

Boxborough Fire Station Building Committee

Fire Station Space Needs



April 10, 2025

Purpose of this Presentation

Educate FSBC and the public about firehouse space requirements

Relate space requirements to 72 Stow Road conceptual design

Connect conceptual plans to current total square footage needs

Designing a New Firehouse Includes an Assessment of Program Needs and Requirements

Program needs refer to all that is needed to run a smooth and efficient fire station

This includes spaces for:

- Fire and emergency vehicles and equipment
- Firefighters to decontaminate after an incident, including washing their gear
- Administrative functions for the day-to-day operations of the fire station
- Training to allow fire fighters to meet training requirements
- Emergency operations to coordinate across town, state and federal entities during an emergency such as a pandemic or natural disaster
- Dormitory and living quarters for firefighters who live on site during multi-day shifts

Boxborough Worked with Consultants to Estimate Program Requirements and Size

Program requirements and size assessed three times over past 10 years

Program requirements considered:

- Current and future staffing needs
- Equipment and storage needs
- Space for staff training, emergency operations and large group meetings
- Boxborough has only one station that must meet all needs; many other communities have a central headquarters and substations
- Parking requirements

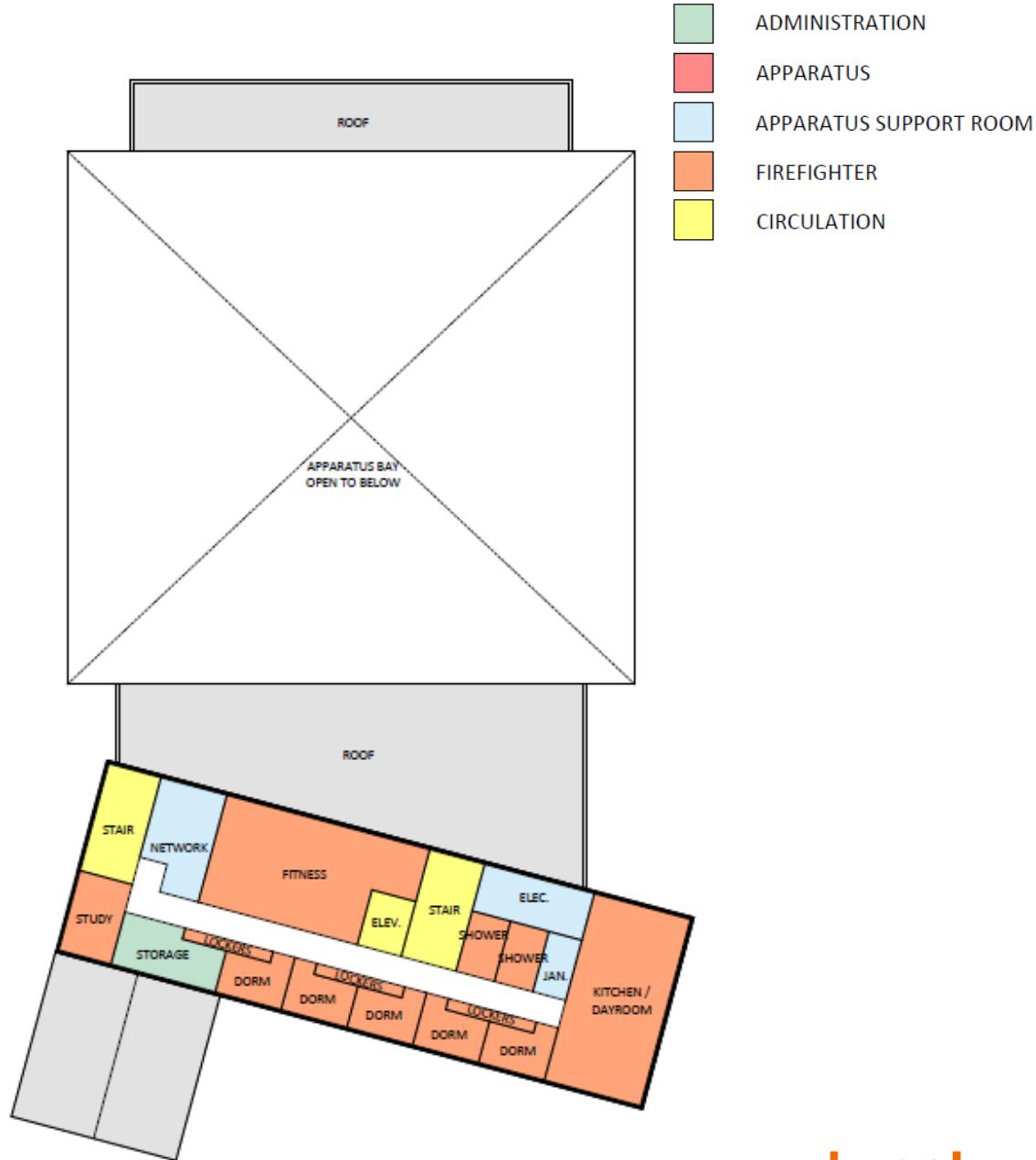
Needs assessment suggested need for a 24,000 GSF Firehouse

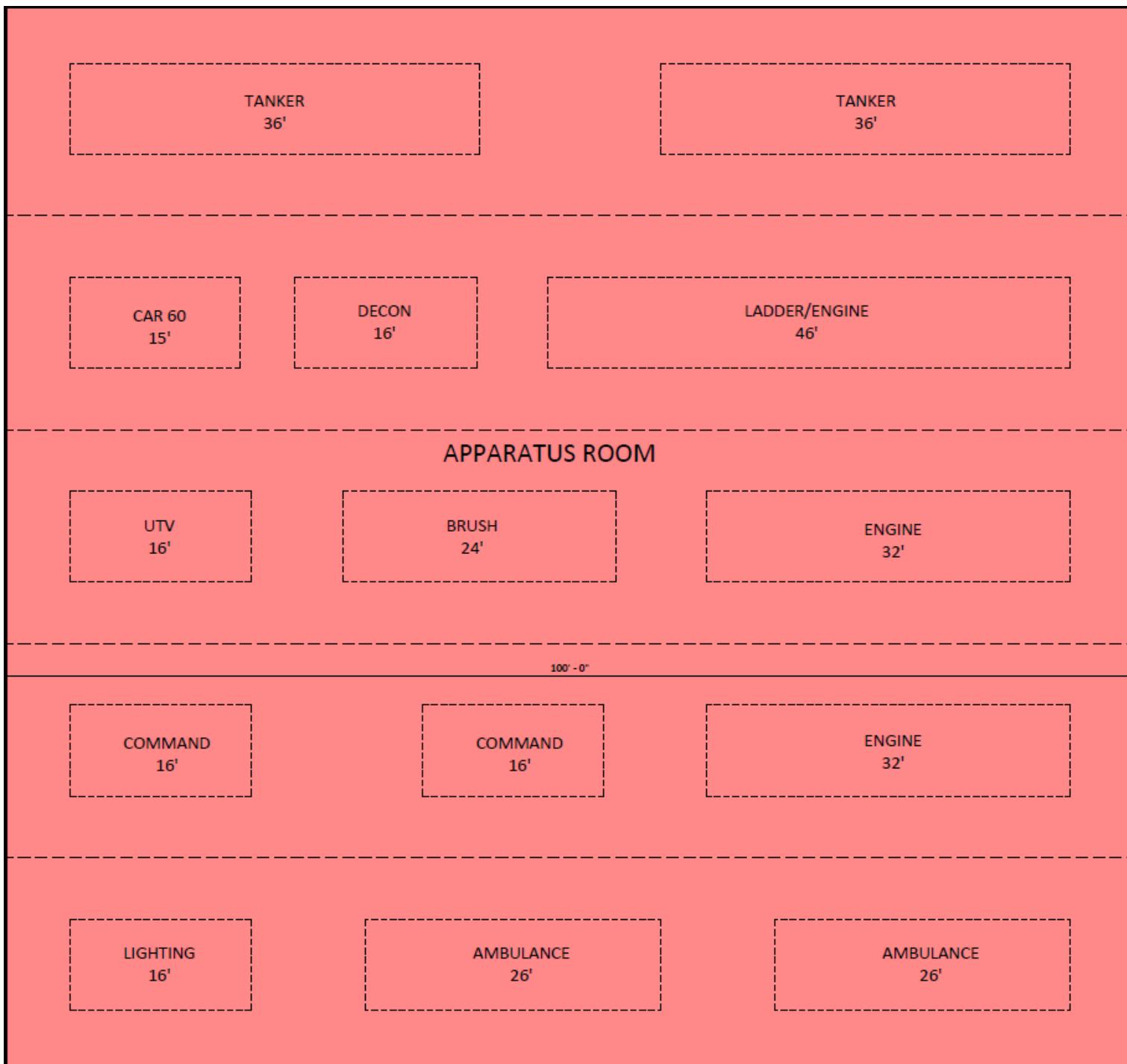
Conceptual design work has space down to 20,800 GSF (13% reduction)

More specific design could reduce size further



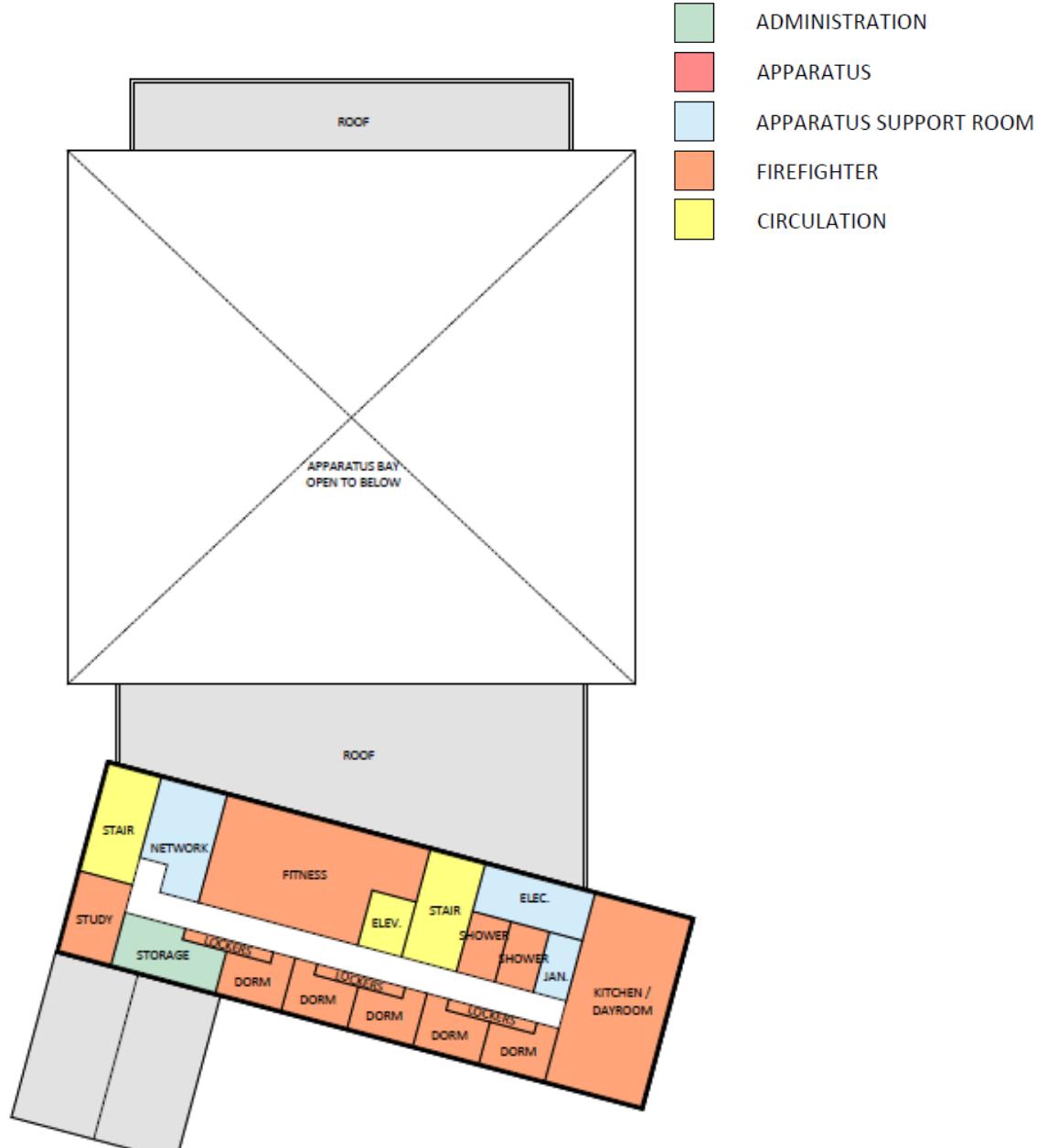
BOXBOROUGH FIRE HQ - CONCEPTUAL SITE PLAN - 72 STOW ROAD





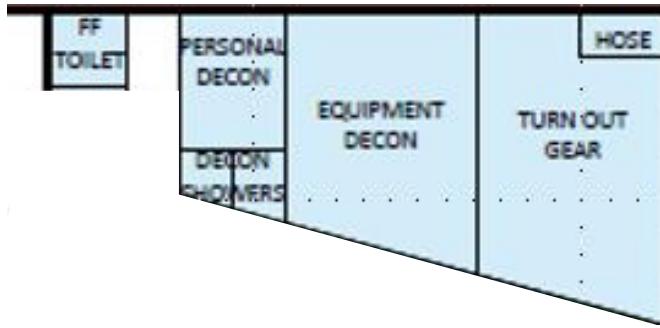
Apparatus Bay

- Will house 14 vehicles
 - Currently we house 9 vehicles
 - Additionally, 3 vehicles currently stored outside will move into the bay
 - Will continue to have 3 vehicles stored outside
 - Future net growth potential of 2 vehicles
- Designed to provide dual access
- Space between vehicles allows easy movement with equipment and in uniforms, as well as space for exhaust system
- Totals 8,827 sq ft (11,151 sq ft with grossing factor)
- Accounts for 54% of designed space



Gear Storage and Decontamination

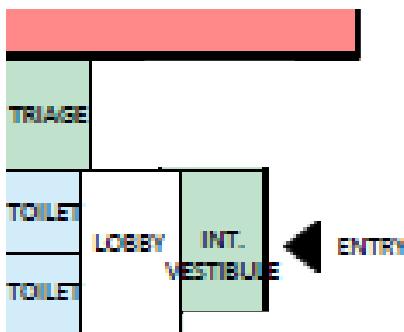
- Safety requirements include personal and equipment decontamination spaces and decontamination showers
- This space also includes space for firefighter turnout gear and a firefighter toilet room
- Totals 1,089 sq ft (1,376 sq ft with grossing factor)
- Accounts for 7% of designed space

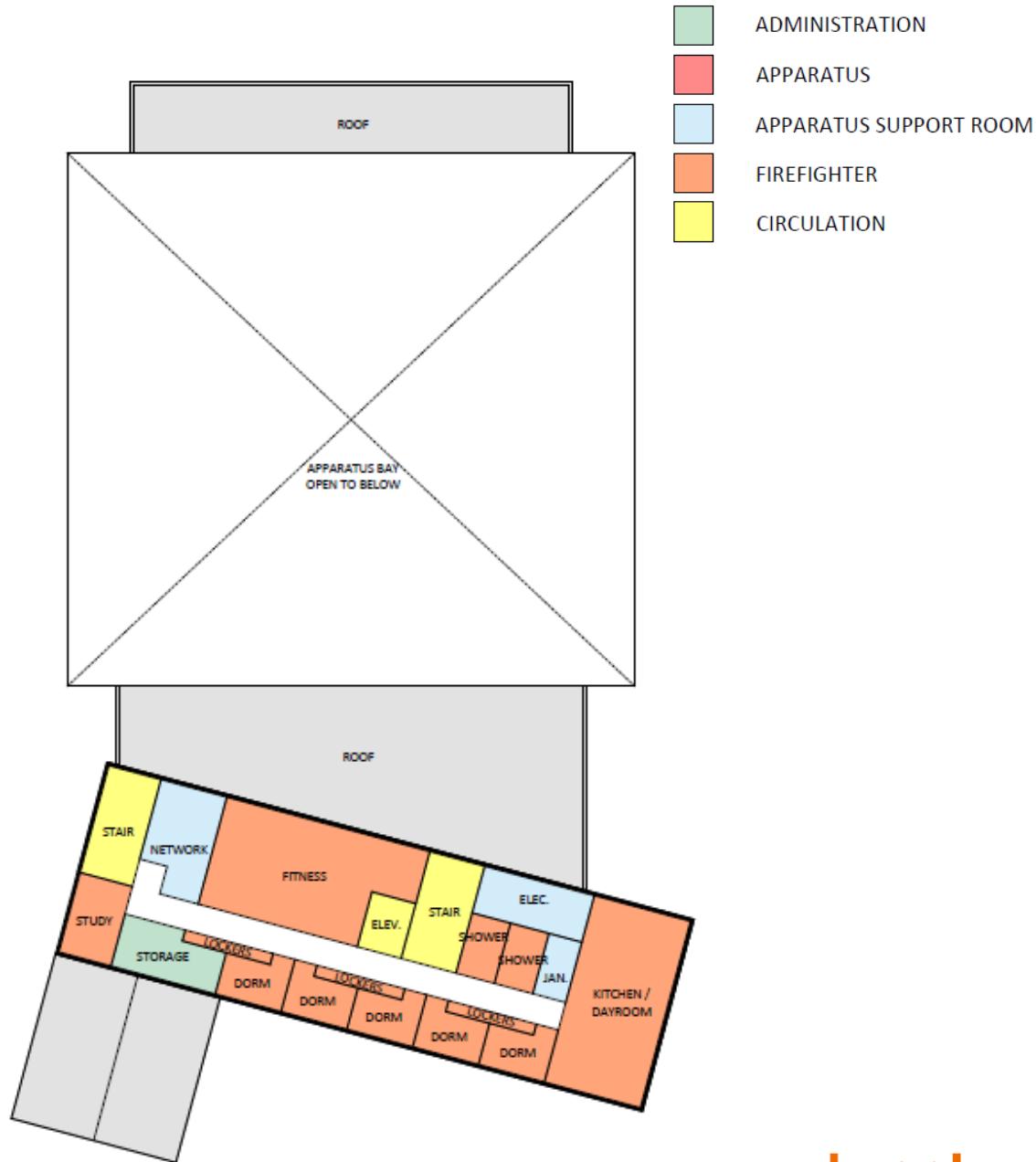


72 STOW ROAD - FIRST FLOOR

Public Entry & Triage Space

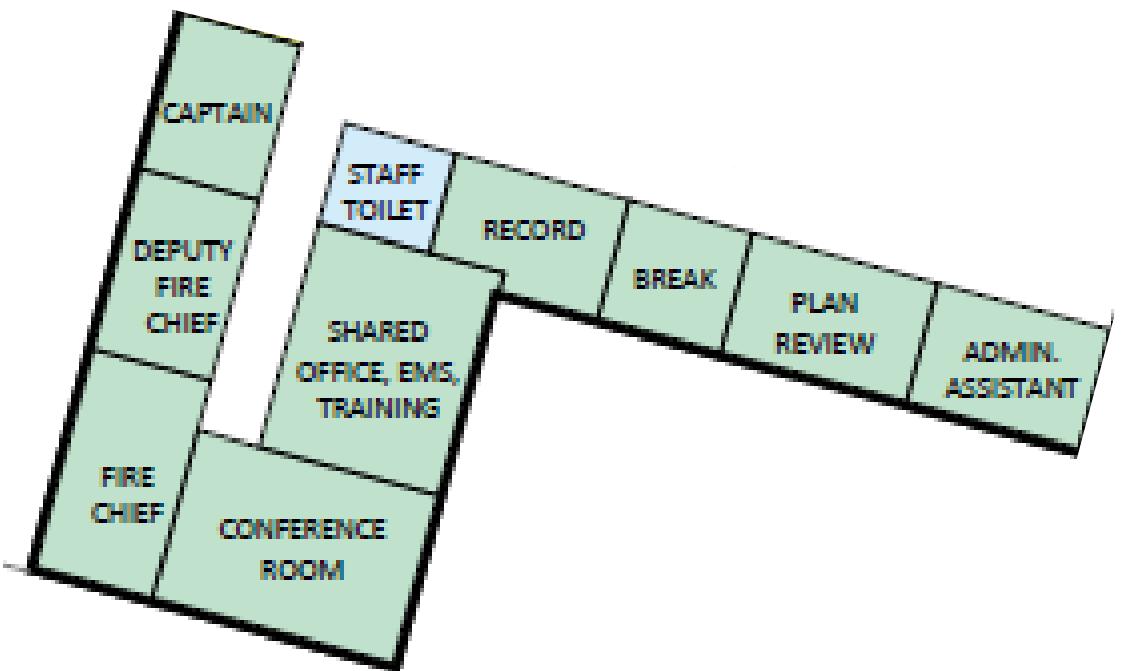
- Includes:
 - Vestibule
 - Lobby
 - Public toilets
 - Triage room
- Triage room for walk-in medical emergencies – room connects to apparatus bay for easy access to for emergency transport
- Totals 376 sq ft (475 sq ft with grossing factor)
- Accounts for 2% of designed space





Office Space & Conference Room

- 6 offices can support up to 11 staff
 - Currently we have 10 FT staff and 30 on call firefighters
 - Future net growth potential of 3 staff
- Offices range from 90 sq ft to 228 sq ft (shared office); average per person office size is 109 sq ft
- Totals 1,343 sq ft (1,697 sq ft with grossing factor)
- Accounts for 8% of designed space



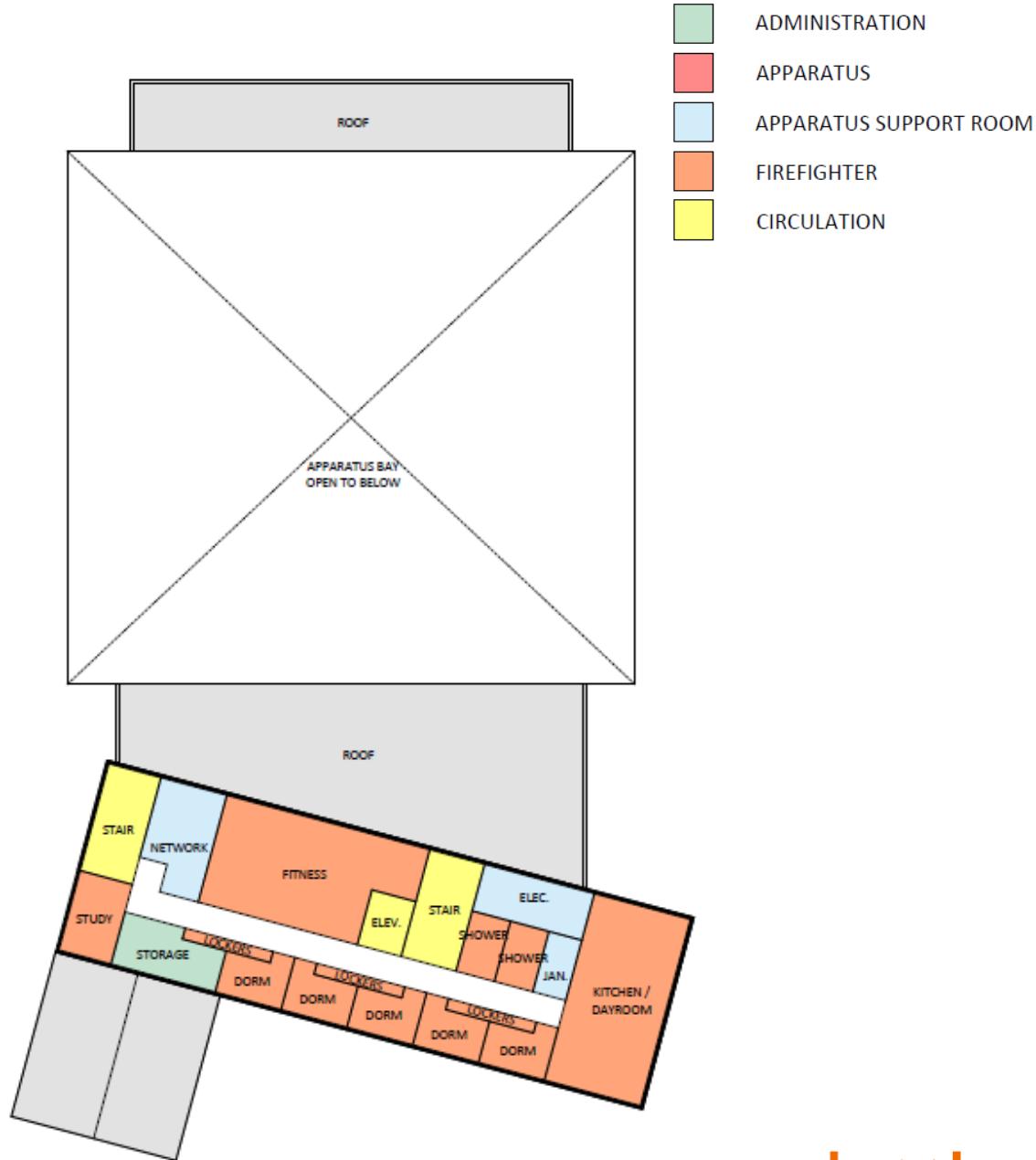
72 STOW ROAD - FIRST FLOOR

Emergency Operations/ Training Room

- Offers space for on-site training so firefighters can meet annual training requirements
- Will allow Boxborough to host trainings, which will reduce overtime needed for staff attending trainings in other locations
- Could provide reimbursement when Boxborough is the host training site
- Space can also function as emergency operations center when needed
- Will also offer additional public meeting space in Boxborough
- Totals 896 sq ft (1,132 sq ft with grossing factor)
- Accounts for 5% of designed space

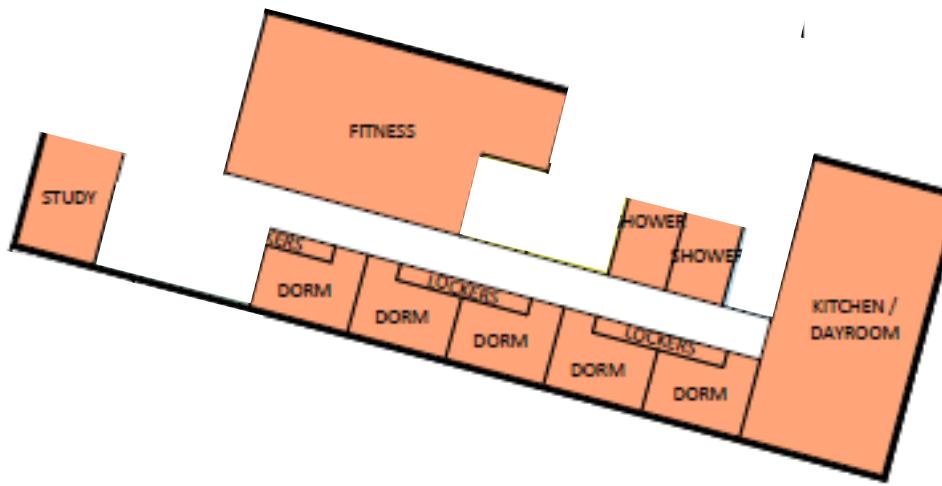


72 STOW ROAD - FIRST FLOOR



Firefighter Living Quarters & Fitness

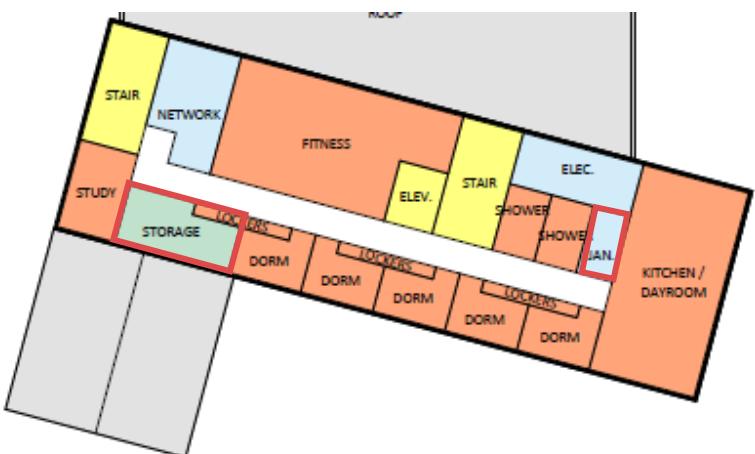
- Includes:
 - 5 dormitories with lockers in hallway
 - Kitchen/Day room
 - Shared study space
 - 2 bathrooms with showers
 - Fitness room
- Totals 1,789 sq ft (2,271 sq ft with grossing factor)
- Accounts for 11% of designed space



72 STOW ROAD - SECOND FLOOR

BERC & Other Storage

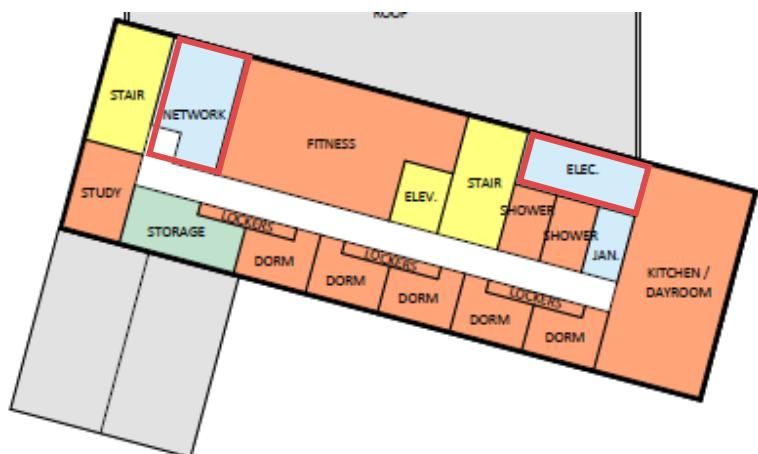
- Includes: BERC storage, janitor spaces, public education storage, fire training supply storage, hose storage, equipment storage, SCBA, maintenance workshop, EMS storage, haz mat storage, and bulk and other storage
- Totals 1,410 sq ft (1,781 sq ft with grossing factor)
- Accounts for 8% of designed space



72 STOW ROAD - SECOND FLOOR

Building Mechanicals

- Includes: EMR, mechanical room, sprinkler room, ELC, network room, and electrical room
- Totals 726 sq ft (917 sq ft with grossing factor)
- Accounts for 4% of designed space



72 STOW ROAD - SECOND FLOOR



Firehouse Conceptual Design Spaces

Firehouse Spaces	Concept Design GSF	% of Design
Apparatus Bays	8,827	54%
Gear Storage and Decontamination	1,089	7%
Public Entry & Triage Space	376	2%
FD Office Space	1,121	7%
FD Staff Conference Room	222	1%
Emergency Operations Center/Training Room	896	5%
Firefighter Living Quarters	1,208	7%
Fitness Room	590	4%
BERC Storage	243	1%
Equipment and Other Storage	1,167	7%
Building Mechanicals	726	4%
Net Sq. Footage	16,465	
Grossing Factor	26.33%	
Gross Sq. Footage	20,800	