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(8-86)

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**United States Department of the Interior
National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

**FIRE STATIONS OF VERMONT
Firefighting in Vermont 1800-1955**

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Firefighting in Vermont, 1800-1955

The history of firefighting in Vermont is intricately connected to the settlement and development of the state. As communities grew in the nineteenth and twentieth centuries, so too did the institution of firefighting. It has been a process shaped by changes in technology, architecture, engineering, politics, civic engagement, and economic forces.

Inception: the dawn of firefighting

Initial fire protection for communities was largely an informal, unstructured system and formation of fire companies, the precursor to modern fire departments, was often prompted by a devastating fire - usually related to burgeoning industries. In Montpelier, an 1814 blaze which destroyed the Cotton Mill led to the creation of a fire company that same year. Brandon's Fire Department was spurred by a fire which destroyed the Brandon Iron and Car Wheel Company's works in 1856. Other earlier companies included those in Burlington (1808), Rutland (1811), Bellows Falls (1826), Brattleboro (1831), Windsor (1833), Pittsford (1834), and St. Johnsbury (1844).

In larger towns, fire companies quickly proliferated, functioning as both fire protection organizations and men's social clubs. Many communities had several fire companies. In Brattleboro, companies such as the Hydropath Engine Company, the Phoenix Engine Company, and the Protector Hook and Ladder Company joined the Brattleboro Fire Society in the 1830s, '40s and '50s. Burlington and St. Johnsbury, among others, also had numerous companies. Among those in St. Johnsbury were the Active No.4, a group of "young men," and the Veterans No.5, who were notorious for their outlandish uniforms and acrobatic stunts.

Organization: politics, structure and funding

Each company had a fire warden, and his authority at fires was supreme. Other members acted as firemen to operate the engine, as hook and ladder men, or to serve in the bucket brigade. There were generally two models of operation for these early fire companies. The first was as private, all-volunteer organizations initially receiving little or no public support, although volunteers were often granted exemptions from military duty and taxes. Additional funding came from membership dues - the Brattleboro Fire Society, for example, had 125 dues-paying

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members at its formation on December 13, 1831 - for belonging to a fire society was considered a mark of social standing.

As the nineteenth century progressed, Vermonters began to recognize the importance of fire companies and town after town voted to provide public support for the volunteers by paying their expenses, purchasing additional fire equipment, and erecting buildings to store the apparatus. It was an informal process at first - after an 1829 fire destroyed Burlington's courthouse, in which much of the city's firefighting equipment was being stored, citizens raised money to buy the community's first Boxer Engine for \$300.

By the end of the Civil War, a pattern had established in Vermont's larger communities. The state had initiated a system of incorporating volunteer fire companies, which were now being supported both by membership dues and public (city) funds.

When the City of Burlington was incorporated in 1866, several companies were in existence, including: the Boxer Engine Company; the Ethan Allen Engine Company; the Volunteer; and the Rough and Ready Hook and Ladder Company. The city paid the companies' expenses, including firefighting equipment, operating expenses, and building rental costs for company meetings and storage, while the volunteer force was now overseen by a municipally paid chief engineer. Fire companies were still largely autonomous and self-governing however, with internal company bylaws and other matters left up to the company membership. Companies elected their own officers; could elect new (and dismiss current) members by majority vote; designed and paid for their own uniforms; and submitted their volunteer membership rolls to the city assessor for members' exemption from all city taxes, with the exception of highway taxes.

The second organizational model was based on large commercial sponsorship. The Batesville Hose Company in Newport, for example, operated in the nineteenth century under the auspices of the Frost Veneer Company. It was mainly intended to provide fire protection to the Frost Veneer Mill and was housed in a building constructed by the mill on its property. Additional examples include the Estey Organ Company in Brattleboro, which founded its own fire company in 1876, and the Vermont Marble Company, which organized and funded the Proctor Hose Company in 1924. (Vermont Marble still partially underwrites the Proctor Fire Department.)

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Commercial concerns also manifested themselves in other ways. In

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1837, for example, the entire Montpelier Volunteer Fire Department was reorganized and put under the direction of Chief Engineer Daniel Baldwin - the former president of the Vermont Mutual Fire Insurance Company - which marked the start of a unique, close relationship between a fire department and a fire insurance company.

Whatever their structure, fire companies functioned as social clubs throughout the nineteenth century. As Joseph J. Heald writes in a 1982 history of Burlington's Ethan Allen Fire Engine Company, formed in 1857: "Those gallant men... became an integral part of two universal brotherhoods - (1) a brotherhood engaged in defense against a potential, natural, enemy and (2) a brotherhood engaged in a search interchange of ideas, social contact, companionship, and ultimately, friendship."

1895 marked a transition in Burlington which presaged events in other communities statewide. The year in which two major fires destroyed the J.R. Booth Lumber Mills and, embarrassingly, one of its fire stations, Burlington made the transition from a volunteer to a paid department. Manpower went from two-hundred forty three volunteer firemen to forty-seven paid firefighters, thirteen of whom were full-time while thirty-four were "call-men." The firefighters and their duties were distributed among four stations city-wide, while those remaining in volunteer companies relocated to new sites and became purely social clubs for the city's elite. (Politics played a significant role in this process of course. In Burlington for example, Moses Murray, the chief of the city's largest, wealthiest and most powerful engine company - the Ethan Allen Company - became the first chief of the newly organized municipal fire department.) Other communities with similar populations and financial resources followed suit, although many smaller, and especially rural communities would transition to either a combination career/volunteer department or retain an all-volunteer system, albeit with public support for equipment and necessary expenditures.

The growth of Vermont towns and villages in the twentieth century, combined with the lower cost of operating motorized equipment, allowed smaller communities to establish fire departments. Barnard's volunteer department dates to 1957, Clarendon's to 1963 and New Haven's to 1967.

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FIGHTING FIRES: EQUIPMENT AND PROCESS

Companies outfitted themselves with buckets, ladders, blankets

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(the 1808 Burlington inventory) and, in time, fire engines, the first of which were pulled by hand. They consisted of a portable tub with an interior pump. The tub was filled by members of the "bucket brigade," who were required to have their own labeled, leather buckets, drew water from existing wells, natural water bodies or cisterns. (Buckets used by the original Montpelier bucket brigades can be found at the Union Mutual Fire Insurance Company in Montpelier.) With pumping, the engine would spray water from a long nozzle at the top of the tub.

The first Boxer was a small-scale engine, but changing technology soon led to bigger and heavier engines. A new engine the City of Burlington purchased for its Boxer Engine Company in 1858 weighed 2,680 pounds and had 17-foot-long pump handles, or "brakes", which turned on pivots allowing the handles to lie parallel to the machine when not in use. These pump handles could be operated in a rocking motion by ten to twenty-five firemen, sending a continuous stream of water from the top-mounted nozzle. Additionally, the engine could suction water into the pump from a cistern by way of a leather hose. Purchase of this engine signaled the end of the bucket brigades in Burlington. (Smaller communities retired their buckets somewhat later.)

As companies grew, so too did pride and an increase in professionalism. An element of rivalry often also developed, as companies would race to be the first on the scene of a fire - and thus take control of the scene and the process. Unfortunately, the volunteer network could not keep pace with the intense growth of Vermont's communities in the latter half of the nineteenth century. Many towns suffered devastating fires because too few water sources were available to supply the fire engines. By 1875, Montpelier had witnessed two such fires, one of which destroyed 38 buildings. In 1887 cisterns couldn't provide enough water to quench a major fire in Randolph.

Waterworks and hoses

Several developments emerged to remedy the problem of adequate, accessible, water sources. Towns began to create community-wide water systems in the latter decades of the nineteenth century. Reservoirs were built and, with the assistance of gravity or pumps, water flowed to all areas of a community through underground pipes - to fire hydrants. Fast-growing Burlington

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adopted this system as early as 1867, and by 1880 had installed 148 hydrants for its city of 11,371. By 1882 eleven Vermont towns had established waterworks: Bellows Falls, Brandon, Burlington, Fair Haven, Hyde Park, Rutland, St. Albans, St. Johnsbury, Vergennes, Windsor and Worcester.

By 1870, the hose as a firefighting tool was developed. The first of these were made of leather, ran in lengths of 40' - 50', and worked well, but were extremely heavy. The invention of vulcanized rubber then led to rubber-lined cotton or linen hose - although these required extensive care to prevent rot and cracking. The advent of the hose signaled the end of the hand pump engine era, as fire companies could now battle fires by hooking up to hydrants and setting loose a direct flow of pressurized water.

This led to the development of hand-drawn hose wagons, which enabled volunteers to fight fires with triple the amount of hose than the engines could previously carry. Towns began to form "hose companies" which built new firehouses to store hoses, equipment and wagons. In 1875 Burlington had five such hose companies. In 1870 the city had 3,900 feet of hose - by 1886 it had 9,200.

While the development and availability of the fire hose afforded greater efficiency in fighting fires however, it also created an additional challenge: hose wagons became heavy and cumbersome for men to pull by hand and also increased response time. Consequently, by the close of the nineteenth century, fire departments began harnessing horsepower and addressing response-time by implementing a system of housing firemen within the firehouses on a rotating basis.

Steam-, chemical-, and horse-power

Firefighting became more complex as Vermont's towns grew upward as well as outward. Long lengths of hose couldn't provide enough water pressure to quench fires in taller buildings and the old hand-pumped engines weren't adequate for large fires. In 1890 steam-power was harnessed to address the problem and pump pressurized water, and town after town traded in their old hand-operated engines in favor of the new steam pumpers. Chemical engines, containing a soda-and-acid mixture which effectively smothered flames, were the next innovation to run on steam-power and in Burlington were extinguishing ninety percent of all fires by 1898. Steam pumpers offered an additional advantage. Whereas

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hand-pumped engines required heavy manning, steam engines could be operated by far fewer men.

Fires in taller buildings required longer ladders - seventy-five-footers became common - and longer trucks to carry them. The steam and chemical engines, along with the newly added ladder trucks, resulted in even heavier loads than presented by the hose wagons. Horsepower thus became universal.

The internal combustion engine

The emergence of the internal combustion engine in the early twentieth century had a profound effect on firefighting, as it did on virtually every aspect of life in America. The Burlington Fire Department acquired its first motorized fire truck in 1911, and it immediately demonstrated its cost advantage over horse-drawn vehicles: that year, it cost \$1.33 a day to maintain a team of horses, while the motorized truck cost 27 cents. St. Johnsbury was similarly progressive, purchasing an automobile fire truck in 1912.

Along with the cost disadvantage, the larger communities found that horses were having difficulty pulling the weight of the growing number of ladders required to fight fires - the longest of which, at approximately 75 feet, barely reached the cornice lines of the increasingly taller buildings typical of the late nineteenth and early twentieth century. The solution rested in motorized aerial trucks. St. Johnsbury acquired the state's first motorized ladder truck in 1914. By 1925 Burlington dispensed of its last two horses and was entirely motorized. Other communities would soon follow suit.

The firehouse: evolution of design

When firefighting first began, pumpers, engines and other gear were either stored outdoors or in wooden sheds and garages - whatever was readily available. Technological advances and increased cost of equipment, however, began to necessitate secure storage. Some towns adapted existing buildings - Burlington for example refurbished the basement of its courthouse in 1855. In North Bennington an 1856 blacksmith shop was converted to a firehouse in 1878, and Queen Anne details were added. For towns whose size or resources necessitated only one firehouse, buildings would be selected for their central locations - to ensure the quickest possible response time to an

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alarm. Current firehouses in Plainfield and Huntington, both Greek Revival-style buildings, served as churches in the nineteenth century - which were typically centrally located in communities. This trend continued throughout the twentieth century: the town of Whiting, for example, formed its fire department in 1966 and converted the village's old milk plant into a fire station.

Other communities chose to construct new buildings, which were usually plain, rectangular blocks with gabled roofs and sometimes included space for town offices as well as fire fighting equipment. Some examples of these first designed firehouses, built circa 1850-1870, include: the Nickwackett House (Fire Station No. 2) in Rutland, a two-story Italianate brick structure built in 1860 and possibly the earliest Vermont firehouse still standing; the Northfield Village Hall and Firehouse, a rectangular wooden building with a bell-tower, built in 1865 as a combination firehouse, jail and town meeting hall; and the Bradford firehouse, built in 1871 with Greek Revival details.

Whatever a community chose to do, two trends in firehouse design and adaptation emerged in tandem: 1) buildings were designated as dedicated fire stations or 2) they were created to house several municipal and/or public safety functions (for example police, fire and town offices).

Once a shift-system was implemented, with firemen essentially living in their stations while on duty, firehouse design evolved further. Floor plans began to feature the many amenities of home (carpeted bunkrooms, kitchens and libraries, usually on the second floor), showing a conscious desire to create an atmosphere that would also encourage firemen to spend their leisure hours at the firehouse. Firehouses thus developed into small, private clubs that inspired pride and professionalism. In Burlington, the city approved of the trend and the chief engineer noted in his 1883 annual report that "the city... should erect buildings that the firemen can point to with pride... This would result in a prompt response to alarms and would render the firemen more familiar with their apparatus and its use." The introduction of the brass sliding pole in the c.1880s enabled firemen to speedily access the equipment floor and thus diminish response delay even further.

These developments, along with evolving architectural styles and tastes, led to dramatic changes in building forms. Firehouses grew larger and the plain rectangular boxes of earlier days were

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supplanted by more elaborate designs. Queen Anne, High Victorian Gothic, Italianate and Richardson Romanesque buildings appeared. Most distinctively, with the advent of the fire hose, firehouses began to sport towers of fifty feet or more in height - designed to hang hoses to dry. Architects and builders were predominantly local, and their buildings interpreted (and embellished) traditional forms of architecture rather than adhering strictly to them. Among the buildings of this period are the Randolph firehouse (c. 1885), with its high Victorian Gothic Tower, and the 1889 Ethan Allen Fire Station in Burlington.

Many of the firehouses of this period also reflected the character of their setting in their design. Fire Station No. 3 in Burlington, for example, spoke to the residential nature of its setting in its design. Built by prolific local builder D.W. Clapp, it speaks to, and exhibits elements of, its surrounding influences and complexity of period. The organization and distinction between the upper and lower stories of the main façade serve to distinguish two very distinct functions housed within the structure: one commercial and utilitarian (the business of firefighting), the second residential and more refined (sleeping quarters, living and socializing spaces). Its heavy base within which the engine bays were housed evoke the solidity and security befitting a firehouse, while the more delicate upper story - with its horizontal band of narrow windows - serve to not only downplay the verticality of the building but also to align it more with the residential context of its location. Even closer inspection of its exterior features reveals additional elements of surrounding structures which include Italianate, Queen Anne and Second Empire styles.

With the advent of horsepower came another change in building requirements. Companies briefly built adjoining horse barns, opting thereafter to move horses into the main firehouse structure to avoid response-time delays. Horse stalls and haylofts thus became firehouse features until the advent of the automobile further changed firehouse design.

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Advent of the automobile

With the development and increased availability of the automobile as the twentieth century took hold, self-propelled pumpers displaced horses and horse-drawn engines. They were increasingly, heavier, wider and taller. Firehouses that could accommodate the changes were modified: horse stalls and haylofts were cleared out and often remodeled; doorways were enlarged and doors replaced; engine bay floors were reinforced; and, toward the end of the century, interior exhaust systems for the trucks were installed. Where existing buildings could not be retrofitted, or it was not fiscally prudent to do so, new buildings were constructed. Foundations were substantial and built to withstand the sheer weight of not just one truck, but - in larger communities - often a fleet of vehicles. Bays were wider, taller, and ran the width of a building uninterrupted by structural elements or walls. Building code requirements played a role as well: in Burlington for example, the creation and codification of an inner city fire district mandated the use of non-combustible building materials in new construction. The Montpelier Fire Department sold its last horse in 1924, the same year it moved into a new two-story brick-and-concrete firehouse with a three-bay façade and large segmental, arched doors. Along with firefighters and their quarters, the building housed an automatic pumper, a ladder truck, and a Ford truck. In Burlington, the similarly designed and aptly named Central Fire Station (which now became Station No.1) was built in the city center in 1926.

Around this time, hose towers also became obsolete as fire departments returned to a horizontal drying system in the basement or first floor of a station. (Hoses were now lined with rubber, or made entirely of rubber, which eliminated the need to dry their interiors.)

New fire stations continue to be built in Vermont, increasingly replacing earlier converted and designed firehouses. They are built, much as they have been throughout firefighting history, either as dedicated fire stations, or as combined public safety municipal buildings. Many of the remaining early fire houses have been converted to residential or commercial uses. And a number of historic firehouses, such as Fire Station No. 3 in Burlington - reputedly the oldest firehouse in continuous service - remain. Those that do can serve to remind Vermonters of the long struggle to tame that most horrifyingly destructive element - fire - and the evolution of the continuing struggle that has consumed more than two centuries.

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Associated Property Types

I. Name of Property Type: Fire station

II. Description:

Overview

Fire stations have held a vital place in Vermont communities since their first construction and inception in the mid-nineteenth century. Their form has been shaped over time by the political, economic, and social climates of the eras in which they were built.

Over time, firehouse design has been influenced by the ways in which they have been utilized. Initially the function of the structures was to protect equipment, but over time, they began to assume a number of social functions by providing meeting space for the departments, as well as sleeping and living quarters for on-duty firemen, and in some towns, stations provided town meeting spaces. Though the purpose in construction is consistent from town to town and company to company, designs varied. Today, examples survive from the earliest days of firehouse building up to modern construction.

As towns grew, and fire continued to threaten that growth, public awareness of volunteer companies increased, and support manifested itself in the construction of buildings and purchasing of equipment by towns themselves. The following are brief descriptions of types of fire stations identified by a 2005 survey. Further research and study may reveal additional types or more extensive information on the types listed below. It is important to note, however, that communities did not adopt developments in technology or building design in tandem. Community size, town budgets and other factors account for overlapping elements of building types.

Barns and Sheds (Prior to 1850)

Until the mid-nineteenth century, towns stored the firefighting apparatus outdoors, or in sheds or barns. In Montpelier, the volunteer fire department originally stored equipment in a stone shed owned by Braman and Lamb. The Rutland Fire Society's equipment was stored in a shed until 1829 when the charter for the Society was reorganized and a firehouse was built.

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Early Box Style (1850-1870)

A traditional form of construction emerged when towns began to provide public support for volunteer firefighters by erecting buildings for the protection of the apparatus. From 1850, when towns first recognized firefighting as a civil service by providing buildings, until 1870, firehouses were most often constructed in the Greek Revival style, popular at the time, using a simple box shape, usually one or two stories high. Structures were predominantly designed to house the 2680 lb. engines, 17 foot long pump handles, and leather hoses. Some stations had bell towers attached, usually in the back, which housed the alarm bell. This style has continued to be used throughout history, usually to accommodate small communities in rural areas.

These firehouses were usually wood frame, sheathed in clapboards with stone foundations. The earliest were simple buildings with little ornamentation, a result of the small funds given to fire companies. In larger communities, and in later years, others were built in high style designs such as Queen Anne, Italianate, Richardson Romanesque, and later High Victorian Gothic styles.

Most early designs were rectangular in shape with a gable front, and one or two stories high. Some buildings had a square bell tower, whose bell acted as the fire alarm. Early designs usually incorporated two large entrance bays at the ground floor in the front of the building, and an entrance door on the side of the building.

In the interior, plans vary somewhat. The first floor was usually a large open space used to store the fire equipment, and storage space was sometimes located at the rear of the building while an internal hose drying shaft extended up through the second floor. Unlike the first floor, the second floor was most often used for other civic or social functions.

The oldest known firehouse in Vermont, Nickwackett House in Rutland, is an Italianate style building, built in 1860. It is a two-story brick building with a gable roof. The gable façade has triple arched windows over the garage door while the side elevations are four recessed bays deep with paired brackets under the eaves. Converted and no longer functioning as a firehouse, additional research is required to assess how the interior spaces were utilized.

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Hose Tower Era (c.1870-1890)

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In tandem with the implementation of community-wide water and reservoir systems, came improvements in hose-design and construction. Originally made of leather and running 40 to 50 feet in length, hoses weighed more than 84 pounds each. The development of vulcanized rubber led to the manufacture of rubber-lined cotton or linen hose. Both types required great care to prevent rot or cracking.

As established, the emergence of hand-drawn hose wagons during this time, now provided for the transport of triple the amount of hose. Subsequently, the hose tower was developed between 1870 and 1890 to provide storage and drainage for these newer, longer hoses. Towers often reached at least fifty feet - the average length of hose during this period. Aside from this development, firehouses remained traditional in form. In rural communities, vernacular forms appeared, though others were built in the styles of the period. Usually, stations were two stories high with gable roofs. Many of these stations have a raised basement, which housed mechanical systems. Most stations are rectangular in shape with a gable or eaves front. Most were balloon frame with clapboard siding, and others were brick. Central bays were often arched, and windows on the second story similarly often arched and hooded to match. Towers were incorporated on the backs, sides and fronts of buildings, sometimes engaging the central entrance into the tower design, creating a vestibule within the first story of the tower.

Some stations built an additional tower for the alarm bell, while others housed an alarm bell within the tower, giving it a dual function as bell and hose tower. The top of the tower often had a large arch-shaped opening on each of its four sides and was frequently crowned on top with an architectural embellishment such as the copper used on the Winooski station.

The Chester firehouse, for example, was built c.1878, and is a good illustration of the early box style, with a bell tower on the front and the addition of a hose tower on the rear. The massing is rectangular, with clapboard siding, 6/6 sash windows and an oversized sliding door on the main gable-front façade. The most characteristic feature of this structure is the Second Empire style embellishment of the towers. Both are topped with Mansard roofs.

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Interiors began to reflect a growing awareness of the importance of efficiency, comfort, and appearance of firehouses. Second stories enclosed sleeping quarters and a recreation room, responding to a need for better efficiency in getting to a fire in time to save a building. Other companies built firehouses that encouraged firemen to spend their leisure hours there as well. Stations developed into small, private clubs that featured many of the amenities and comforts of home such as carpeted bunkrooms, kitchens, and libraries.

The Ethan Allen Engine Company in Burlington was built in 1889 and provided space for the company's two-wheeled hose cart and four-wheeled steam pumper on the first floor and included a combined hose and bell tower that rose 85 feet from the building's basement. Pulleys allowed for 50-foot lengths of hose to be pulled up the tower for drying. A trap door in the first floor permitted firemen to drop dirty hose into a 50-foot tub in the basement, for cleaning prior to drying. A window in the basement created a draft that drew air up into the tower.

Steam Engine Era (1890-1910)

With expanded hydrant networks the heavier steam pumpers and chemical engines, along with increased ladder lengths, marked the transition from hand-drawn to horse-drawn engines. Initially, companies constructed barns outside firehouses, but the delay in time in fetching the horses from the barn proved too costly.

Eventually, space was made to house the horses inside the firehouse. Fire Station No. 3 Station in Burlington featured two new improved horse stalls when it was built in 1896. The "Snow Sanitary Stall" claimed to be absolutely odorless and always clean and dry. Stalls were located at the rear or sides of the apparatus, and the harnesses were often suspended from the ceilings and lowered with pulleys onto the horse's back at the sound of the alarm. Oats and hay for the horse were usually stored on the second floor and dropped down to the stalls as needed.

Nearing the turn of the century in the 1890s, fire companies began to utilize brick and other fireproof materials in firehouse construction, typical stations continued to be rectangular in shape, two stories high, with two bays on the front façade. The

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hose tower remained a popular form in the design of firehouses during this period for the drying of hoses. Roof types varied: a gabled roof was often used, but other buildings were incorporating a flat roof into their designs.

Interior styles varied with location. In rural areas, fire stations lacked the same embellishments found in more populated communities. Cornices were often heavily profiled. Some incorporated High Victorian features such as paneled and beveled doors, multi-pane transoms, segmental and rounded arch window openings, lancet windows, and brick corbelled cornices, such can be found in Bennington's W.H. Bradford Hook and Ladder Company, considered one of the finest in Vermont at the time.

In Hardwick, construction had to accommodate the weight of the apparatus with turnbuckled trusses and additional floor supports, which also offset the lateral forces of the horses and engine when they sped to answer a call.

The second floors were utilized even more at this time and were set up with dormitories, kitchens, and recreation rooms for firemen on duty. The brass sliding-pole was introduced and enabled firemen to quickly move down from the second floor to the lower floor when the alarm was sounded.

Motor Vehicle (Internal Combustion Engine) Era (1910 -)

With the development of the automobile, self-propelled pumpers began to replace the horse-drawn steamers of the preceding era. The mechanized vehicles had a number of advantages over the animal-powered versions, such as greater speed and control, as well as reduced cost in upkeep. Ladders, once again, were barely able to reach the cornice lines of increasingly taller buildings constructed during around 1910-1930. With the advent of motorized aerial trucks, ladders could be raised automatically.

Massing continued to be in a rectangular shape of brick construction, usually two stories high. Typically, stations continued to have two bays in the front of the building, though in Burlington, Central Station, for example, had four. The once popular hose tower was replaced by horizontal drying racks in the basement or first floor, and sometimes attached sheds.

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Ornamentation was frequently in the Colonial Revival style, popular at the time. Belt courses, projecting cornices and brick piers separating the bays are adornments that can be found in construction at this time. Roofs continued to vary between gable and flat.

With the acquisition of motor-driven apparatus, the interior of the firehouse was cleared of stalls and other accoutrements required to house and maintain the horses. The space of the first floor was opened up to accommodate the larger trucks coming into service. Reinforced flooring was essential and basements became utilized space, housing workshops, stockrooms, coal pockets and boiler rooms.

Also in the interior, office space was introduced to the second story to accommodate the growing professionalization of the firefighting trade. In Burlington, the second floor of Central Station incorporated a recreation room, washroom, a large clean-up room, kitchen, 14 sleeping rooms, and offices of the Chief and assistants. The station also had four sliding poles.

Converted Buildings (1870s-Present)

Throughout the history of firefighting, towns and cities in Vermont converted buildings from previous uses into firehouses. Barns and garages represent the simplest kind of building conversion. Other building types that have been converted into use as fire stations include town halls, a former school house in Morrisville in the late 1800's; the Park View Garage in Orleans in 1925; the old post office in Orwell in 1951; a Grange Hall in Isle La Motte in the late 1960's; and an old milk plant in Whiting in 1966.

One of the earliest examples of building conversion is in North Bennington where a blacksmith shop was converted to a firehouse in 1878. Here, a post and beam, clapboard sided shop incorporated new elaborate ornamentation to the main façade, incorporating Queen Anne-style architectural detailing. The building became a two bay fire station with double carriage doors on the ground floor topped by ornamented lintels and large, semi-circular clapboard arches. In Grafton, a school was converted in 1939 to a firehouse. Here a single bay garage replaced the pedestrian door, which was widened in the late 1960's.

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Methods of remodeling of these buildings to accommodate fire fighting equipment and apparatus varies depending on the period in which they were converted.

Municipal/Shared Buildings (1850-Present)

Throughout the history of firefighting in Vermont, fire companies have also shared buildings with other municipal offices. This combined usage continues today, mostly in smaller, rural communities that either lack funding for separate buildings, or do not have a need. In the early days of fire fighting, Burlington, for example, refurbished the basement of the courthouse in 1855 in order to house the fire engine and hook and ladder apparatus.

In Rochester, the fire company shared a lot with the Congregational church, and therefore used the church tower to hang dry the hoses. In St. Johnsbury, the fire station inhabits the right half of the original masonry block, while the city offices occupy the other half of the building. The Danby/Mt. Tabor Volunteer Fire Department's building is also used by the community as town meeting space. In Windsor, the upper floors of the fire station are used by the town clerk.

In Northfield, the Village Hall and Firehouse, was a single building, home also to the town meeting hall and jail. The plan of the building was a simple rectangle with gable ends facing the street. This building had clapboard siding, 6/6 sash windows, a square bell tower that housed the fire alarm, and two large entrance bays in the front. The first floor housed the fire engines and had a storage room in the rear. In addition, an internal hose-drying shaft extended up through the second floor. The main function of the first floor was simply the storage of the fire apparatus itself.

Changes Over Time

In stations that incorporated an arched design in their central bays, a rectangular shape has often replaced this design to accommodate the increasing size of trucks and allow them passage in and out of the station. Similarly, bays of other shapes have also been altered.

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Heating and lighting systems and restrooms have likely been modernized. To accommodate some of these changes, dropped ceilings may have been added. Firehouses still in use today that were once heated by woodstoves may now have a furnace or boiler located in the cellar. Historic lighting fixtures may have been replaced by fluorescent lights. Smaller rooms may have been constructed within larger spaces.

Some firehouses no longer in use for firefighting purposes generally have been converted to other uses, such as other municipal departments, commercial buildings, or housing, generating a need for modernized bathrooms, kitchen facilities, and additions. Fenestrations may also have been altered.

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III. Significance

It is expected that fire stations will be individually eligible for the National Register primarily under criterion A for their association with the broad patterns of firefighting history in Vermont. In addition, it is expected that stations will be eligible under criterion C for the distinctive characteristics of their period and property type. Firehouses also are often eligible for the National Register as integral parts of historic districts. Further research may show that some firehouses may be eligible under criteria B and D.

It is most likely that fire stations will be nominated under the areas of significance of politics/government and architecture. It is expected that the level of significance will be state and/or local.

The historic context and significance of firefighting and firehouses in Vermont are described more fully in section E, Statement of Historic Contexts, and are summarized below.

Firehouses clearly reflect the long history of firefighting in Vermont as well as the social, political, economic, and technological trends associated with fire protection. They were and are important, and often iconic, buildings in their communities—sources of civic pride both at the time of their construction and throughout their history. In addition, many firehouses have had ancillary public functions as, for example, polling places.

Vermont's historic firehouses were built in response both to a growing public awareness of the need for improved fire protection—often in the wake of a major fire—and to the changing equipment used for fighting fires. They also reflect the architectural styles of their periods and the building traditions of the day.

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The state's first firefighting groups were formed in the early nineteenth century. These were informal, volunteer "bucket brigades" with rudimentary equipment that was stored in sheds or open areas. By the mid-nineteenth century many Vermont towns had several fire companies. These private, autonomous groups functioned as social clubs as well as firefighting operations, and they were sometimes known to compete with one another. Local governments began to build firehouses to accommodate these departments—although sometimes the buildings were constructed under the auspices of a local business. Later some towns would switch to professional firefighting forces and would construct buildings for them.

The primary influences in firehouse design have been equipment and function. The role of the firehouse as a shelter for the apparatus of the firefighters has been a major determinant. Firehouses built in similar time periods display distinct similarities in appearance and layout. The evolution of firehouse design corresponds to the periods of change in the technology of firefighting along with the increasing demands placed on the firehouse by newer equipment, which grew ever larger and heavier. Among these changes were the shift from hand-pumped to steam-powered fire engines, the development of reliable fire hoses and municipal water systems, the use of horse-drawn fire equipment, and the switch to motorized trucks.

Changing functions were key forces in the evolution of firehouse design. Initially, these structures were designed only to protect equipment. However, over time they began to assume a number of social functions, including serving as meeting halls for the fire department and sleeping and living quarters for on-duty firemen. In Burlington, for example, the city's chief engineer noted in 1883 the importance of firehouses that would encourage the (then-volunteer) firefighters to spend their leisure hours in the building.

Many firehouses were built as Vermont's larger communities opted to professionalize their fire departments. They were built during the late 19th and early 20th century periods of progressive movements that promoted city government reform, professionalism, and rationalization. Fire stations from this period objectified these goals along with public pride in these new, modern public-safety organizations. Their construction—usually of fireproof masonry materials—also reflected insurance company pressure at the time.

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The architectural characteristics, including scale, materials,

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and style, of historic firehouses are described in the property type descriptions above. Firehouses are clearly reflective of architectural trends, both in New England and across the United States. They usually were built of local materials and are the primary physical markers of the evolution of firefighting in Vermont.

IV. Registration Requirements

In general firehouses will meet the registration requirements under criteria A and C because they reflect the social, political, economic, and technological changes in firefighting in the state and/or because of their distinctive architectural form and character.

Firehouses should retain the form and materials that reflect their historic use, the period of construction, as well as any changes over time. It is expected that historic firehouses will remain on their original locations. Many buildings have been altered and reconstructed to accommodate changes in firefighting practices and technologies, but it is expected that buildings meeting the registration requirements will retain integrity of design, materials, workmanship, feeling, and association.

Historic Firehouses in Use since 1955:

Changes made after 1955 to the interiors of historic firehouses in use since 1955 may also be acceptable. The extent of such acceptable changes depends on the size and character of the building under consideration and the purpose of these changes. The partitioning off of small spaces for restrooms, storage closets, mechanical systems, and/or offices is acceptable providing that the sense of the historic open space remains. The remodeling of the interiors of sheds, barns or garages is acceptable if this remodeling was necessary to provide additional space for fire-fighting related activities.

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Historic Firehouses No Longer in Use:

Some changes made to the interiors of historic firehouse buildings after they are no longer in use as firehouses may be acceptable. Changes such as partitioning off of small spaces for bathrooms, storage closets, and mechanical systems is acceptable providing that the sense of the historic open space remains. For firehouses whose exteriors have significant architectural character, their exterior qualities may outweigh negative interior changes. Larger firehouses should retain a sense of their important historic interior characteristics.

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Geographical Data:

The State of Vermont

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The multiple property listing of firehouses in the state of Vermont is based upon collaborative research conducted by 16 individuals - members of the University of Vermont's M.S. Historic Preservation Program class of 2006: Sara Jamison, Liisa Reimann, James Duggan, Doug Royalty, Amanda Ciampolillo, Laura Butler Need, Devin Colman, Susanna Prull, Lindsay Hess, Gweneth Langdon, Gregory Tisher, Todd Goff, April Cummings, Alexis Godat, Sara Gredler and Joseph Hoefflerle Jr. Sources consulted include historic photographs and newspaper articles, city directories, town reports, preservation plans and personal interviews of firefighters. The study includes towns throughout the State of Vermont, which is also the geographic area for the historic context on which this multiple property listing is based. The geographic area for this context was determined to be the entire state because many of the trends in firehouses are reflected throughout multiple towns in the state. The time period is from 1808, when the first fire company was incorporated in Burlington by the state of Vermont, to 1970.

The property type documented in the multiple property listing is firehouse. This property type is based on function, style, time period and historical period. Firehouses historically housed firefighters and their equipment.

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