the labor agreement, the Board could revert to the Constant Three approach which apparently worked in a satisfactory manner for decades in the past. Therefore, it is valid to consider the additional cost of the paid chief approach as an investment of at least an additional \$238,806 each year – an investment that should yield a return.

The Board should be able to explain the value to the Village of this additional investment. Would there be additional services or improved services worth the additional expenditure? For example, if the additional services involve fire inspections by career firefighters, the Board should determine whether any added compensation for the career staff is involved, and then compare the cost of that approach to the cost of employing a part-time or full-time fire inspector.

Potential benefits to be achieved through changes in the labor agreement need to be cost-evaluated. If, for example, an agreement is possible with respect to exclusivity in the operation of fire apparatus, or some other element of the labor agreement, the value to the Village of that agreement may have to be offset by other concessions to the union in the negotiations. The true annual value of the change in the labor agreement has to include both the added value to the Village and the offsetting cost of the concession to the union.

Costs should be compared to consolidation with the Town of Mamaroneck Fire District. If the LFD is merged into the TMFD, it is likely that the TMFD Code Two approach to staffing would be implemented, as this is already the standard practice in the TMFD. Thus, a reasonable starting point is to assume that the merger savings would at least be equivalent to the savings associated with the TMFD Code Two option in this study - \$327,163 less than the Paid Chief option. Opportunities for additional savings are identified in the Fire Council merger study.

Summary of Issues

In summary, the Paid Chief option costs more, particularly over a period of years when not offset by anticipated short-term retirement savings, than the Village Board has publicly explained, and the offsetting savings are uncertain and unclear, and highly dependent on a labor negotiation which is underway.

The operational benefits are uncertain, largely involving asserted improvements in accountability and convenience to the Mayor and Village Board. These benefits are intangibles, but are unlikely to generate savings or added value of more than \$300,000. Furthermore, the benefits would be

easily outweighed by any loss of volunteers, which would materially reduce the effectiveness of firefighting and emergency response.

The savings associated with another choice – the TMFD Code Two strategy that is currently in place and working well at the Weaver Street firehouse – are substantial.

The Cost Analysis

The cost analysis is based on a modeling technique that was used in the 1990s in Larchmont and incorporated by reference into the Buracker Report, a consultant’s study of the fire department commissioned by the Village Board. The technique was used again during the late 1990s in re-evaluating overtime use.

The first table defines the number of firefighters to be employed under each option. The total number is determined by two factors: the number of positions necessary to generally cover the schedule structure, and the additional supervisory position for the Operations Captain and Paid Chief options.

	Constant Three Firefighters	TMFD Code Two	Operations Captain	Paid Chief Current Contract	Paid Chief Revised Contract
Number of Firefighters Employed					
Paid Chief				1	1
Number of Captains	1	1	2	0	0
Number of Lieutenants	3	3	3	4	4
Number of Firefighters	10	9	11	11	11
Assumes contract change in exclusivity	No	Yes	No	No	Yes

The next table presents the total number of scheduled hours for each option. For example, providing three firefighters for 24 hours a day for 365 days results in a need to staff a schedule for 26,280 hours. The additional hours are associated with the Operations Captain and Paid Chief.

	Constant Three Firefighters	TMFD Code Two	Operations Captain	Paid Chief Current Contract	Paid Chief Revised Contract
Hours of Coverage					
Baseline hours 3x24*365	26,280	26,280	26,280	26,280	26,280
Additional Position Hours	0	0	1,759	1,759	1,759
Total Scheduled FF Hours	26,280	26,280	28,039	28,039	28,039

The next table presents the source of the hours. This is based on the number of hours worked by each scheduled firefighter, multiplied by the number of persons in each position.

	Constant Three Firefighters	TMFD Code Two	Operations Captain	Paid Chief Current Contract	Paid Chief Revised Contract
Source of Hours					
Paid Chief	0	0	0	1,759	1,759
Captains	1,759	1,759	3,519	0	0
Lieutenants	5,278	5,278	5,278	7,037	7,037
Firefighters	<u>17,594</u>	<u>15,834</u>	<u>19,353</u>	<u>19,353</u>	<u>19,353</u>
Total FF Hours	24,631	24,631	22,872	28,150	28,150
Total Shiftwork hours	24,631	24,631	22,872	28,150	26,390
Total FF Hours Scheduled	24,631	24,631	22,872	26,390	26,390

The number of hours that a firefighter works, for the above computation, is based on leave statistics that we last updated during the late 1990s, but they are relatively constant because they are constrained by the labor agreement.

	Senior	Starting
Schedule work hours/yr	2190	2190
Vacation Hours	216.0	162.0
Kelly Hours	104.0	104.0
Personal Leave	24.0	24.0
Sick Hours Taken	77.9	77.9
Funeral Leave	8.8	8.8
Union Leave	0.0	0.0
Training	0.0	0.0
Hours of Leave	430.6	376.6
Remaining work hours/yr	1759.4	1813.4

The next table presents the number of overtime hours required. The overtime is in several categories:

- Structure overtime is the difference between the total number of scheduled hours and the total number of hours that the employees will work who are covering the schedule.
- Event-driven overtime is the based in unpredictable requirements, such a being called in to work a fire.

- Overtime avoided by the TMFD approach to the night shift is presented. This is based on the probability (.052 x 3) that any one of the three firefighters, on any given day, will call in sick or be on leave.
- Overtime avoided by the Operations Captain working on a shift for a firefighter on leave is also presented. This is also calculated based on the probability that any one of the three firefighters will be on leave.

The table then summarizes overtime hours.

	Constant Three Firefighters	TMFD Code Two	Operations Captain	Paid Chief Current Contract	Paid Chief Revised Contract
Overtime					
Structural Overtime Hours	1,649	3,408	1,649	1,649	1,649
Event-Driven Overtime	604	604	604	604	604
OT avoided due to Code 2	0	-1,660	0	0	0
OT avoided, OC/Chief is 3rd	<u>0</u>	<u>0</u>	<u>-800</u>	<u>0</u>	<u>-800</u>
Total Overtime	2,253	2,353	1,453	2,253	1,453
Training Straight Time Hours	623	623	623	623	623
Summary					
Total Salaried Hours	24,631	22,872	28,150	28,150	28,150
Total Overtime Hours	2,253	2,353	1,453	2,253	1,453
Total Straight-Time OT hours	<u>623</u>	<u>623</u>	<u>623</u>	<u>623</u>	<u>623</u>
Total	27,507	25,847	30,226	31,026	30,226

The next table is a presentation of the personnel costs for each option, based on the direct salary costs of each position, fringe benefits, and overtime costs.

	Constant Three Firefighters	TMFD Code Two	Oper. Captain	Paid Chief Current Contract	Paid Chief Revised Contract
Estimate of Costs, FY 2006-2007 dollars					
Paid Chief				115,000	115,000
Captains	93,866	93,866	187,732	0	0
Lieutenants	263,166	263,166	263,166	350,888	350,888
Firefighters	718,193	646,374	790,012	790,012	790,012
Fringe Benefits	345,942	322,835	399,249	404,072	404,072
Overtime	148,424	154,993	95,723	148,424	95,723
Straight Overtime	<u>27,361</u>	<u>27,361</u>	<u>27,361</u>	<u>27,361</u>	<u>27,361</u>
Total Personnel Costs	1,596,952	1,508,595	1,763,244	1,835,758	1,783,057
Cost Compared to Constant 3	\$0	-\$88,357	\$166,292	\$238,806	\$186,105
Cost Compared to TMFD Code 2	\$88,357	\$0	\$254,649	\$327,163	\$274,462
Cost Compared to Oper. Cpt	-\$166,292	-\$254,649	\$0	\$72,514	\$19,813