ITEM	3
MANAGER'S REPORT NO.	64
COUNCIL MEETING	1979 09 24

RE: FIRE PREVENTION CONTROL STUDY AND MASTER PLAN
(ITEM 8, REPORT NO. 80, 1978 NOVEMBER 14)

Following is a progress report from the Chairman of the Fire Study Technical Committee regarding the Fire Prevention Control Study and Master Plan.

RECOMMENDATION:

1. THAT the report of the Chairman of the Fire Study Technical Committee be received for information purposes.

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TO: MUNICIPAL MANAGER

FROM: FIRE STUDY TECHNICAL WORKING COMMITTEE

RE: FIRE PREVENTION CONTROL STUDY AND MASTER PLAN

RECOMMENDATION:

1. THAT this report be received for information purposes.

REPORT

This is a report on the progress of the Fire Prevention and Control Study and Master Plan.

This study was the subject of a report to Council of the same caption dated 1978 November 02 in which a schedule and an estimate of costs were provided. This present progress report is measured against the estimates in the 1978 November 02 report.

STATUS OF STUDY

Referring to the attached flow chart we are now at Stage 3 "Define the Fire Situation".

The Community has been divided into 55 Fire Management Areas and data accumulated and analysed by these F.M.A. to answer the questions listed in the attached schedule entitled "Preliminary Data Analysis by Fire Management Areas - Questions to be Answered".

Data has also been gathered and analysed on a community basis to compare it with other communities. This covers such things as rates of deaths and injuries, rates of fire damage, numbers of calls per capita, average response times and operating costs per capita.

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The volumes of data and analysis with tables and illustrations have been the subject of a meeting with this (Technical Working) Committee and a meeting with the Fire Board of Administration. The Fire Board of Administration are now studying the material and will be reporting their findings and suggestions in October.

Referring again to the flow chart our next step after receiving the comments of the Fire Board of Administration will be to "Establish Community Fire Protection Goals" for the consideration of Council. Concurrent with the presentation of suggested goals to Council your Technical Working Committee will ask authority to establish the Advisory Committee, which will contain representation from interested segments of the community.

As the study progressed it became evident that, in order to obtain a meaningful picture of the fire situation,a good deal more data would have to be obtained from our records than had originally been envisaged and indicated earlier to Council. For this reason the study is presently two months behind the schedule in the flow chart.

In the 1978 November 02 report, using 1978 rates, the total cost at the completion of Stage No. 3 "Define Fire Situation" was estimated at $41,306. It is estimated that at present approximately $33,000 has been spent, of which $10,200 is attributable to staff specially hired, with the remaining being "in-house" staff and equipment costs.

This is for the information of Council.

(for) T. Nairn,
Chairman
Fire Study Technical Committee

CRL/hf

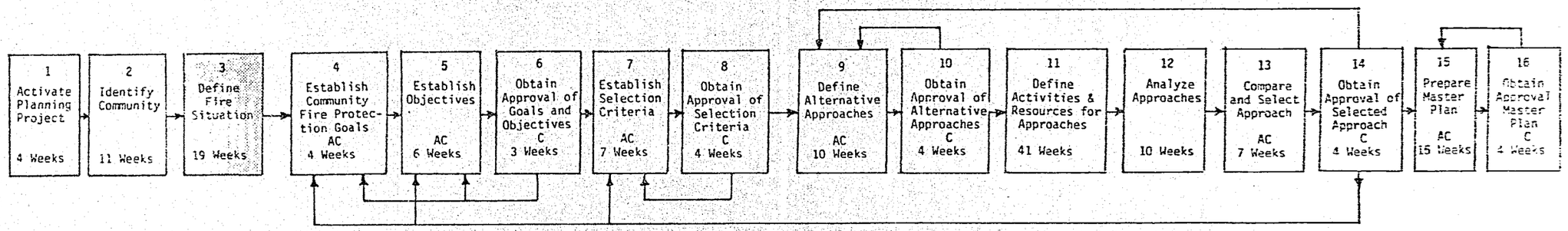
Attach.

c.c. - Technical Working Committee:
- Municipal Treasurer
- Municipal Engineer
- Director of Planning
- Chief Building Inspector
- Planner II (CRL)

FIRE PREVENTION CONTROL STUDY AND MASTER PLAN - FLOWCHART

(1) Where "AC" appears in one of the boxes below this means that the advice of the Advisory Committee will be sought at that stage.

(2) Where "C" appears this means that Council approval will be sought at that stage.



NOTE: At Stage (No. 6) Council can assess the fire situation and the objectives proposed. At this time Council has the opportunity to decide what further action should be taken with respect to the study.

PRELIMINARY DATA ANALYSIS BY FIRE MANAGEMENT AREAS - QUESTIONS TO BE ANSWERED

CATEGORY - A. PERSONS

	QUESTION	REASONING
1.	How many people living in the area require fire protection now?	Demand for fire protection and likelihood of fire incidence.
2.	How many people living in the area will require fire protection in future (1986)?	Demand for fire protection and likelihood of fire incidence.
3.	What is the present density of population?	Intensity of need for fire protection and likelihood of fire incidence.
4.	What will the future density of population be?	Intensity of need for fire protection and likelihood of fire incidence.
5.	How many people work in the area?	Demand for fire protection and likelihood of fire incidence.
6.	What is the density of people working in the area?	Intensity of need for fire protection and likelihood of fire incidence.
7.	How many fire related deaths have occurred in the area?	To determine whether deaths can be related to a characteristic specific to the area.
8.	How many fire related injuries have occurred in the area?	To determine whether injuries can be related to a characteristic specific to the area.
9.	What was the cause of the deaths and injuries?	To determine whether the deaths or injuries can be related to a characteristic specific to the area.
10.	To what extent has the Burnaby experience with deaths and injuries been related to length of response time?	A relationship between deaths and injuries and length of response time would be an important factor to consider in establishing an acceptable level of risk.

PRELIMINARY DATA ANALYSIS BY FIRE MANAGEMENT AREAS - QUESTIONS TO BE ANSWERED

CATEGORY - B. PROPERTY

	QUESTION	REASONING
1.	How valuable is the property in the area?	The greater the value of property - the greater the demand for fire protection.
2.	What has been the value of property damaged in the area?	Value of property damaged in the past may be an indication of future demand for fire protection.
3.	What is the volume of housing stock in the FMA?	The number of dwelling units is one indication of the demand for protection.
4.	How many dwelling units will there be in the future (1986) in this FMA? And how many dwelling units may there be beyond 1986?	The number of dwelling units is one indication of the demand for protection.
5.	What is the dwelling unit size in the area?	Different types of units have different fire protection needs e.g. need for aerial ladder equipment for apartment buildings.
6.	What will be the dwelling unit mix in the area in 1986?	Different types of units have different fire protection needs e.g. need for aerial ladder equipment for apartment buildings.
7.	How much industrial, commercial and institutional building is there in this FMA and what are the structural materials?	A further measure of fire protection demand as indicated by how much there is to burn. The different structural materials have different fire protection demand. e.g. wood frame is more combustible than concrete, etc.
8.	How much industrial, commercial and institutional development can we expect in this area by 1986? And how much beyond 1986?	A measure of how much more property there will be to burn i.e. one determination of fire protection demand.
9.	How many substandard buildings are there in the area?	Substandard buildings are more liable to be fire generators than are buildings which are up to standard.
10.	How many buildings in the FMA have sprinklers?	This is obviously a measure of a reduction in fire suppression needs made possible by this method of self protection. Unfortunately, records prior to 1974 have been destroyed and so the usefulness of the data in the FMA analysis is very limited.
11.	To what extent is the effective deliverable fire flow capacity in the hydrants adequate to meet the present demand in each FMA and the demand which can be expected with future development? (This data is currently being analysed)	This may lead to an objective that because of the present situation or because of anticipated future population and development, improvements are needed in the firefighting water supply system.

PRELIMINARY DATA ANALYSIS BY FIRE MANAGEMENT AREAS - QUESTIONS TO BE ANSWERED

CATEGORY - C. DEMAND FOR FIRE PROTECTION

QUESTIONS	REASONING
1. How many fires have there been and what kinds of occupancies have been most involved?	An indication of the type of occupancies which may in future be fire generators and effect demand for fire protection.
2. How many calls of all types have there been in this area?	This is a direct measure of the demands which have in the past been made by this area on the fire suppression system including rescues,etc.
3. How many calls per capita have there been in this FMA?	Provides a measure of the extent to which the area constitutes a special problem when compared with other FMA. An exceptionally high ratio will need further investigation to determine the reason for it.
4. Which properties within the FMA are generating an excessive number of calls?	To determine which specific properties are causing problems and to seek solutions.
5. How many calls in the FMA are being made at night versus the number being made by day?	This knowledge may result in being able to provide an improved alignment of responsibility boundaries for the different fire halls. Night calls are potentially more serious in that people are at home asleep in their dwellings.
6. Compared with acceptable standards and compared with other FMA, how long on average is it taking for the fire equipment to reach the fire, rescue scene, etc.?	A direct measure of the adequacy of the existing system measured against a standard.
7. What water supply is available in each FMA (Measured in gallons per minute fire flow capacity)?	A measure of the capability of the water system to suppress fires.

PRELIMINARY DATA ANALYSIS BY FIRE MANAGEMENT AREAS - QUESTIONS TO BE ANSWERED

CATEGORY - D. WORKLOAD ON FIRE HALLS

QUESTIONS	REASONING
1. What fire hall normally responds first and what fire halls provide "back-up" support when required?	A measure of the demand which this FMA is placing upon its "first-in" fire hall and other fire halls for support.
2. How many calls does each fire hall make to each FMA and what is the average response time from each fire hall to each FMA?	This will point out in clear focus the workload which each area imposes on each fire hall. It will also point out the areas which are reached by a particular fire hall in those times which are within or without acceptable limits.

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