

Boxborough Fire Station Building Committee

Historical Overview and Current Context



August 14, 2024

Purpose of this Presentation

Much work done to find the best site for a Public Safety building

Focus of FSBC established July 2024 is on a new Fire Station building

Build common understanding of past work to move forward

We'll evaluate work done to date and determine need for further studies

Aim to select a site by Fall 2024 and propose a budget at Town Meeting

Historic Timeline

Broad 10 Year+ Overview



Sites Considered

Sites Assessed and Dropped (1 of 2)

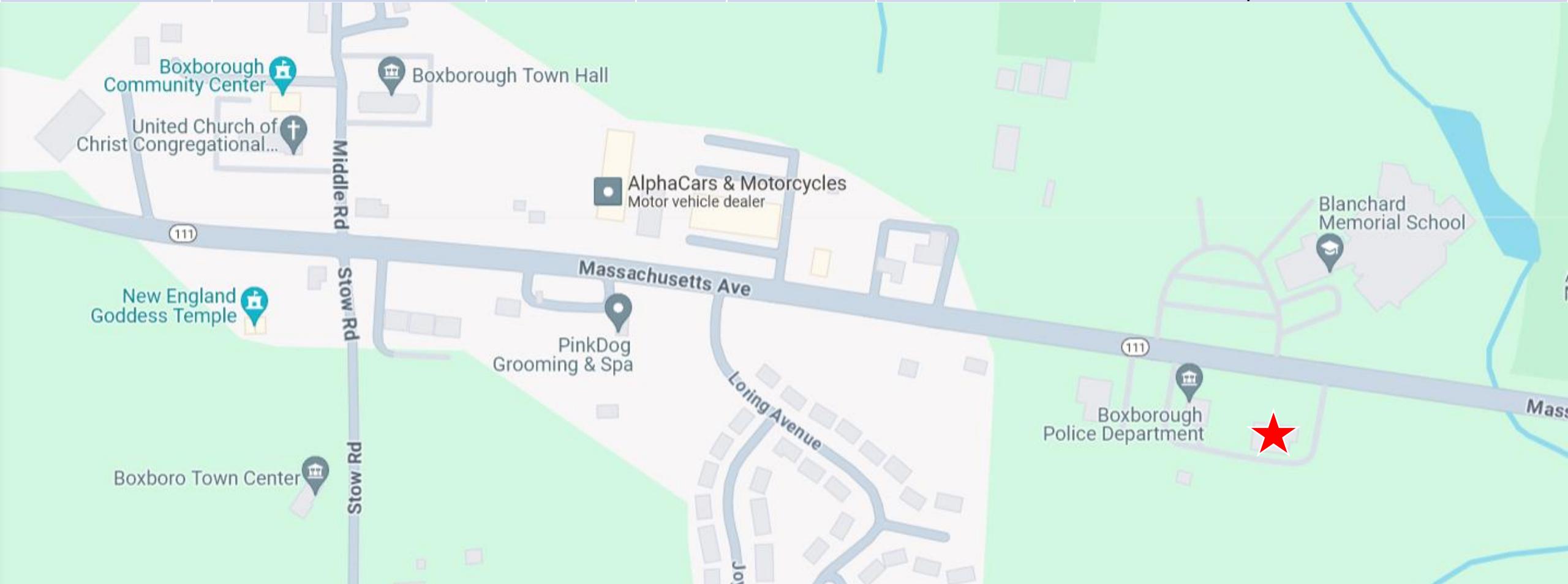
Site	Background	Issues
Campanelli Campus	Former Cisco Beaver Brook campus now Campanelli's "The Park" development	Location considered too remote for fire station
Land behind new DPW 873 Mass Ave	Picnic Trust municipal land	Steep grade at back of DPW; Concerns on Mass Ave sight lines for fire apparatus, and sharing steep DPW driveway
866 Mass Ave	Corner lot at Hughes Land and Mass Ave, across from new DPW	Heavy ledge
Land adjoining Town Hall	Would require apparatus approaches from both Mass Ave and Middle Road, acquisition of all or portions of adjoining private residences	Sharp drop off from town hall parking lot to adjoining parcel not favorable for through-circulation of apparatus from Mass Ave; Overlapping protection zones of nearby PWS; Concerns expressed by Chief White
Land abutting old DPW (593 Mass Ave)	Wanted to see if feasible to make use of old DPW combined with adjoining parcel	Wetlands and buffer zone issues reviewed by Town Planner; Appeared infeasible due to wetlands and limited upland
Land between Blanchard School and Sargent Library	Municipal Land (Hager)	Stream and wetlands issues; would require sharing Library driveway with emergency apparatus; Sight line issues;

Sites Assessed and Dropped (2 of 2)

Site	Background	Issues
Hager Land	Municipal land behind Library	Grade too steep; would require sharing Library driveway with emergency apparatus. Sight line issues
126 Mass Ave	Corner of Mass Ave and Summer Rd	Extensive wetlands
871 Mass Ave	Old Tree Masters site next to new DPW	1.9 acre lot too deep and narrow for apparatus movement
1300 Mass Ave	Commercial property corner of Mass Ave and Burroughs Rd. BBC evaluated in 2019 for feasibility of converting to PS building.	Evaluation conducted by HKT Architects and Pare Structural Engineers. Building is aging, needs renovation. WW system leach field to east on Mass Ave, nearing end of life. Estimated renovation would likely exceed costs of new construction.
975 Mass Ave	In 2017 BBC contracted Frank Vanzler for professional site construction preparation cost estimate for a one- story 20,000 SF fire station, and possible acquisition under article 3 of Dec 2017 STM. Article passed over.	North side abuts town land (Picnic Trust and Steele Farm). Owned by Dee Bus in 2017. Current assessment is \$168,000. 2017 article passed over due to high cost. Would require extensive site work due to ledge. Vanzler estimated would add ~ \$2M to purchase price in 2019, estimated at about \$2.5M for 2025.

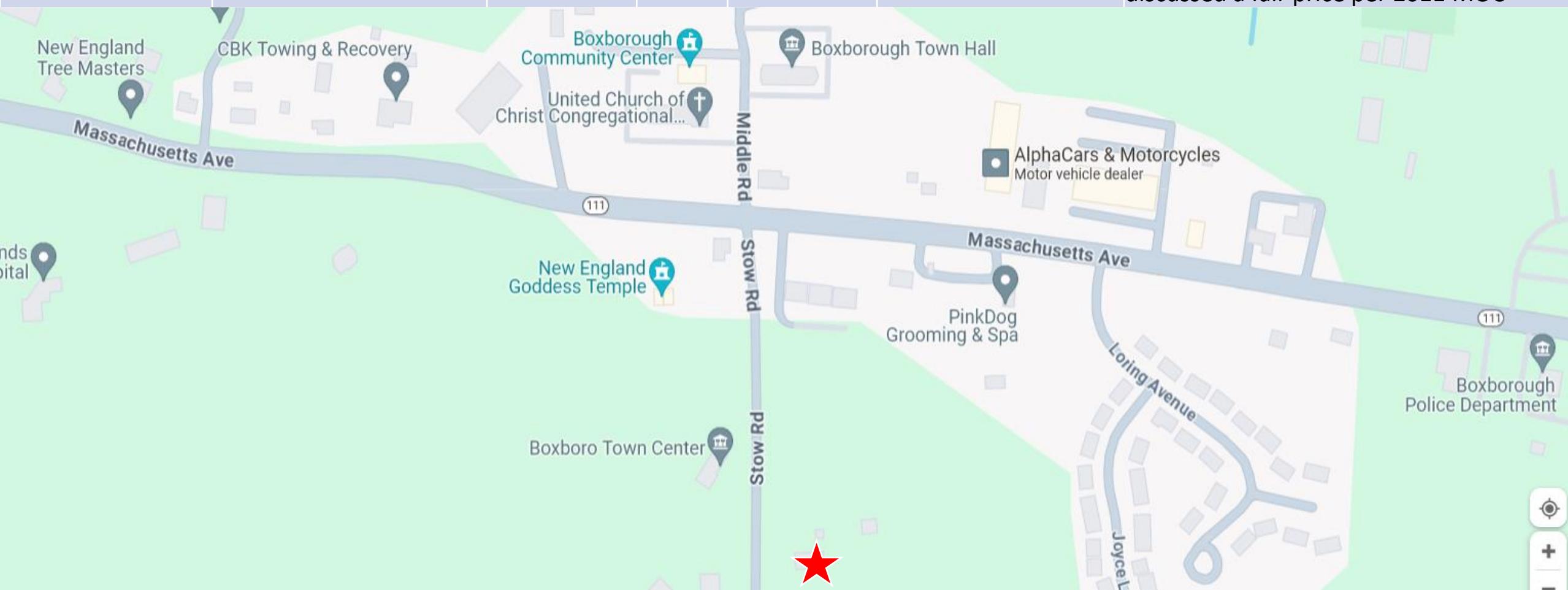
Sites Still Under Consideration: 502 Mass Ave

Site/Map #	Background	Initial Cost	Date	Est Cost 2025	Notes on Cost	Status
Current site #11	Current site on Mass Ave of Fire Station (#502) and Police Station (#520)	N/A	N/A	N/A	Town owns	2015 HKT developed conceptual design for combined PS bldg to meet space needs for both departments; noted concerns about wetlands, flood plain and soil conditions



Sites Still Under Consideration: 72 Stow Road

Site/Map #	Background	Initial Cost	Date	Est Cost 2025	Notes on Cost	Status
72 Stow Road #9	Brought to BBC attention on 4/30/2019; consensus to study	\$850,000	2010	\$1,200,000	Town owned on behalf of Housing Board; 2011 MOU	BBC voted 9-3 on 1/31/24 to recommend for fire station site. Housing Board, Housing Trust, and Select Board Reps* discussed a fair price per 2011 MOU



Sites Still Under Consideration: 700 Mass Ave

Site/Map #	Background	Initial Cost	Date	Est Cost 2025	Notes on Cost	Status
700 Mass Ave #7	Remainder of original town center proposed development now occupied by Enclave; Keith Lyons is representing the site and had several discussions with BBC	\$2,000,000	2023	\$2,121,800	Estimated cost. Lyons quoted value is \$3M but would discount \$1M; Would make site "foundation-ready"	Site work done by Lyons; Conceptual site plan by Dillis & Roy for five-bay, 2-story 21K SF fire station; Concerns marginal fit, less area than needed, Mass Ave sight lines, room for wells & septic system, no room for additional facilities; Informal talk about a sale with "give-back" but town has not received a definitive offer for sale to town



Sites Still Under Consideration: 1320 Mass Ave

Site/Map #	Background	Initial Cost	Date	Est Cost 2025	Notes on Cost	Status
1320 Mass Ave #2	Attempted negotiated acquisition	Unknown/ Negotiable	2019	Unknown/ Negotiable	Acquisition cost would be subject to future negotiations with town.	Site evaluated by Places Assoc for fire and police station. Would require relocation of existing PWS. Appeared feasible, no show- stoppers due to site constraints. No current activity. Initially had potential to tie into (relocated) Lincoln Properties' PWS water and WW treatment. Would need to start new negotiation with Lincoln Properties.



Sites Still Under Consideration: Overview



Needs Assessments

Considerations for Sizing and Siting

Fire Dept Needs

- Operations
- Critical Function
- Response Times
- Storage Needs

Other Key Factors

- Water
- Septic
- Parking
- Traffic Flow and Visibility
- Space for Public Meetings/Trainings

Building for Next 50 Years+

- Staffing Needs
- Equipment Needs and Sizes
- Sustainable/Green Infrastructure

Staffing Projections through 2050

Staffing Considerations

- Account for current and future personnel
- Growth includes
 - 1 per diem or part-time deputy fire chief
 - 1 additional FT day-time officer
 - 1 EMS coordinator or additional per diem officer

Staffing Projections

Current Staff	Additions	Total
8	3	11

HKT Architects Public Safety Space Needs Assessment

May 2015

Space Needs	Gross Square Footage
Shared/Town Spaces	6,427 GSF
Police Dept Spaces	10,179 GSF
Fire Dept Spaces	18,362 GSF
Total*	34,967 GSF

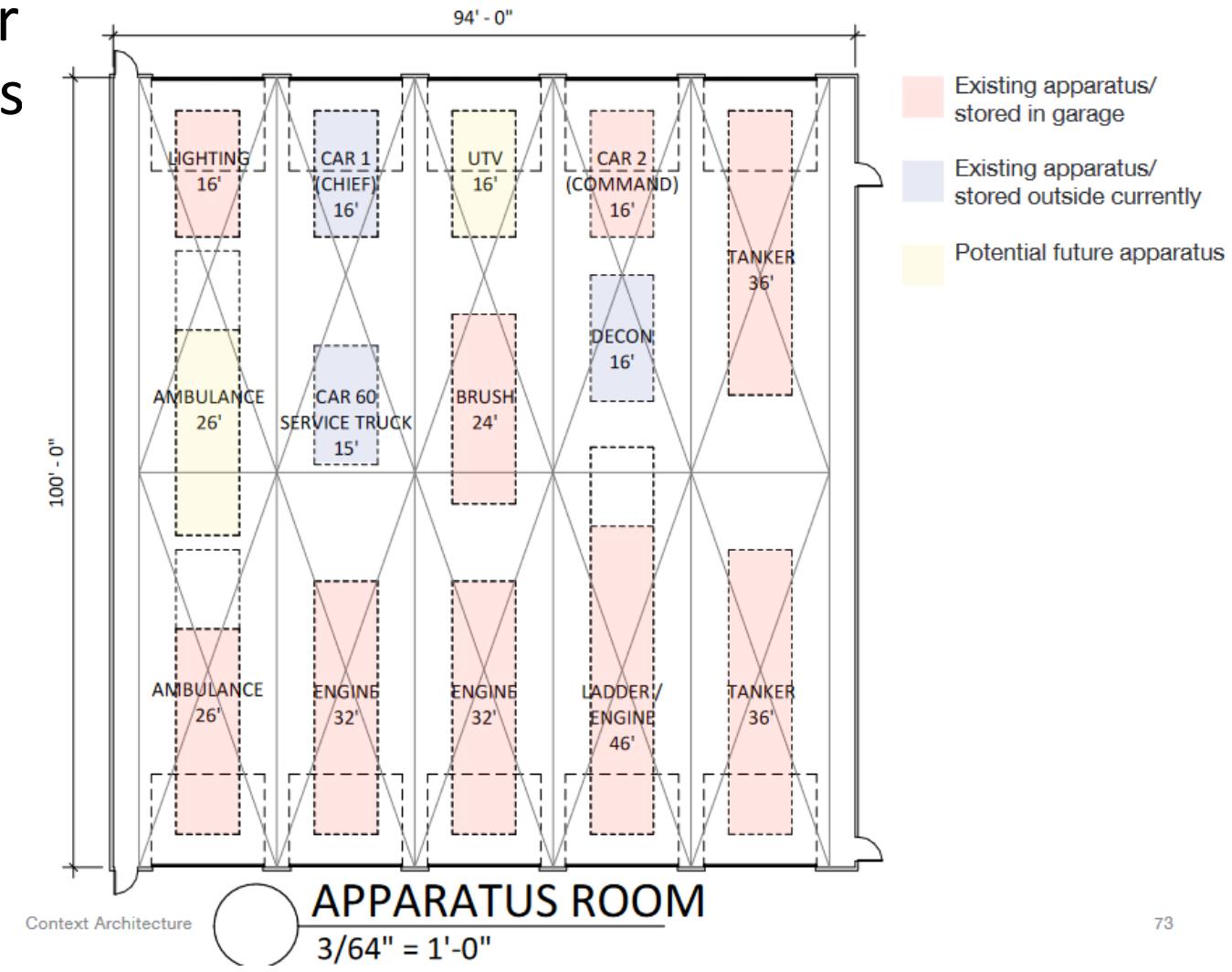
**Numbers do not add up due to rounding of figures after applying grossing factors*

Parking Needs	Parking Spaces
Visitor/Town Employee Spaces	11
Police Dept Spaces	27
Fire Dept Spaces	21
Total	59

Context Architecture: 24,013 GSF Fire Station

Feb 2023

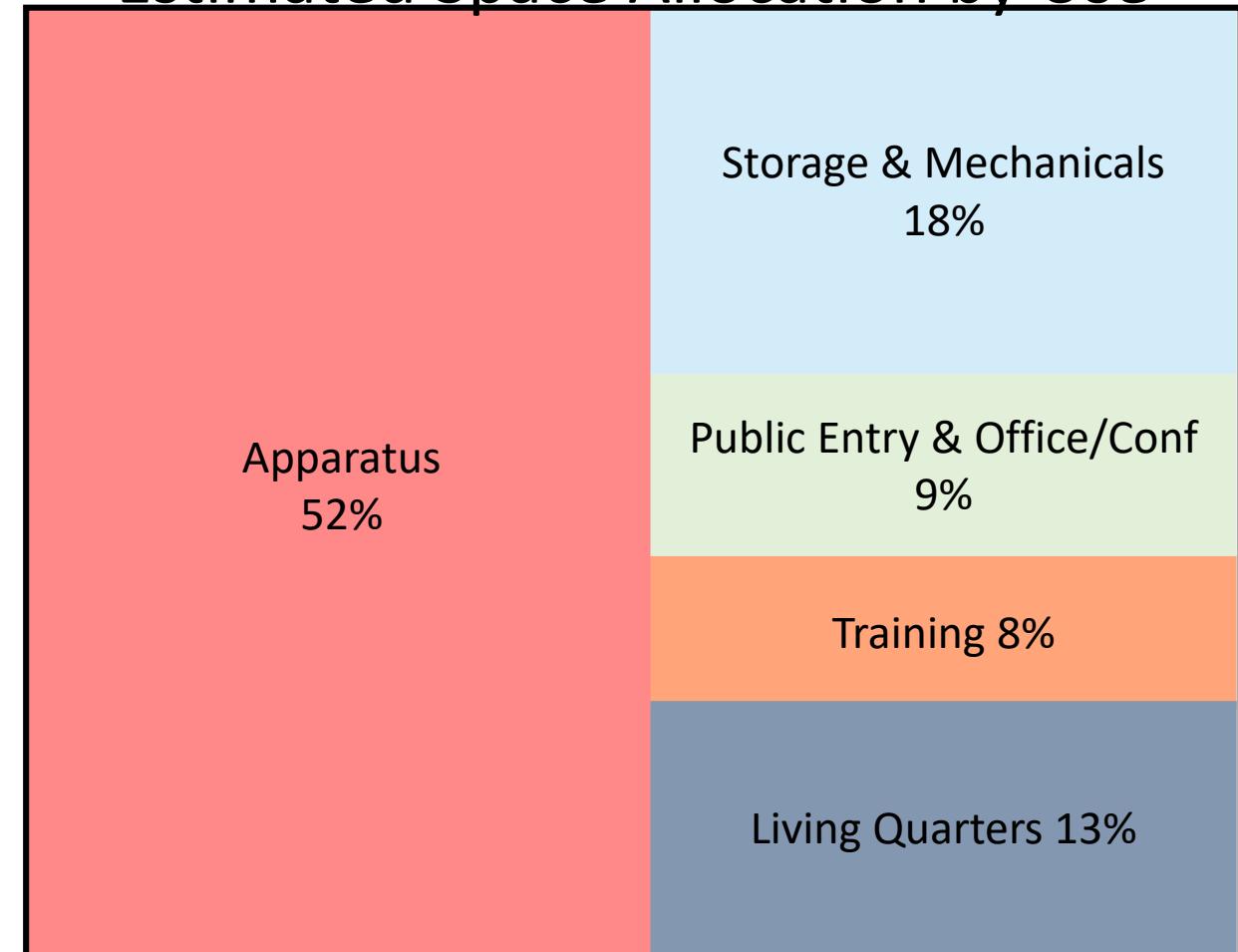
- Includes administrative, firefighter quarters, apparatus and apparatus support areas
- Also includes:
 - Area for decontamination
 - Public meeting & training room
 - Storage and locker spaces
- Considered:
 - Currently 12 apparatus (9 inside, 3 outside)
 - Addition of 1 ambulance and a UTV on trailer
 - Increase of 3 FT staff over 30-year period



Boxborough Fire Station Space Needs

Space Allocation GSF	Existing	Proposed
	Station GSF	Station GSF
Apparatus Bays	4,000	9,400
Storage	640	377
Gear Storage and Decontamination	435	1,984
BERC Storage	-	280
Building Mechanics	250	692
Public Entry Space	136	443
Office Space	285	976
Conference Room	-	220
Training Tower	-	396
Training Room	780	988
Firefighter Living Quarters	889	1,665
Fitness Room	480	634
Net Sq. Feet	7,895	18,055
Grossing Factor		33%
Gross Sq. Feet	7,895	24,013

Estimated Space Allocation by Use



Cost Estimates

Preliminary Cost Estimates

These costs are illustrative based on known public data. As design progresses, these estimates could swing based on a number of factors

	A	B	C	D = B * C	E	F	G = D + E + F	H = G *. 10	I = G + H	J = A + I
	Land						Total Estimated			Potential
Options Est to Date	Acquisition Cost - 2025	Total Sq. Footage	Cost/Sq. Ft -2023	Total Hard Costs	Total Soft Costs	Total Contingency	Cost without Land - 2023	Escalation to 2025	Total Building Cost 2025	Total Project Cost 2025
Stand Alone										
Fire - Stow										
Road	\$ 1,324,272	24,013	\$ 1,000	\$ 24,013,000	\$ 4,802,600	\$ 2,881,560	\$ 31,697,160	\$ 3,169,716	\$ 34,866,876	\$ 36,191,148
Stand Alone										
Fire - S700										
Mass Ave	\$ 2,121,800	24,013	\$ 1,000	\$ 24,013,000	\$ 4,802,600	\$ 2,881,560	\$ 31,697,160	\$ 3,169,716	\$ 34,866,876	\$ 36,988,676

A	Source Per File from Les Fox with escalation. Subject to future negotiation.
B	Per Context Space Needs Report. Sq. Footage would be adjusted through future design work but is directionally correct in terms of needs.
C	High Level Estimate from Jeff Shaw at Context, \$850/sq. ft for combined facility, \$1000/sq. ft. for stand-alone
D	Hard Construction Costs (Sq. Footage x Cost per Sq. Ft)
E	Soft Costs estimated at 20% of Hard Construction Costs. Would include OPM, Designer, Furniture, and other equipment for building. Range of 20 - 50 % of Soft Costs provided by Jeff Shaw at Context
F	Estimated at 10% of Total Hard and Soft Costs
G	Total Hard and Soft Construction Costs without land in 2023
H	Assumes 10% escalation over two years with construction starting in 2025
I	Total Hard and Soft Construction Costs without land in 2025
J	Total Estimated Project Cost including Land Acquisition

Past Feasibility Work

Feasibility Study of 72 Stow Road

Assessed by HKT & Pare Corp in Aug 2021 for Public Safety Project

Adequate space for public safety building and future small community center

Could require 3 wells or 2 wells with negotiated abutter easement

Needs further investigation of ground water levels

Conceptual “test fit” layouts developed

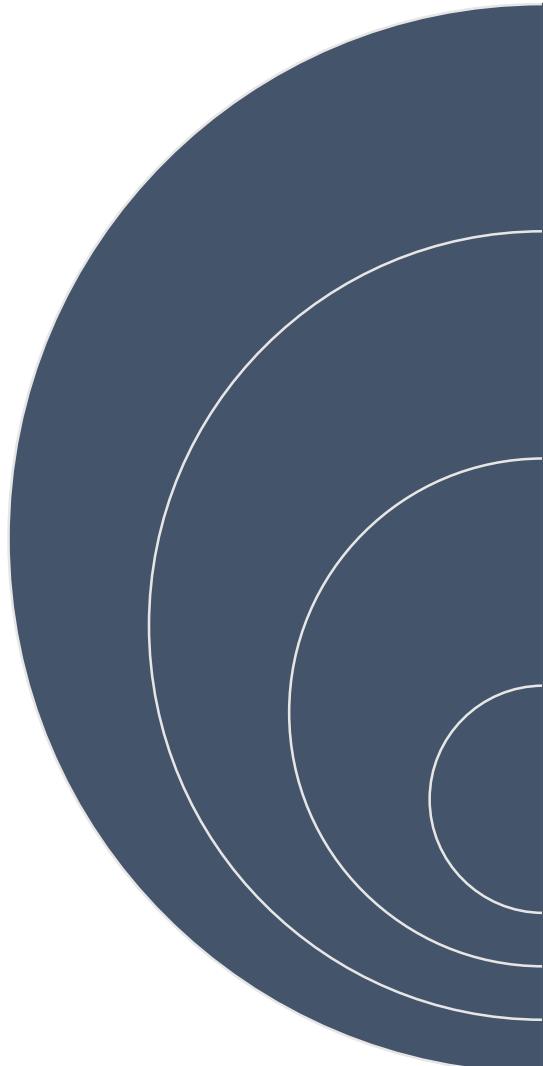


Context Architecture Work Available Now:

Ready to present
72 Stow Road and
current design
considerations

Preliminary work
done on current
fire station
(502 Mass Ave)

Potential FSBC Next Steps



Review existing feasibility and assessment materials in more detail (e.g., studies, site lines, testing)

Meet with Context to get input on 72 Stow Road and 502 Mass Ave

Work with OPM to prioritize sites and assess need for further feasibility studies

Conduct assessments as needed and select best site