

***THE CORPORATION
of the
CITY of THOROLD***

1996 FIRE SERVICES REVIEW



OFFICE of the FIRE MARSHAL

CITY of THOROLD
FIRE SERVICES REVIEW

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City of Thorold
Fire Services Review

Fire Services Report:

July, 1996

Background:

The Office of the Fire Marshal was requested to review all current fire services for the City of Thorold and assist in updating the existing municipal fire protection plan. This request was made as a result of proposed changes to the ten year Municipal Fire Protection Plan approved by council in 1991.

Review Process:

Following a May 7, 1996, meeting with City Administrator K.Todd, Fire Chief L.Jane and Deputy Chief K.Roach, council approved a process suggested by the Office of the Fire Marshal. In order to prepare a report that outlined the views and opinions of all persons concerned, the *OFM* agreed to:

- a) *Review relative reports including;*
 - *the KPMG Management Consulting Fire Department section,*
 - *the 1996 Insurance Advisory Organization report,*
 - *the report presented to council through the Thorold Professional Fire Fighters, and,*
 - *the reports from 1989 - 1991 used to develop your current master fire plan.*
- b) *Consult with all groups who participated in preparation of the current plan including;*
 - *the mayor and/or any interested councillors by appointment,*
 - *the city administrator and appropriate municipal staff,*
 - *full time fire department staff,*
 - *volunteer fire department staff, and,*
 - *any other group or person who may provide beneficial information or have a vested interest in this review as directed by council, the fire chief or city administrator.*
- c) *Provide a report for fire department staff to discuss with assigned council members prior to presentation of a final report for council.*

The Office of the Fire Marshal sincerely thanks all of the persons from Thorold who assisted in the review and provided valuable information for this report. While the *OFM* acknowledges all of the participants in the collaborative process, we do assume full responsibility for the contents of this report.

Purpose and Scope:

Thorold developed and initiated a Municipal Fire Protection Plan in 1991. This report is provided as a base information package for the council appointed committee which will update or revise your municipal fire protection plan.

We must stress that items identified in this document are *not* to be perceived as criticism of current or past councils, municipal staff, fire department managers or members. They are areas where we believe progress can be made in a reasonable and practical manner with the approval, cooperation and direction of council.

It is also emphasized the Office of the Fire Marshal does not normally become involved with collective bargaining issues. However, some of our comments will have implications that may require future contract negotiations with the fire fighters association.

While the report focuses on suggestions and considerations for the fire planning committee, the *OFM* also included recommendations where we believe council must establish specific policies or provide clear direction to their committee. Since council has sole responsibility for establishing policy matters, our recommendations are identified at the conclusion of each report section separately from items to be discussed and planned by your committee.

Councils have always been accountable for local financial matters and normally handled them in a reliable manner, however, with fiscal restraint programs in vogue, increased public attention and the impact of the social contract, all municipal spending is under particular scrutiny and must be constantly justified.

In recognizing this primary influencing factor, your revised plan must contain provisions, through a staged municipal strategy, to provide:

***the best possible public fire protection services to ALL residents of
the City of Thorold based upon costs the community can afford.***

Fire related factors in this report are identified by departmental function and include comments, suggestions and/or recommendations on;

- 1. Organization and Administration,***
- 2. Operations,***
- 3. Personnel,***
- 4. Fire Stations,***
- 5. Fire Prevention, and,***
- 6. Training and Education.***

Organization and Administration:

Organization:

The Thorold Fire Department was organized and continues to function as a composite fire department. This means both full time and volunteer or part time personnel assemble and respond for rescue, fire suppression and medical emergency calls received from the public.

Two major benefits of this type of fire department composition are a guaranteed response in approximately one minute supplemented by the most economic method of providing additional fire suppression personnel.

Council must clearly understand the volunteer system never *guarantees* responses at any time and when the volunteers are available, their assembly time will extend responses by two minutes on average. Details regarding these inherent facts are noted in the *Operations* section of this report.

Because full time fire fighters are available at all times, the City has received a better risk rating through the Insurance Advisory Organization following their 1996 survey. This improved rating directly influences the amount every owner or tenant will pay to insure their property from fire and for most occupancies, a reduced premium more than compensates the portion of their tax dollars dedicated to municipal fire protection.

The improved ratings were discussed with Deputy Chief Roach and it was agreed he would verify what monetary value this represents to the average Thorold home owner. This information will be provided to the planning committee for their deliberations on fire station locations and subsequent response procedures.

At the present time, the fire department consists of:

- *A full time fire chief and deputy fire chief,*
- *9 full time fire suppression persons, including a training and a fire prevention officer*
- *5 volunteer or part time district chiefs,*
- *10 part time captains,*
- *10 part time lieutenants, and,*
- *118 part time fire fighters.*

When the announced retirement of Fire Chief L. Jane occurs later this year, council has indicated Deputy Fire Chief K. Roach will assume the position of chief and the department will then operate without a deputy fire chief.

The department responds to emergency calls from five fire stations utilizing six pumpers, two telesquirts, two rescue vans, three water tankers, two equipment vans and a vehicle which doubles as a service vehicle and command car.

Administration:

The department has been well managed over the past fifteen years with successive fire chiefs generally trying to satisfy the needs of the full time and volunteer people as separate and distinct groups.

The introduction of regional government also required the chiefs to administrate volunteers who maintained their local autonomy resulting in different operations, procedures and practices within the same fire department. While these differences have been reduced by fire department managers, they still exist in areas such as training, fire prevention and designation of responsibility.

Through these formative years, there has been very little clear direction from council to their fire department managers and staff except at budget time or when a problem has required their immediate attention.

With the pending appointments of a new city administrator and fire chief, it is the opportune time for council to include a revised five year fire protection plan as an integral part of their recently developed municipal strategy. To ensure the revised plan reflects how council wishes their fire department to function, they must provide their appointed planning committee with:

- 1. An updated establishing and regulating by law describing general functions of the department and corporate policies that are relevant to fire department operations,*
- 2. Council approved corporate policies which provide clear direction to the appropriate fire and municipal staff in areas such as safety, hiring, promotions, training and fire prevention,*
- 3. The types and levels of fire protection services council wishes to provide for each part of the municipality, and,*
- 4. A commitment to provide the essential resources necessary to deliver fire protection services which council determines are appropriate for the City.*

The establishing and regulating by law your fire department operates under was passed in 1977 and does not reflect actual current practices of the department.

The by law should be revised in draft form by the fire chief and city administrator in conjunction with the Office of the Fire Marshal. The draft should be circulated through human resources to ensure there are no personal infringements and then provided to the planning committee to assure the provisions of the by law can be reasonably attained during daily operations and in the five year plan. The final draft should be presented to council for their amendment and/or approval just prior to submission of the final draft of the revised fire protection plan.

The revised by law references hiring, promotional, training and fire prevention policies that have been approved by council. While council is responsible for approving specific items or programs, details in the policies should be prepared by the city administrator and fire chief with the input of appropriate fire department staff as the end users.

This report also references standard operating procedures or guidelines necessary to ensure the entire department and staff function in a uniform manner. The fire chief is responsible to council through the by law for development and administration of operational procedures and council only provides approval of specific policy matters relating to the procedures.

For example; council determined the fire department will provide medical assist and defibrillator services and the fire chief determined the operational procedures necessary for providing these services.

As with the corporate policies, the standard operating procedures (*SOP's*) require the input of the end users. The fire fighter connecting hose to a hydrant, extricating an accident victim or applying the defibrillator equipment is in the best position to determine the most appropriate procedures for performing specific tasks. The company officers should now examine the SOP to ensure all safety matters are reasonably met and the task can be accomplished with available resources. The fire chief may now verify the procedure does not conflict with any other municipal or departmental policies and approve the SOP for distribution to all relevant personnel.

Applicable policies and procedures are specified in relevant sections of this report with available OFM samples referenced and/or provided as appendices. If your planning committee identifies additional required policies, we will make every effort to obtain samples for them.

The types of fire protection services available to the residents of Thorold are defined in the revised establishing and regulating by law as:

"a range of programs designed to protect the lives and property of all inhabitants of the fire department response areas from the adverse effects of fires, sudden medical emergencies or exposure to dangerous conditions created by persons or nature and includes fire prevention, public education, rescue and suppression services."

The levels of service, however, are not defined and these must be determined and approved by council. The council is responsible for identifying the extent of specific programs delivered and acceptable response times to all areas of the City, in conjunction with fire department managers.

For example; Thorold will provide level 1 (*land based*) water rescue services and a full ice rescue program. Similarly, reasonable minimum times are identified for responses to the various occupancies and geographic areas of the City such as, 3 minutes for institutional, 5 minutes for all urban residential and 7 minutes for all rural or open widely detached residential occupancies.

Further details regarding levels of service and establishment of acceptable response times are included in the following *Operations* section of this report.

The essential resources provided by council must include an adequate number of trained personnel equipped with the appropriate equipment and apparatus to perform the council mandated rescue and fire suppression activities in the safest possible manner. Provisions must also be included in your fire protection plan for the timely replacement of all required resources.

Administration Recommendations to Council:

1. The existing fire department establishing and regulating by law be revised by the fire chief, city administrator and OFM fire services adviser for final amendment and approval of council.
2. An acceptable level of service for the entire City be identified by council, in conjunction with your planning committee, prior to final revision and council approval of your municipal fire protection plan.
3. The policies referenced in the approved fire department establishing and regulating by law and additional policies that are deemed necessary by the fire planning committee be submitted to council for final amendment and approval.

Administration Considerations for Planning Committee:

1. To assist council in determining acceptable levels of service, the committee should identify the fire suppression, rescue and medical assistance functions the department is expected to perform. The committee should then identify resources including personnel, apparatus and any specialized equipment required to safely perform the functions. A reasonable *anticipated* response time for each type of occupancy and/or occurrence must also be identified as outlined in the *Operations* section of this report.
2. The committee should discuss each policy referenced in the draft establishing and regulating by law and ensure the policy is adapted to a reasonable application for the fire department. The committee may determine additional policies are required and these should also be drafted and submitted to council for their consideration and approval. The following are policies which are identified through this report with our suggestion for committee deliberation:
 - *Hiring policy*: verify municipal policy and establish criteria for selective recruitment,
 - *Promotional policy*: a sample is included with the appendices to this report,
 - *Training policy*: to be developed in conjunction with the Fire Fighter Curriculum,
 - *Fire Prevention policy*: a sample is included with the appendices to this report.
3. All standard operating procedures should be examined by the fire department members and recommendations for any *necessary* changes should be forwarded through the appropriate members of the committee for discussion. Sample SOPs have been included which describe a method for regular evaluation, a process for required changes or new procedures and how these changes or additions may be distributed to all personnel.
4. The departmental rules, regulations and related published policies should also be reviewed at this time and amended where required. They should be circulated to all personnel in conformance with the SOP referenced in the preceding paragraph and periodically evaluated and amended, *when necessary*, in the same fashion as the SOPs.

Fire Department Operations:

As previously noted, the Thorold Fire Department operates as a composite department with both full time and volunteer or part time persons responding to emergency calls from the public. This system can offer satisfactory and affordable fire protection if each group understands their role and works toward a defined fire department goal of providing what is best for the protection of the citizens served.

To understand the operational roles of full and part time groups, we must look at *facts* governing fire department responses from the critical time fires or emergencies commence until the fire fighters intervene to lessen or eliminate the danger to the persons experiencing the problem.

The following has been adapted to reflect the actual intervention times which may be expected in Thorold with a description of how structural fires grow and how intervention times have been and/or may be effectively reduced.

Notification of fire department is seldom immediate and it may take a person 3 minutes or more to discover the emergency and call the dispatch centre.

Dispatch must then relay the message to the appropriate responding department and this will take from .5 to 1 minute.

Assembly time is the time required for fire fighters to assemble, dress and depart the station. This is where the major response difference occurs in the full time and volunteer groups.

Full time personnel are able to assemble, dress and depart the station in 1 minute or less.

Volunteer personnel will average 3-4 minutes to assemble, dress and depart the station.

This averaged time calculates occasions when volunteers are in the fire station as well as at their normal places of employment or at home in bed. A person living or working 2 miles from the station will take *more than 2 minutes* at 60 miles per hour just to drive to the station.

Travel time or time actually driving from the fire stations to all areas of Thorold average from a low of 3.3 minutes in the urban areas to a high of 11.7 minutes to the less populated rural areas at the extremities of the City. These times include arrival of both full time and volunteer groups at all emergency scenes and in the volunteer response areas, travel time for the volunteers is lower than 11.7 minutes on average.

Set up time at the scene for a *well trained* rescue or suppression crew will be approximately 1-2 minutes for a single family dwelling fire. Set up activities must include:

- *size up of the incident*
- *water supply and pump engagement*
- *deploying appropriate hose lines*
- *making entry into the structure, and,*
- *location of fire and commencement of extinguishment.*

The element of intervention time becomes most crucial when we realize a structure fire containing normal ordinary combustible materials, found in each of our homes, will grow:

9 TIMES IN 3 MINUTES

25 TIMES IN 5 MINUTES

64 TIMES IN 8 MINUTES

100 TIMES IN 10 MINUTES

A fire growth of 100 times in ten minutes also explains the estimated time factor for the *flashover* effect. Flashover occurs when all of the surfaces and objects in a room are heated to a temperature at which flames simultaneously break out over the entire surface within the room or space.

To effectively reduce the overall intervention time of rescue and fire suppression crews, Thorold has implemented or may consider the following examples.

Detection of Fire:

- Provide public education programs on the dangers of fire and need for early detection
- Initiate mandatory installation and maintenance of smoke alarms to provide early fire warnings

Reporting of Fire and Dispatch Time:

- Provide a 9-1-1 system
- Provide adequate trained staff in dispatch centre
- Make use of computer aided dispatch and modern communications technology

Assembly and Travel Time:

- Provide sufficient full time and available volunteer fire fighters to ensure timely responses
- Provide an adequate number of strategically located fire stations to lessen travel times
- Provide traffic signal control capabilities in problem areas

Set up Time:

- Ensure standard operating procedures define all operations required to control an emergency
- Provide standard training for all staff in command, control and fire ground operations

A check of these time reducing factors clearly indicates Thorold has taken some of the necessary steps and is continuing development. Examples of this include the recent move to St. Catharines dispatch, the initiation of the Fire Fighter Curriculum for all staff and a long range plan to relocate Fire Stations 1 and 5 to more strategic response locations.

In Thorold, the full time persons are dispatched to all emergency calls and the appropriate group of volunteers are simultaneously alerted. The full time crews, however, are not presently dispatched for calls received in the Pelham area covered through the fire protection agreement with Station 4.

This ensures an immediate response and a number of volunteers to form an initial fire attack team at the scene of the emergency or a stand by crew at the fire station to answer subsequent emergency calls. Because of the lower availability of volunteers during normal working hours, two or more stations may also be simultaneously alerted for reported structural fires in any of the response areas.

Volunteer availability is further detailed in the *Personnel* section of this report.

Because the volunteers do arrive to many calls before the full time, there should be no distinction regarding who supports who. The first arriving crew has specific tasks which *must* be conducted to execute rescue and/or extinguishment as briefly described under *Set up time* on page 7 of this report.

This also means volunteer and full time must initiate interior rescue and fire fighting, therefore, *all members* of the department must be appropriately trained in command and all necessary fire ground operations.

By utilizing this information related to actual response statistics, your planning committee should be able to suggest anticipated response times to all areas of the municipality to assist council in establishing an acceptable level of service for the City as suggested on page 5.

We strongly suggest, however, the committee does not exceed the response time or distance criteria used by *IAO* to establish the latest improved insurance classifications for Thorold. Deputy Chief Roach can verify this in his committee report determining the potential monetary savings for home owners as previously identified.

During practical application of this response and operational data, the role of *every* member of the Thorold Fire Department remains constant as defined in the establishing and regulating by law.

"To protect the lives and property of all inhabitants of the fire department response areas from the adverse effects of fires, sudden medical emergencies or exposure to dangerous conditions created by persons or nature"

Unfortunately, the role of your fire department members is not clearly understood by everyone as both full time and volunteer groups have expressed concerns and opinions regarding the function and operations of the other. These concerns were published in a KPMG Management Consulting report as precisely quoted below.

"Communications and cooperation between the full time and volunteer groups is reported to be poor. Both volunteer and full-time believe it is now beginning to affect emergency response capability. Both sides make very strong allegations regarding the competence of the other."

The report goes on to note lack of teamwork, discrepancies regarding first arrival at fire scenes and who is in charge at emergencies. It further states the concerns are known to management and council and suggests they "*must be investigated and resolved immediately in the interest of public safety*".

Council or fire department managers cannot, however, be expected to initiate corrective action based upon rumor, innuendo or coffee table conversations.

These allegations were discussed in detail with both the full time association and the volunteer district chiefs. They were informed that if *any* member was not performing a function or duty in conformance with approved fire department procedures, immediate action must be taken by the fire fighter or officer in charge. If the necessary action is beyond the jurisdiction of the fire fighter or officer in charge at the scene, a formal report must be relayed, directly following the incident, through their immediate superior to the deputy chief.

Both groups expressed a desire not to get the others "in trouble" through formal reports. It was emphasized that *everyone* would be "in very serious trouble" if a fire fighter or civilian were injured or killed because policies were knowingly executed incorrectly or entirely ignored.

It should also be noted that most of the problems or discrepancies reported to KPMG can easily be validated through the standard operating procedures and the records maintained at the dispatch centre. If both groups are involved in a complete review and revision, where necessary, of the procedures, there should be no misunderstanding regarding the functions and operations expected of all fire department members.

Council must not get the impression relations between the groups are all negative. Both full time and volunteer persons offered *unsolicited* positive comments about joint training and the potential benefits of working more closely together for the progression of the department.

Medical assist and defibrillator calls are posing an increasing concern for both groups respecting availability of personnel.

The full time staff sighted occasions when defibrillator calls were received and the single on duty fire fighter had to wait for a volunteer to arrive at the station before responding. This wait extended the intervention time beyond the criteria established for vital help as accepted when council approved fire department participation in the program.

The volunteer district chiefs reported a growing reluctance by some volunteers to respond to medical assist calls. This is not an uncommon development for volunteer departments throughout the province and some minor personnel assignments could alleviate this concern before it becomes a major problem.

Suggestions for improving staff availability situations are detailed in the *Personnel* section of this report.

Response procedures have continuously improved in conjunction with your 1991 plan. Stations 4 and 5 responding together, full time responses to all areas and stand by or back up crews in the responding stations have assisted in ensuring a timely assembly of initial rescue and fire attack teams. Now that a reasonable response framework is in place, the planning committee can direct attention to options included in the *Personnel* section for improving availability of day time volunteers and limiting entire station assembly for medical assistance calls.

In concluding this section, we again emphasize that with clear direction of council regarding the types and levels of service to be provided, the administrator and senior fire officers can bring all members together as an efficient and effective single fire department.

Operational Considerations for Planning Committee:

1. Ensure standard operating procedures address initial activities, radio procedures and the chain of command at emergency scenes. If the committee believes it is necessary to highlight or emphasize these specific procedures as a reminder, they could be published under a separate special issue and distributed immediately for all personnel.
2. Review the options for volunteer response procedures detailed in the *Personnel* section and develop an implementation process for the most practical or any others which may be offered and accepted by the committee.
3. Determine anticipated emergency response times to all areas of the municipality and/or specific high hazard occupancies as part of the report to council respecting levels of service. Verify the report does not conflict with the *IAO* criteria used to establish the current insurance ratings.

Personnel:

Volunteer or Part Time:

Availability of volunteers from Monday to Friday during the day time working hours has become a common problem across Ontario. With more fire fighters working away from the municipality and employers not able or willing to allow employees to leave their job site, the problem is also increasing in Thorold.

Average day time response numbers reported by the district chiefs during this review are;

Station 1 = 8, Station 2 = 8-12, Station 3 = 5-7, Station 4 = 6-10, Station 5 = 5-7.

The following are some options which can assist in making the best use of these valuable people and provide them with some incentive to remain with the fire department.

Platoon systems are designed to function with an "on duty" group as first responders and a second platoon available as back up or second response. Platoons make more volunteers available

for all calls and also permits "off duty" time if they must leave town or wish to attend family, social or recreational activities.

This system was suggested in the previous OFM survey and a similar system is recommended in the current IAO report.

The problem with immediate initiation of platoons is that the 5 people now available at Station 3 are the *only* 5 people available during the week days.

For the system to be effective, Station 3, with a compliment of 20, would need a majority of 10 persons assigned to each of two platoons available for calls at any time for the duration of their "on duty" shift. Obviously, the platoons must also be well planned to properly balance both the availability and experience of officers and fire fighters.

For the platoons to work during week days, a program of selective recruitment must take place with new fire fighters hired who are available during the problem times. Some municipalities are recruiting people who work in the fire areas through the week but do not necessarily live there.

A platoon system would work, however, on week nights, week ends and holidays when 25 people turn out for any type of call at Station 2 or 4.

This would provide some relief for the volunteers who are reluctant to respond for stand by when the full time people are responding to medical assist or defibrillator calls. It should also be noted that even those employers who still permit volunteers to respond for fire calls are very hesitant to allow them to leave work for stand by or medical calls.

Selected officers or crews equipped with radios may also respond directly to emergency scenes rather than the fire station. They can perform size up and advise responding apparatus of initial required actions lowering critical set up time for primary rescues or fire attacks.

Stand by crews presently utilized at each station during calls could also be alerted to staff stations during inclement weather to guarantee more timely emergency responses.

There is no magic community size or population known to preclude use of volunteer fire fighters and the simple fact remains:

When volunteer or part time persons fail to respond to emergency alarms in a reasonable time in appropriate numbers, at any time of day, full time persons must be employed for adequate protection of the municipality and its citizens.

Full Time:

For several years, adequate fire suppression staffing has been a contentious issue and release of an OFM report titled *Fire Ground Staffing and Delivery Systems* in December, 1993, was intended to provide persons responsible for providing fire protection and the fire service with validated information to subjectively evaluate this matter for their specific locale.

Your fire department managers and association have copies of this report and can provide additional information to assist council in reaching a suitable decision.

An assembled on site compliment of 10 persons is necessary for fighting a fire in a single family detached structure and the necessary on site jobs are validated in our staffing report.

It is absolutely essential to have an initial rescue and fire attack team of *at least 4 persons* at the fire before flashover (*approximately 10 minutes*) occurs. When initial rescue is necessary, trapped persons have an extremely low chance of surviving once flashover begins.

There are presently 9 full time fire fighters on four shifts in Thorold assigned for fire suppression, rescue and medical assistance emergency calls. Through shift assignments, sick time, vacation and other off duty time, the department operates with 2 persons per shift for 85% and only 1 for the other 15% of the time.

Your initial fire attack crews are comprised of 1 or 2 full time people and anywhere from 5 to 25 volunteer fire fighters. There is little doubt Thorold can assemble at least 7 or 8 people in the prescribed 10 minute time and several more in less than 15 minutes for fire suppression.

Your immediate full time staffing problem, however, is providing the required 2 fire fighters in 8 minutes for defibrillator calls. This program was approved by council and if they wish to continue it, the necessary resources to perform all associated duties must be provided.

To determine staffing for the 42 hour week your fire fighters work, the standard formula requires 1.25 persons be hired for each on duty person needed. To maintain 8 persons assigned to 4 shifts, then, 10 persons are normally necessary to compensate for vacation, sick and other time off.

Presently, Thorold only experiences this shortage 15% of the time and there is an alternative which *may* be less costly than hiring another full time person over at least the next few years. This alternative includes arranging a more flexible shift rotation arrangement for your training officer supplemented by hiring back your off duty fire fighters.

A rotation of the 42 hour shift week could be arranged to have the training officer work 2 tours of days which would allow him to work for 2 days with each of the 4 shifts. The day shifts would be followed by 2 tours of nights accommodating the evening training of the volunteers.

This system would still require hiring back off duty personnel from time to time, however, is far less expensive than hiring an additional fire fighter. The system only works as an interim measure since costs to hire back will escalate as your present fire fighters gain seniority and receive more extended vacation times.

It should be understood that this or any similar type of arrangement will also have to be agreed upon by the association representing your full time fire fighters.

Evaluation must also continue by fire department managers to ensure the assembly of on site fire attack teams is adequate. If it becomes apparent adequate numbers of volunteers are not available

for responses around the clock in the times specified through council approved levels of service, additional full time fire fighters must be provided to protect Thorold and the citizens.

Deputy Fire Chief:

During the past ten years, the following matters have significantly increased the demand upon time for all Ontario fire chiefs:

- 1. changing technology, both in fire fighting apparatus and techniques and the properties protected,*
- 2. legal requirements and complexities necessitating greater attention required to minimize legal liabilities,*
- 3. needs for self improvement in management techniques and personnel relations,*
- 4. needs for research, development and planning of new and specialized equipment and the associated training and education for new and specialized services,*
- 5. increased paper work required by all levels of government for matters ranging from simple vehicle responses to detailed reports for courts and injury reports to municipal and provincial agencies,*
- 6. required enforcement or participation in statutes, codes and regulations which were not in force until the eighties, such as the Occupational Health and Safety Act and the Ontario Fire Code.*

Thorold fire chiefs have compensated for the demand by delegating most fire prevention and training duties and sharing others with the deputy fire chief. The pending loss of the deputy fire chief position and assignment of the fire prevention officer to the shift system, has instead added to the responsibility of your chief.

In our opinion, the department would be far better served if the position of deputy fire chief were maintained and the daily fire prevention activities were included as specific responsibilities of the deputy.

While the following recommendations do not save money, Thorold can maintain and may even improve their current level of fire protection services slightly, with very little additional cost to the citizens.

Personnel Recommendations to Council:

- 1. A policy for minimum on duty staffing of two full time persons at all times be prepared by the city administrator, fire chief and association executive for the approval of council.*
- 2. A more flexible shift schedule be prepared by the city administrator, fire chief and training officer in conjunction with the association for the approval of council.*

3. The position of deputy fire chief be maintained with specific responsibility assigned for performing necessary daily fire prevention activities and coordinating the departmental fire prevention and public education programs.

Personnel Considerations for Planning Committee:

1. Ensure a system is in place for identifying the actual number of assembled persons for initial rescue and fire attack teams and the approximate times required to significantly increase the number of available volunteers. To obtain the information to be compiled, some change may have to be incorporated in radio procedures. For example, first responding pumpers may report: Pumper 2 with 4 persons responding or departing station.
 2. Review all response procedures in conjunction with *Operational consideration #2* and discuss any additional proposals from committee members. Some of the options may also be more effective if they are combined. For example, platoons with selected radio equipped officers responding directly to the emergency scene.
 3. Review the OFM *Fire Ground Staffing* report to determine how it applies to Thorold and if it may assist the planning committee with their deliberations and reports to council.
-

Fire Stations:

If there is an area of your approved plan illustrating ten years is too long range, the location of fire stations is it. When the 1991 plan was developed, there were absolutely no immediate or even tentative proposals for any type of development in the Port Robinson area, west of the canal.

Your 1991 plan included acquisition of land and construction of;

1. *a new fire hall in the vicinity of Port Robinson Road and Merrittville Highway areas to replace station 5 in 1991,*
2. *a new station in the vicinity of Highways 58 and 20 to replace station 2 in 1993, and,*
3. *a new headquarters station in Confederation Heights in 1998.*

In light of the 1996 *IAO* report and construction of the facility replacing station 2, the 1991 fire station priorities should remain the same.

Having driven the roads around the station 5 area, however, I would suggest the planning committee retain the 1991 selected location as a proposed alternative to the one recommended in the *IAO* report. A site further west on Port Robinson Road may accommodate *IAO* criteria for responses to industrial occupancies and still put the station in a more strategic location for calls to Highway 20 and the dual coverage area shared with station 4.

Your plan should also contain a report on the future use of station 4. This was discussed with the district chiefs and they do have some alternatives which should be examined for your report to council. With the increasing call volumes of station 1 and 5, one of the options to explore must be as a back up or cover station for each of these response areas.

The possibility of relocating the chief and/or deputy chief and fire prevention offices to the new station 2, on at least an interim basis, should also be considered by the committee. With some *minor* adjustments at existing headquarters, this would provide ample space for a training office and the administrative office currently shared with the deputy chief.

The need for a new headquarters station, however, still exists and will escalate as development continues to bring increased demand for emergency services in the western areas of the City. This need has been identified in several reports over the past fifteen years and most recently was reported by the *OFM, IAO* and your previous fire protection planning committee.

Apparatus and equipment required to deliver the rescue and fire suppression services were discussed during each review. Council and the fire chiefs have provided excellent fire apparatus over the past fifteen years and in the 1991 approved plan made provisions to maintain their fire vehicles through a twenty year vehicle replacement forecast.

Thorold has two dual purpose telesquirts that combine elevating and pumping capabilities in a single vehicle. The possibility of combining pumpers with tankers or rescue vehicles has also been discussed and where feasible, should be included in the vehicle forecast.

Volunteer and full time groups indicated a problem with the time required to replace broken or worn out equipment. With the restrictive budgets of the last few years, the tendency has been to make do and not replace equipment. A policy for staged replacement of aging and immediate replacement or repair of essential broken equipment should be prepared and approved by council.

As previously stated, resources must be provided to safely perform all fire protection services to the levels which have been identified as acceptable by council.

Fire Station Considerations for Planning Committee:

1. Determine the most suitable locations and revise the priority list for required land acquisition and construction of new fire stations to be recommended to council by the committee.
2. Determine what major renovations or building repairs will be required over the next five years for all stations.
3. Develop a revised capital forecast for land acquisition and construction or major renovations of fire stations to be included with the new plan. It is suggested the fire station forecast be separated from the capital vehicle replacements. The twenty year vehicle forecast should be updated annually while station needs normally remain relatively constant for at least the first five years of your plan.

4. Determine the future use of station 4 and provide appropriate committee recommendations to council in your planning report.
5. Review options for relocating offices to station 2 and if these decided relocations should be on a temporary or permanent basis.

Fire Prevention and Public Education:

Thorold has conducted fire prevention inspections and provided public education programs for many years. The recent assignment of your fire prevention officer to suppression shifts, however, will require some programs to be drastically reduced or eliminated entirely unless some immediate action is taken to rectify the situation.

During this review, your fire prevention officer was working his last day before starting vacation and would not return to a day shift for 29 days. This certainly is not conducive to good relations if a building owner must wait a month for a fire prevention inspection and/or letter of approval to open a business or obtain a license.

Maintaining a deputy fire chief with fire prevention responsibility and utilizing the fire suppression personnel would very likely alleviate this and promote a better overall public education program.

Fire prevention and public education are integral parts of overall fire protection and if effectively performed, a significant reduction in the loss of life and property will result. Residents of the community, elected officials and all fire department personnel share equal responsibility for the prevention of uncontrolled fires.

To clarify this for planning committee discussions and their report to council, descriptions of the basic types of inspections and who can conduct them are offered.

Regulatory Inspections are conducted by the fire prevention officer for licensing or compliance with municipal or provincial legislation such as liquor licences, boarding and lodging houses, public halls, nursing homes and day nurseries.

Retrofit legislation has also been introduced to govern existing apartment buildings and "granny flats" or basement apartments. The full impact of this legislation will likely be realized during the coming year as affected buildings are sold, updated or inspected for insurance or other purposes.

Comprehensive Inspections are conducted by the fire prevention officer following complaints and periodically in the older commercial and business districts or other specified occupancies. These inspections are detailed and include examinations of the structure and all related building components. A detailed report to building owners with provisions for staged work and several reinspections are often necessary and may result in formal charges, in some instances, before they are finalized.

In Service Inspections, however, may be conducted by fire suppression personnel to point out and eliminate obvious hazards for the property owners and are voluntary only. On duty and/or

The recommendation to council permitting a more flexible shift schedule for the training officer should alleviate any time problem which exists. Several fire departments are currently looking at methods of getting training personnel back on shifts for greater exposure to the fire fighters and to keep current with the latest technology and fire ground practices in practical use.

The planning committee should determine a method of implementing the curriculum program for the department as uniform training for all stations and personnel.

Promotions have been conducted for volunteers by election and the Office of the Fire Marshal does not endorse this manner of appointing fire department officers for the following reasons.

The Occupational Health and Safety Act requires the employer to provide supervision for workers and states specifically: "An employer **SHALL**, when appointing a supervisor, appoint a **COMPETENT** person."

It defines a *competent* person as a person who is qualified because of his knowledge, training and experience to organize the work and its performance, is familiar with this Act and the regulations that apply to the work, and has knowledge of any potential or actual danger to health or safety in the work place.

This, in no way implies that Thorold now has or has ever had officers who were less than competent, however, it must be agreed through the election process, the possibility of not getting the most suitable person for the position exists. The fire fighters certainly do not elect their superiors at their normal places of employment and the officers are supervisors who act as agents of the City, just as any foreperson does in private industry.

There are two other major influencing factors for our position on the promotion and appointment of officers.

Firstly, as emergencies become more technical in nature, the responsibilities of officers escalate and more direct commands or orders must be given. The possibility of an officer doing "the job too well" and subsequently getting "voted out" has occurred on more than one occasion over the years in your department. This was verified without prompting or solicitation of your district chiefs.

The second is a personal, yet equally important, factor. If I apply for a promotion and am not the candidate selected, I am entitled to a written reason and identification of the areas where I should improve to apply for the next vacancy or position. Getting fewer votes than someone else would not likely satisfy my rights as an employee of the corporation nor provide appropriate direction for my future development.

The sample promotional policy included in this report could be adapted by the planning committee to satisfy the needs of all members.

Training and educational opportunities away from the department must be evaluated and a very strong recommendation to council should be included in the final planning committee report.

Training and Educational Considerations for Planning Committee:

1. Develop a standard training policy statement for all members of the department. This should include persons required, frequency and resources required.
 2. Appoint a sub committee consisting of the training officer as chairperson and an *interested* designate from each station to develop a progressive syllabus listing all subjects of the fire fighter curriculum and the resources required to complete them. The resources should include instructors, trainer facilitators and the training officer indicating how each will be utilized.
 3. Develop practical target dates for completion of the curriculum subjects provided in the training syllabus with assistance of the training officer and his sub committee.
 4. Develop a draft promotional policy for all members of the department for submission and approval of council.
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Conclusions:

The Office of the Fire Marshal does not rely upon municipal comparisons because of the many variables from community to community. If Thorold is compared with a totally rural township having a volunteer fire department, it would only seem fair to also use the opposite end of the spectrum and compare with St. Catharines, Hamilton or Burlington.

This report is intended to assist council and their appointed planning committee in arriving at some very important fire protection decisions. We are fully aware of the financial restrictions imposed on the City of Thorold and offer our recommendations and considerations as ways of justifying current expenditures and providing some future reductions in costs for this essential service.

We most respectfully suggest, in this name of austerity, citizens can and will tolerate a little longer wait for books from the library or to process a license at the municipal offices. They will not tolerate the same wait for a fire department response if their home is on fire or a family member lies unconscious on the floor, regardless of cost.

There is no reason to believe the City of Thorold and their Fire Department can not develop a new plan as part of your municipal strategy which fully identifies and addresses fire protection based upon needs, costs and expectations of the public they protect.

The Office of the Fire Marshal is committed to assisting council, municipal and fire department members in implementing these or any other proposals which will improve public safety, in any way we are able.

Summary of Recommendations to Council:

1. The existing fire department establishing and regulating by law be revised by the fire chief, city administrator and OFM fire services adviser for final amendment and approval of council.
 2. An acceptable level of service for the entire City be identified by council, in conjunction with your planning committee, prior to final revision and council approval of your municipal fire protection plan.
 3. The policies referenced in the approved fire department establishing and regulating by law and additional policies that are deemed necessary by the fire planning committee be submitted to council for final amendment and approval.
 4. A policy for minimum on duty staffing of two full time persons at all times be prepared by the city administrator, fire chief and association executive for the approval of council.
 5. A more flexible shift schedule be prepared by the city administrator, fire chief and training officer in conjunction with the association for the approval of council.
 6. The position of deputy fire chief be maintained with specific responsibility assigned for performing necessary daily fire prevention activities and coordinating the departmental fire prevention and public education programs.
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Summary of Considerations for Planning Committee:

1. To assist council in determining acceptable levels of service, the committee should identify the fire suppression, rescue and medical assistance functions the department is expected to perform. The committee should then identify resources including personnel, apparatus and any specialized equipment required to safely perform the functions. A reasonable *anticipated* response time for each type of occupancy and/or occurrence must also be identified as outlined in the *Operations* section of this report.
 2. The committee should discuss each policy referenced in the draft establishing and regulating by law and ensure the policy is adapted to a reasonable application for the fire department. The committee may determine additional policies are required and these should also be drafted and submitted to council for their consideration and approval. The following are policies which are identified through this report with our suggestion for committee deliberation:
 - *Hiring policy*: verify municipal policy and establish criteria for selective recruitment,
 - *Promotional policy*: a sample is included with the appendices to this report,
 - *Training policy*: to be developed in conjunction with the Fire Fighter Curriculum,
 - *Fire Prevention policy*: a sample is included with the appendices to this report.
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3. All standard operating procedures should be examined by the fire department members and recommendations for any *necessary* changes should be forwarded through the appropriate members of the committee for discussion. Sample SOPs have been included which describe a method for regular evaluation, a process for required changes or new procedures and how these changes or additions may be distributed to all personnel.
4. The departmental rules, regulations and related published policies should also be reviewed at this time and amended where required. They should be circulated to all personnel in conformance with the SOP referenced in the preceding paragraph and periodically evaluated and amended, *when necessary*, in the same fashion as the SOPs.
5. Ensure standard operating procedures address initial activities, radio procedures and the chain of command at emergency scenes. If the committee believes it is necessary to highlight or emphasize these specific procedures as a reminder, they could be published under a separate special issue and distributed immediately for all personnel.
6. Review the options for volunteer response procedures detailed in the *Personnel* section and develop an implementation process for the most practical or any others which may be offered and accepted by the committee.
7. Determine anticipated emergency response times to all areas of the municipality and/or specific high hazard occupancies as part of the report to council respecting levels of service. Verify the report does not conflict with the *IAO* criteria used to establish the current insurance ratings.
8. Ensure a system is in place for identifying the actual number of assembled persons for initial rescue and fire attack teams and the approximate times required to significantly increase the number of available volunteers. To obtain the information to be compiled, some change may have to be incorporated in radio procedures. For example, first responding pumpers may report: Pumper 2 with 4 persons responding or departing station.
9. Review all response procedures in conjunction with *Operational consideration #2* and discuss any additional proposals from committee members. Some of the options may also be more effective if they are combined. For example, platoons with selected radio equipped officers responding directly to the emergency scene.
10. Review the OFM *Fire Ground Staffing* report to determine how it applies to Thorold and if it may assist the planning committee with their deliberations and reports to council.
11. Determine the most suitable locations and revise the priority list for required land acquisition and construction of new fire stations to be recommended to council by the committee.
12. Determine what major renovations or building repairs will be required over the next five years for all stations.

13. Develop a revised capital forecast for land acquisition and construction or major renovations of fire stations to be included with the new plan. It is suggested the fire station forecast be separated from the capital vehicle replacements. The twenty year vehicle forecast should be updated annually while station needs normally remain relatively constant for at least the first five years of your plan.
14. Determine the future use of station 4 and provide appropriate committee recommendations to council in your planning report.
15. Review options for relocating offices to station 2 and if these decided relocations should be on a temporary or permanent basis.
16. Appoint a sub committee consisting of the fire prevention officer as chairperson and an *interested* designate from each station to review all current fire prevention programs, the samples provided and prepare a draft policy for discussion and approval of the planning committee.
17. Discuss the deputy fire chief position with specific fire prevention responsibilities. Determine the appropriate roles of all fire department members in programs accepted by the planning committee and include standard methods of conducting the programs.
18. Identify all resources required and the associated costs of the programs to be included in the policy to be submitted to council for their approval.
19. Develop a standard training policy statement for all members of the department. This should include persons required, frequency and resources required.
20. Appoint a sub committee consisting of the training officer as chairperson and an *interested* designate from each station to develop a progressive syllabus listing all subjects of the fire fighter curriculum and the resources required to complete them. The resources should include instructors, trainer facilitators and the training officer indicating how each will be utilized.
21. Develop practical target dates for completion of the curriculum subjects provided in the training syllabus with assistance of the training officer and his sub committee.
22. Develop a draft promotional policy for all members of the department for submission and approval of council.

