

## **REPORT AND RECOMMENDATIONS OF THE HANOVER FIRE STATION STUDY COMMITTEE**

The Hanover Fire Station Study Committee was formed by the 2005 Annual Town Meeting. The Committee was established for the purpose of assessing the needs of the town related to fire stations. The Committee is authorized to make recommendations to the Selectmen and town meeting.

The following is the report and recommendation of the Hanover Fire Station Study Committee. In making this report and recommendation, the Committee considered information presented by the Hanover Fire Department and reviewed the most recent *Report of Municipal Fire Protection*. The Committee essentially considered two questions. First, is another staffed fire station needed to provide adequate and timely fire and EMS service to the town? If so, the Committee next considered where such a station might need to be located to achieve the desired outcome.

In summary, the Committee has determined that a significant portion of the town is at risk of being underserved for timely fire and EMS response. For the reasons set forth in the following detailed report, the Committee recommends that the town look to establish a fire station staffed with full-time fire fighters that would be supplemented with call fire fighters. Given this need, the Committee also recommends that this station be located in the North Hanover area in the vicinity of the Curtis School. Based upon information from the Fire Department, the Committee believes that this station should house an ambulance, two pumping engines, a forest fire truck and a rescue boat.

The Hanover Fire Department is classified as a "combination department." Currently, only the Fire Headquarters is staffed with full-time firefighters and supplemented with call fire fighters. The remaining stations currently depend solely upon the call fire fighter response. There is an inherent "lag-time" with callback. Off-duty and call personnel must stop what they are doing, get into their personal vehicle and drive to the station. This delay can be significant depending upon weather conditions and traffic. The average time required to man an engine company with on-call personnel is greater than 4 minutes.

This fact does not diminish the value of the on-call system. It is a valuable resource that allows the Town to handle larger emergencies and multiple calls without relying exclusively on mutual aid. Mutual aid is dependent on availability. The fire departments of neighboring towns are also experiencing more calls as their communities grow. It is becoming more and more common to find that the

closest mutual aid resource is unavailable. This results in unacceptable delays in emergency response.

As demonstrated by the map on page 9, having fire headquarters as the only staffed station leaves most of North Hanover and parts of West Hanover without timely and adequate fire and EMS response. As the map on page 10 illustrates, a staffed station in the North Hanover area in the vicinity of the Curtis School, rather than other available sites, will provide the best possible fire and EMS coverage for the town.

The Committee's report and recommendation is based upon a recognized need to provide adequate and timely fire and EMS service to all parts of the town. The current configuration does not meet this need. The members of the Committee, as residents and taxpayers of the town, are aware that the town is facing significant challenges, including undertaking the building of a new high school and the building of a senior center. However, these competing challenges do not negate the need to also identify and address the requirement and responsibility to provide the most timely fire and EMS service to the town.

Respectfully submitted,

Hanover Fire Station Study Committee

F. Daniel Ahern, Jr., Chairman  
David G. Flynn, Board of Selectmen  
Kenneth L. Blanchard, Fire Chief  
Donna D. Buckley  
Donald E. Morrison

## REPORT OF THE HANOVER FIRE DEPARTMENT TO THE HANOVER FIRE STATION STUDY COMMITTEE

### Response Standards:

The Hanover Fire Department has established a six-minute response time as its standard. Response time is measured from the moment the 911 call is received to the arrival of emergency crews on scene. Six minutes was chosen as it allows the department to meet the standards of three nationally recognized institutions, the National Fire Protection Agency, the American Heart Association, and the Insurance Services Organization.

The National Fire Protection Association (NFPA) has set standards for the Organization and Deployment of Fire Suppression Operations. NFPA Standard 1710 states that "The fire department's fire suppression resources shall be deployed to provide for the arrival of an engine company **within a four-minute** response time and/or the initial full alarm assignment within an eight-minute response time to 90 percent of the incidents." Time is of the essence since an uncontrolled fire inside a structure can double in size every minute.

The American Heart Association has recognized the importance of response time and survival of sudden cardiac arrest (SCA) for years. The latest 2005 American Heart Association Guideline for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care states that "If bystanders provide immediate CPR, many adults in" (ventricular fibrillation) "VF can survive with intact neurologic function, especially if defibrillation is performed **within about five minutes** after SCA. CPR prolongs VF (ie, the window of time during which defibrillation can occur) and provides a small amount of blood flow that may maintain some oxygen and substrate delivery to the heart and brain. Basic CPR alone, however, is unlikely to eliminate VF and restore a perfusing rhythm." As with fires, a quick response time leads to positive outcomes in "true" medical emergencies.

The Insurance Services Organization (ISO) looks at a community's fire protection capabilities and assigns a rating of 1 through 9. A rating of 1 is the highest. Only a handful of fire departments across the country have received this coveted rating. A rating of 9 means a community has no fire protection. Hanover currently has an ISO rating of 3. An important part of the ISO rating is the location of, and maximum travel distances from fire stations. Maximum credit is given for areas that fire apparatus can reach **within four minutes** of travel time. (The time required to process the call and get the apparatus out the door is not included in the four minutes.)

### **Choosing a Location:**

Fire Headquarters is located just south of the actual geographic center of Hanover and is ideally located at a "hub" of main and connector roads. This location is ideally suited to reach a majority of town within six minutes. However, there are three areas of town that apparatus responding from headquarters cannot reach within 6 minutes (See map on page 9):

1. The northwest section of town that includes Whiting Street, north of Webster Street
2. Assinippi including the Walnut Hill area
3. The southwest section of town that includes King St. near the Hanson Town line and the Olde Forge development.

The following factors were considered during the site selection process, population served, projected growth, an historical analysis of response data the geographic location of available sites and input from outside consultation.

### Population Served and Projected Growth:

The Assinippi area has a large daytime and early evening population as a result of the business and commercial properties located there. It also has a large residential area including the Walnut Hill development and two age 55 and older communities. There is a great potential for future residential and/or commercial development in this area.

The Northwest section is the furthest away from Headquarters and is largest in size. It is almost exclusively residential and the land has been already built out for the most part.

The Southwest section that cannot be reached in less than six minutes is a very small area. It includes less than 60 single-family homes and has no commercial or industrial properties. Future growth in this area is limited.

There is no one location that will address all three areas and it is unlikely that the Town would be able to construct and staff two sub-stations. One additional station, however, could address two of the three areas. A station could be constructed in the North Hanover area and cover the northwest and Assinippi sections or, a station could be constructed in the West Hanover area and address the northwest and southwest sections.

Based upon population served and projected growth, a station should be built to protect the Assinippi and Northwest sections of town.

### Historical analysis of response data

#### *Call Volume:*

The department has seen a 40% increase in call volume over the past 10 years. More than 2100 emergency calls were answered last year. During the first quarter of fiscal year 2008 calls were up more than 8%. The amount of emergency calls will continue to increase until the town is fully developed.

#### *Distribution of calls*

An analysis of calls over time shows that the greatest demand for emergency services of the three areas identified comes from the Assinippi section. The Northwest section is the second busiest area and the Southwest section requires emergency services the least.

Based upon historical analysis of response data, a station should be built in the North Hanover area.

### Geographic Location of Available Sites:

Five sites have been identified as being possible locations for fire stations. Three of those are in the North Hanover area and would address response times in the Northwest and Assinippi sections. Two other sites have been discussed as a possible location in the West Hanover Area. These sites would address response times in the Northwest and Southwest sections of town.

#### North Hanover Sites:

1. Curtis School Site
2. Land opposite Hackett's Pond on Webster Street
3. Existing Station 1 Site

#### West Hanover Sites

1. Existing site of the Counsel on Aging
2. Land at the corner of Summer and Circuit Streets

### Outside Consultation:

The department contacted two architectural firms with extensive fire station design experience. They were asked to evaluate each as to their suitability for use as a location for a fire station. Kaestle Boos Associates identified the Curtis School site as being the "most favorable based on site size, geometry, location and ownership. The Maguire Group stated that the Curtis School site "is ideally located and has excellent visibility along Main Street."

Kevin Gimeno, a Community Mitigation Analyst for ISO, was asked to assist the department with locating an additional station. He said the Curtis School site was obviously the best location. He was also asked to determine if a third station would be needed. He said that Hanover would be well covered with two stations.

### **Pros and Cons of Available North Hanover Sites:**

- Curtis School
  - *Pros:*
    - *Owned by Town*
    - Provides the best coverage for the greatest area.
    - Already identified in 1993 report as being an ideal site
    - Geographically ideal location to serve this area of town and to provide backup coverage to remainder of Town.
    - Easier access for call firefighters
    - Will require the least amount of site work.
  - *Cons:*
    - Neighbors may oppose station
    - Ball field may need to be moved
- Hackett's Pond Site on Webster Street:
  - *Pros:*
    - Location will improve response times in North Hanover
    - Good lot size
  - *Cons:*
    - High Volume of Traffic on Webster Street.
    - Close to busy intersection creating access problems due to traffic light cycles.
    - Increased response time to calls south of Curtis School site.
    - Neighbors may oppose station.
    - Significant amount of site work would be required.

- Existing Station 1 Site:
  - *Pros:*
    - *Owned by Town*
    - *Already used as a fire station.*
  - *Cons:*
    - *Small lot. Will not permit a structure that will meet needs.*
    - *Too close to the Norwell Town line. Much of coverage area includes the Town of Norwell.*
    - *Increased response times to calls south of Curtis School site.*
    - *Longest travel distance for call firefighters*
    - *Neighbors may oppose expansion.*

## **Recommendation**

1. A new sub-station must be built and staffed to address the increasing call volume and inadequate response times to the Assinippi and Northwest sections of town. These two areas are densely populated and have a high demand for service. The Curtis School site at 844 Main Street is the ideal location for the sub-station. The 1993 Report of Municipal Fire Protection identified this specific location as an ideal site. (See map on page 10.)

Initially, two firefighters would be assigned to this station on each group. These firefighters would respond with the appropriate apparatus to emergency calls in their coverage area. They would take the ambulance to medical calls, pumper to structure and automobile fires, and the forest truck to woods fires. Callback personnel would respond to this station to provide additional manpower. This system has worked exceptionally well at Fire Headquarters since the 1970's. There are many towns on Cape Cod that rely on this staffing model.

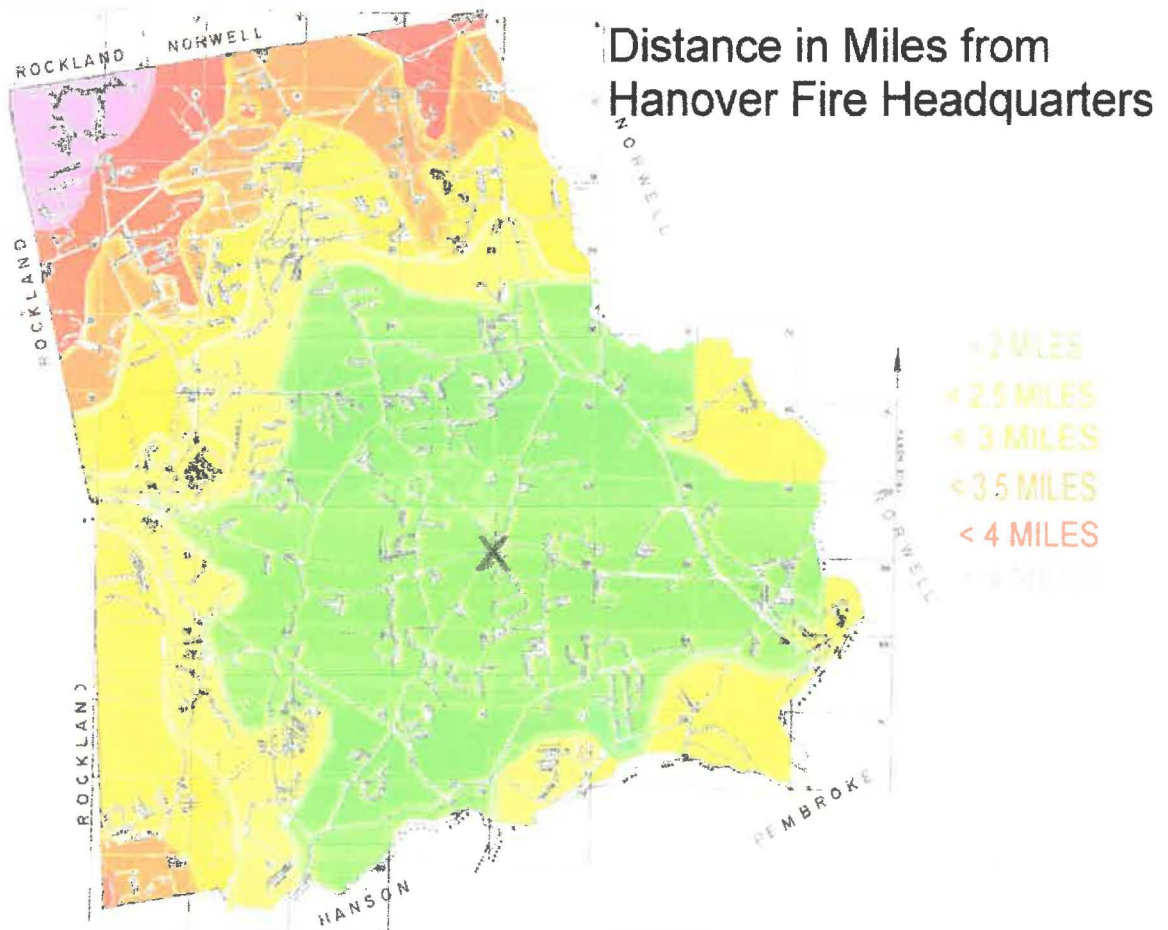
Four additional firefighter/paramedics would need to be hired in order to staff the substation. That would provide each of the four groups with 6 firefighters. Four would be assigned to work at Headquarters and two would be assigned to work at the substation.

Two stations should be adequate to protect the Town for many years to come. Staffing at the stations can be adjusted to meet call volume and provide the necessary fire and emergency medical coverage for the community.

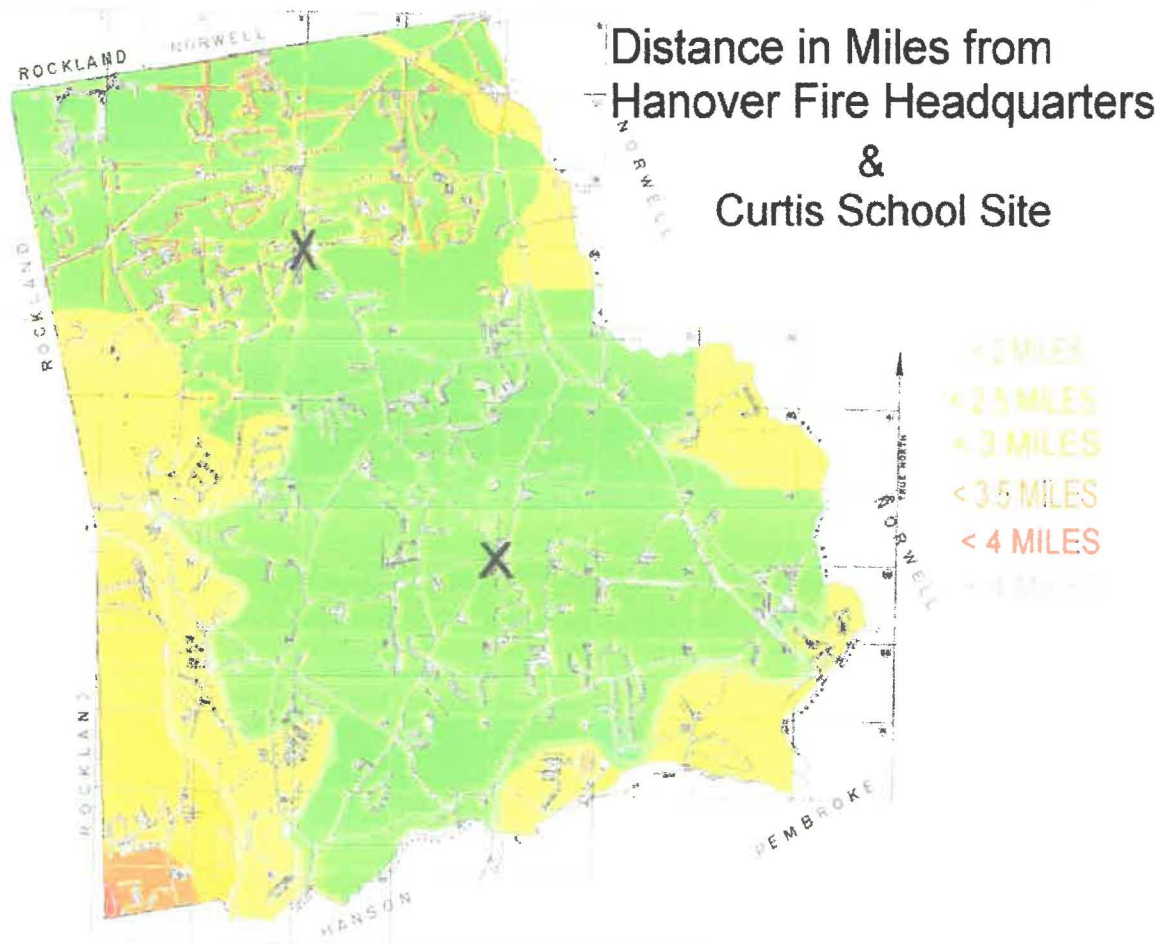
2. The town should retain a lot of land in West Hanover as a site for a future fire station, should it become necessary. The ideal location for a third station would be the site of the Council on Aging building at King and Circuit Streets (See map on page 11). This site was also identified in the 1993 report.
3. After the new station is open and staffed, Stations 1 and 2 could be sold. Station 1 could be converted to a residence and Station 2 could be utilized as a business. The land purchased as a site for a fire station at the corner of Circuit and Summer Streets could be sold. The proceeds from the sale of these three properties could be used to offset the cost of the new substation.

Station 3 is located in a Federal Flood Plain. The building could be retained by the town and utilized for storage.

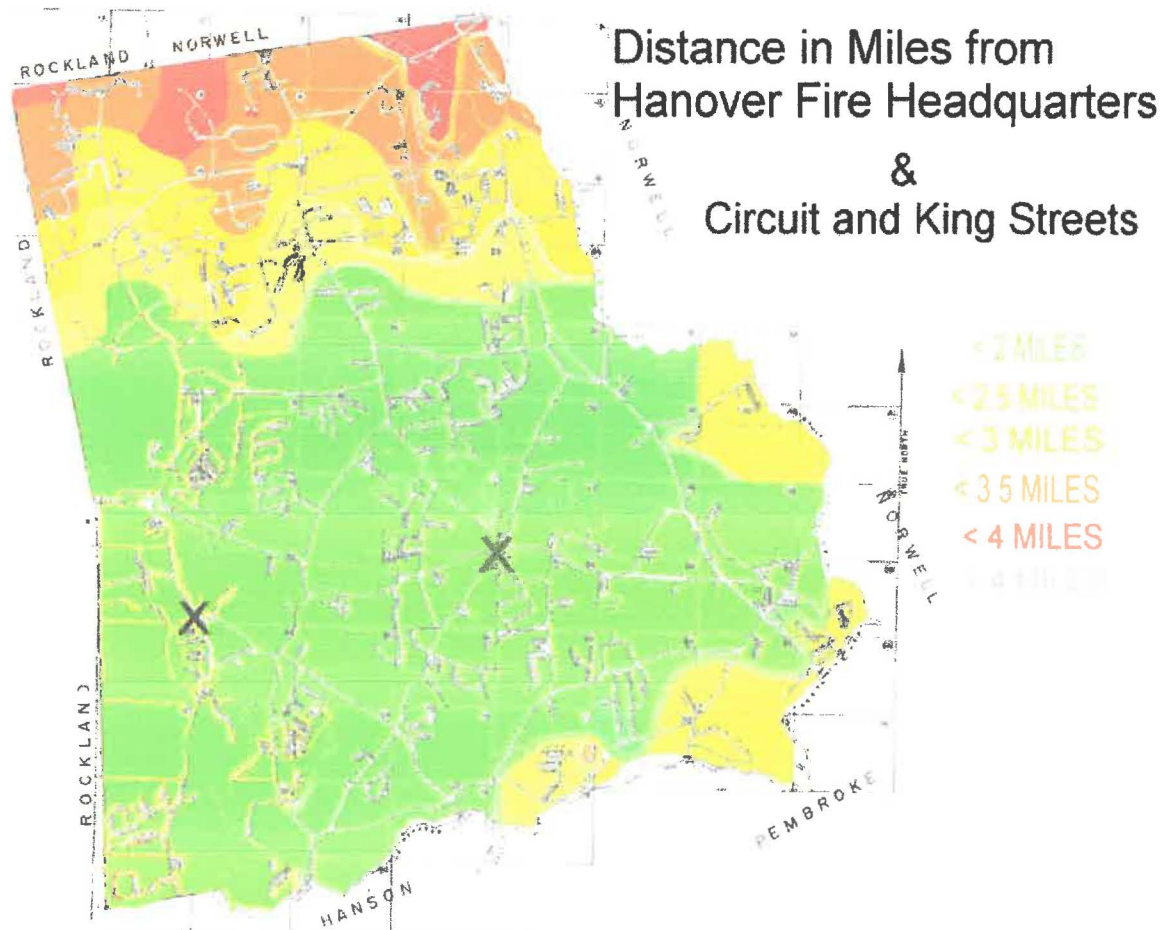




The pink and red areas cannot be reached within 6 minutes by emergency vehicles responding from Fire Headquarters. The dark orange areas may or may not be reached within 6 minutes. Green, yellow and light orange areas are within the 6-minute response time if on-duty staff is not already committed to a call.



A staffed substation at the Curtis School site would provide a 6-minute response time coverage area for almost the entire town.



A staffed sub-station at the intersection of Circuit and King Streets would still leave the majority of North Hanover with an inadequate response.