TOWN OF HAMPDEN

Fire Department Conditions Assessment & Expansion Options Report Phase 1

July 14, 2020

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July 14, 2020

Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

1.0 EXECUTIVE SUMMARY

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Section 1 Executive Summary

1.1 Overview & Scope

The Town of Hampden is seeking to:

A. Examine the current conditions of the Hampden Fire Department (HFD) Station located at 19 North Road,
B. Meet with the appropriate staff to discuss known building issues, concerns and anticipated expansion and/or renovations for the HFD.
C. Describe current and future operational and personnel needs of the HFD to determine needed facility space through in-depth programming sessions,
D. Determine whether to renovate existing facilities or to build new,
E. Determine if facility needs to be located if the current site is found unacceptable to programing needs,
F. Determine estimated cost comparisons of options.

The overall project is organized in three phases:

1. Phase 1 of this project, reported here, includes an assessment of existing conditions, a description of operational and personnel needs in order to determine current and future space requirements, prioritized lists of facility and site repairs, a conceptual cost analysis of repairs, and commentary on the potential longevity and viability of the facility for use.
2. Phase 2 (subject to the issuance of a *Notice to Proceed*; not included in this Study) calls for the assembly of Schematic Building Plans and Elevations of the approved conceptual option along with a Conceptual Site Plan. Details will also be assembled to provide a professional cost estimator all necessary information to develop a Schematic Cost Estimate for the Project.
3. Phase 3 (not included in this Study) involves assembling all required Bid Plans and Specifications required to successfully sending the project out to public bid.

This Phase 1 Report is organized in the following sections:

1. Section 1.0 – Executive Summary presents a summary of the study's scope, methodology, and findings. It also briefly summarizes the recommendations for this first phase.

2. Section 2.0 – Facility Conditions Report presents detailed descriptions of current conditions related to structure, building envelope, interior conditions, site conditions, ADA compliance, life safety

requirements, and mechanical and electrical systems. It also presents an evaluation of the cost implications to allow the building to remain in HFD use.

3. Section 3.0 – Programming presents detailed space requirements. The findings are based on the operational and personnel needs of HFD. This section includes space and early square footage cost comparisons between existing space and current conditions to future requirements.

4. Section 4.0 – Project Options presents a series of conceptual building/site plans ranging from:
    - No building addition with focus solely on deficiency/maintenance upgrades to the Fire Station
    - New Apparatus Bay Addition options with a range of renovation scope for the existing Fire Station spaces
    - New Fire Station on the existing site
    - New Fire Station on a New Site to be determined

5. Section 5.0 – Recommendations presents Phase 1 recommendations based on the findings and cost-related options assembled in the previous Study Sections, including a listing of immediate safety-related building improvements and short term and long-term repair and improvement priorities. It also provides an overview of the steps to be taken to move ahead to Phases 2 & 3.

1.2 Methodology

To conduct the Study, Mitchell Associates Architects, PLLC (MA) assembled a team of partner firms each with extensive experience in all areas related to the goals of the project. MA coordinated the team, conducted the existing condition evaluation, conducted the Fire Operations Programming and is responsible for the recommendations and report.

Emtec Consulting Engineers, PLLC conducted a detailed field visit to review all building systems including Electrical, Mechanical, Plumbing, Fire Alarm and Fire Protection (MEP/FP) and assisted in the assembly of all MEP/FP corrective actions and associated rough cost estimates related to all observed existing conditions.

The program we have developed is an accurate description of the needs of the Hampden Fire Department as judged by the stakeholders at the time that they were interviewed. As such, they are a "snapshot" of a point in time and will evolve between today and the time that your facility is finally built. This is normal.

1.3 Findings

Note: A Cost of Construction Escalation rate of 4% per annum applied over three years totals a cumulative increase of 12.9% for estimated Fall 2022 construction start. This Escalation Rate has been equally applied across all cost estimates to present a level playing field for all comparative cost options. These escalation increases are entered on the Option spreadsheets as the below fees were taken directly from the individual assessment reports for each facility are represent fee estimates for work performed at current costs.

COVID-19: As of July 1, 2020, Coronavirus Disease 2019 (COVID-19) cases in the Northeast are steadily declining while significant rises are being documented in the Southern United States. Construction Projects have started back up but with **Personal Protective Equipment** *(PPE) and* **6-foot minimum separation distance** *guidelines and requirements set forth by OSHA, the American Industrial Hygiene Association and Local and State governments, among others. Determining the construction costs per square foot (costs/sf) amidst this health crisis is difficult to impossible to do. Swings of 20% up or down could be encountered in the next 6 months, 12 months, 2 years; it is simply now known at this point. We would generally consider Hampden as part of the nearby Springfield Construction Market and City Cost Index which would make it similar to our office's local Albany, NY or Capital District Market of $400/sf for new construction at Prevailing Wage rates for all labor. For safety considerations, we are using a cost/sf of $500 for the cost estimates assembled for this report. As the health condition of the area and country cannot be predicted for 6, 12 or 24 months into the future, we offer these numbers merely as a guide of the range in which the project may cost. As new information becomes available, we can re-visit these cost estimates during DD and CD stages of the project.*

The findings are summarized here and are discussed in detail throughout the Assessment Report.

Your facility was examined for its' physical condition and usability for the current and projected needs of the occupants. In the Facility Condition Report, corrective measures and estimated costs are categorized by priority with the emphasis being on immediate needs. Actions are ranked from 1 to 5 to illustrate a phased funding approach depending on the number of years that would pass until a future facility can be designed and constructed.

Potential sites have *not* been proposed but further analysis, which is outside the Phase 1 portion of the study, needs to be conducted to explore the feasibility if constructing a New Fire Station on a new site is deemed in the best interest of the Town and the HFD.

Existing Conditions

The existing Fire Station is a mix of three (3) different construction projects ranging from the original build in 1963 to the latest addition in 2011. Presently, the Station is approximately 5,011± square feet which has approximately 1,000sf dedicated to personnel and the remaining 4,013sf dedicated to fire apparatus and firematic equipment and storage. While all observations performed in the field lead this Team to conclude the existing station is in good condition from a structural perspective, spatial issues and safety and health concerns for all First Responders working in this building present risks which require immediate attention and resolution. Fire exiting and alarm-responding egress paths are compromised by narrow aisles which can result in injuries to responders. The egress widths due to the amount of equipment and storage on the bay floors result in pathways that are too narrow and not in compliance with OSHA safety guidelines.

The space available for the Fire Department is significantly less than they need, and expansion of the Fire Department space within this structure is not feasible. Water infiltration within the exterior walls, cracking and spalling brick units throughout the exterior wall systems and poor carcinogen containment within the facility are but a few significant issues in need of resolution for this facility to provide continued, useful occupancy. Further issues include an inadequate electrical service to the building, a water supply that is not potable and multiple mechanical system Code violations which require full system replacement.

We have concluded that any substantial investment into this facility is not warranted unless corrections to the deficiencies identified within the Conditions Report are addressed as part of the future solution for the Hampden Fire Station. As such, **any options presented that do not correct these significant deficiencies are not in the best interest of the Town** and do not provide critical Life Safety, Health & Welfare benefits to the Volunteers that work this Fire Station.

Summary of the Options and their Estimated Costs

OPTION 1.1 – Renovate the Existing Facility; NO Addition

Building Size Existing	5,011 sf
Building Size Increase	0 sf
Building Size @ Completion	5,011 sf
Program area ***not*** included	12,161 sf

Perform maintenance upgrades and repairs (Priorities 1, 2, 3) to the existing fire station within a period of five (5) years. *Abandon any plans for a new, building addition*.

These upgrades will (a) address general life safety issues identified in the Report, (b) provide building envelope preservation and maintenance to prevent water infiltration and damage to the existing building and (c) perform the *minimal amount* of operational modifications, renovations and repairs to support the immediate needs of the facility. No solutions presented for additional Apparatus space and properly placed and adequately sized Firematic Storage and Firematic Equipment Rooms. The construction timeline for this option will be related to the approval of funding for the different Priority 1, 2 & 3 deficiencies. Project Construction Timeline for this Option 1.1 is approximately 10-12± months.

Option 1.1 Cost Notes

- Priority 1, 2 & 3 repairs and deficiency corrections total **$1.95M** when calculated over a 1-3 year period with escalation costs:
  - Priority 1 totals for 2021 construction are estimated at $**176K**; this number **increases to $250K** if corrections are pushed out for 3 years;
  - Priority 1 & 2 totals for 2021 construction are estimated at $**350K**; this number **increases to $498K** if corrections are pushed out for 3 years;
- **Hazardous Abatement** in an existing, operating facility will cost **between $150K and $195K** depending on what year the abatement is performed.
- **NO** solution is included for the addition of First Responder Bunk Rooms
- Firefighter Safety Upgrades for Hot-Cold Zone Containment are **not feasible** and therefore ***NOT Included*** under this option.

> ***NOTE****: This is* ***NOT a viable solution*** *for the Facility due to the extreme Life Safety Code, NFPA and Building Code violations at this Facility.*

COST ESTIMATE - OPTION 1.1										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 1.1 - Renovate the Existing Facility									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1, 2, 7] - Renovations by performing Priority 1 thru 3 corrections	$175,600	$174,700	$1,022,200	$1,372,500	$41,175	$205,875	$1,619,550	$121,466	$208,922	$1,949,938
Building Addition - NONE[3]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Demolition - NONE[4]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Wood Trailer Shed	$0	$0	$10,000	$10,000	$300	$200	$10,500	$788	$1,355	$12,642
Hazardous Abatement - as Renovation[5]	$0	$0	$150,000	$150,000	$4,500	$7,500	$162,000	$12,150	$20,898	$195,048
New Building Construction - N/A[6]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Temporary Apparatus Bay - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL	$175,600	$174,700	$1,182,200	$1,532,500	$45,975	$213,575	$1,792,050	$134,404	$231,174	$2,157,628
1. Priority 1, 2, & 3 costs per Rough Order of Magnitude estimate in Assessment Report.										
2. Existing Building Square Footage calculated as 5,011 sf.										
3. Building Addition size calculated as 0 sf.										
4. Building Demolition size calculated as 0 sf.										
5. Hazardous Abatement estimate presented as an Allowance for an Occupied Building during Renovations.										
6. New Stand-alone Building size calculated as 0 sf.										
7. NO Hot-Zone/Cold-Zone containment measures are included in these costs.										

Option 1.1 Cost Estimate = $2,157,628

- **Abandon** plans for a Building Addition at the existing site. Perform Priority 1, 2 & 3 Upgrades within the limits of the current building footprint.
- **No** new Apparatus Bay, **No** new Firematic Storage Spaces and **No** new Bunk Rooms.
- **No** Firefighter Hot-Cold Zone Containment Measures are included in the above upgrades to stop the **migration of carcinogens** within the Apparatus Bays from entering Administrative and Living Spaces within the existing Fire Station.
- While the Priority Upgrades of **$1.95M** will provide an estimated 10- to 20-year added life cycle to the existing building, they will **not** eliminate the unsafe aisle widths within all areas of all Apparatus Bays or the unsafe/unhealthy air quality issues throughout the Station.
- Hazardous materials (Asbestos and Lead) will need to be mitigated from the existing building during phases of limited, building occupancy at an estimated cost of **$195K**. This is the **costliest way** to perform abatement in an existing building per State and Federal requirements.
- Project Construction Timeline for this Option 1.1 will be approximately 10-12± months.

OPTION 2.1 – Renovate the Existing Facility & Build an Addition Facing South

Building Size Existing	5,011 sf
Building Size Increase	5,822 sf
Building Size @ Completion	10,833 sf
Program area ***not*** included	6,339 sf

Perform maintenance upgrades and repairs (Priorities 1, 2, 3) to the existing fire station within a period of 1-3 years. *Move forward with original plan for a new, building addition*. Priority 1 repairs costs are **reduced by $145K** from Option 1.1 due to the new addition resolving several of the existing issues. A new well location would be needed and it should be noted that the existing Station does not currently have potable water. **An analysis by a Civil Engineer would be necessary to determine if the site septic can fit on the remaining site open area before any further design scope is performed under this Option 2.1**.

These upgrades will (a) address general life safety issues identified in the Report, (b) provide building envelope preservation and maintenance to prevent water infiltration and damage to the existing building and (c) perform a *moderate amount* operational modifications, renovations and repairs to support the immediate needs of the facility. Project Construction Timeline for this Option 2.1 is approximately 20-22± months.

Option 2.1 Cost Notes

- Priority 1, 2 & 3 repairs and deficiency corrections total **$1.74M** when calculated over a 3 year period with escalation costs:
  - Priority 1 totals for 2021 construction are estimated at $**31K**; this number **increases to $43K** if corrections are pushed out for 3 years;
  - Priority 1 & 2 totals for 2021 construction are estimated at $**205K**; this number **increases to $292K** if corrections are pushed out for 3 years;
- Apparatus exiting the new Addition onto North Rd is **problematic and driveway runs through the existing Well #2 location, the site septic, existing parking and most of the landscaped area**.
- **NO** solution is included for the addition of First Responder Bunk Rooms.
- New Firematic Storage and Equipment space will be created within the existing building and therefore will be designed with various **unavoidable limitations** as compared to a New Building Project.
- Firefighter Safety Upgrades for Hot-Cold Zone Containment are **not feasible** and therefore ***NOT Included*** under this option.
- Exiting the station addition to the south, through the Town Hall Parking lot, then out to Main Street is not viable for the following reasons:
  - The driveway next to Town Hall is too narrow.
  - The fire department has no control over who may use that driveway which can result either in a departure delay, or an accident.

- The radius on the curb cut to Main Street is too tight and would have to be modified.
- There is a pedestrian sidewalk crossing this driveway, posing a danger to pedestrians.
- This exit drive would eliminate existing parking spaces in the Town Hall parking lot.
- If the Town Hall moves to the empty school building, would the existing Town Hall building be sold, and eliminate this driveway as an option?

- Fire apparatus exiting from the addition in this scheme is problematic in that the turning radius of a future ladder truck will required the truck to travel so far south that it would require the removal of many of the existing parking spaces in the Town Hall parking lot and the truck would have to drive over the existing well for the Town Hall and the septic system.

***NOTE**: This option illustrates the limitations of this existing site if the entirety of the existing station is to remain. The resulting solution is limited to the rear of the site and the **exit path of the apparatus does not work.** The existing building to remain will be full of air leak points and compromised egress paths within the existing limits of the fire station proving this an **unviable solution**.*

COST ESTIMATE - OPTION 2.1										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 2.1 - Renovate the Existing Facility & Build an Addition Facing South									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1, 2, 7] - Renovations by performing Priority 1 thru 3 corrections	$30,600	$174,700	$1,022,200	$1,227,500	$36,825	$184,125	$1,448,450	$108,634	$186,850	$1,743,934
Building Addition -5 Lane Apparatus Bay[3]	$0	$0	$2,911,000	$2,911,000	$87,330	$465,760	$3,464,090	$259,807	$446,868	$4,170,764
Building Demolition[4] - Select Demolition	$0	$0	$5,000	$5,000	$150	$250	$5,400	$405	$697	$6,502
New Wood Trailer Shed	$0	$0	$10,000	$10,000	$300	$200	$10,500	$788	$1,355	$12,642
Hazardous Abatement - as Renovation[5]	$0	$0	$150,000	$150,000	$4,500	$7,500	$162,000	$12,150	$20,898	$195,048
New Building Construction - N/A[6]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Temporary Apparatus Bay - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL	$30,600	$174,700	$4,098,200	$4,303,500	$129,105	$657,835	$5,090,440	$381,783	$656,667	$6,128,890
1. Priority 1, 2, & 3 costs per Rough Order of Magnitude estimate in Assessment Report. Items corrected or deemed N/A by new Addition have been removed from Priority Totals.										
2. Existing Building Square Footage calculated as 5,011 sf.										
3. Building Addition size calculated as 5,822 sf.										
4. Building Demolition size calculated as 50 sf.										
5. Hazardous Abatement estimate presented as an Allowance for an Occupied Building during Renovations.										
6. New Stand-alone Building size calculated as 0 sf.										
7. PARTIAL Hot-Zone/Cold-Zone containment measures are included in these costs.										

Option 2.1 Cost Estimate = $6,128,890

- **Move forward** with Building Addition at the existing site. Perform *Select* Priority 1, 2 & 3 Upgrades within the limits of the current building footprint at a cost of **$1.74M**. New Addition costs are **$4.17M** and Abatement of occupied structure will be **$195K.**
- **No** new Bunk Rooms and inadequate parking due to site limitations under this option.
- **Costs for new site water supply well(s) and site septic system not known at this time and design solution(s) must be assessed and estimated by a Civil Engineer prior to further design under this option.**
- Only **Partial** Firefighter Hot-Cold Zone Containment Measures are included in the above upgrades to stop the **migration of carcinogens** within the Apparatus Bays from entering Administrative and Living Spaces within the existing Fire Station due to the cost-prohibitive layout of the existing facility.
- Hazardous materials (Asbestos and Lead) will need to be mitigated from the existing building during phases of limited, building occupancy. This is the **costliest way** to perform abatement in an existing building per State and Federal requirements.
- Exiting Fire Apparatus from the New Addition **does NOT work** due to site and location limitations for the addition.
- Project Construction Timeline for this Option 2.1 will be approximately 20-22± months.

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OPTION 2.2 – Renovate the Existing Facility & Build an Addition Facing East

NOTE: Option 2.1 and 2.2 are nearly identical in costs except for several thousand dollars of Demolition costs.

Building Size Existing	5,011 sf
Building Size Increase	5,822 sf
Building Size @ Completion	10,833 sf
Program area ***not*** included	6,339 sf

Perform maintenance upgrades and repairs (Priorities 1, 2, 3) to the existing fire station within a period of 1-3 years. *Move forward with original plan for a new, building addition*. Priority 1 repairs costs are **reduced by $145K** from Option 1.1 due to the new addition resolving several of the existing issues. The new Apparatus Bay would be built on the only feasible site location under this Option 2.2 which is **atop the 2 existing site wells and the site septic**. New well locations would be needed and it should be noted that the existing Station does not currently have potable water. **An analysis by a Civil Engineer would be necessary to determine if the site septic can fit on the remaining site open area before any further design scope is performed under this Option 2.2**.

These upgrades will (a) address general life safety issues identified in the Report, (b) provide building envelope preservation and maintenance to prevent water infiltration and damage to the existing building and (c) perform a *moderate amount* operational modifications, renovations and repairs to support the immediate needs of the facility. Project Construction Timeline for this Option 2.2 is approximately 20-22± months.

Option 2.2 Cost Notes

- Priority 1, 2 & 3 repairs and deficiency corrections total **$1.74M** when calculated over a 1-3 year period:
  - Priority 1 totals for 2021 construction are estimated at $**31K**; this number **increases to $43K** if corrections are pushed out for 3 years;
  - Priority 1 & 2 totals for 2021 construction are estimated at $**205K**; this number **increases to $292K** if corrections are pushed out for 3 years;
- Apparatus exiting the New Station onto North Road is *appropriately achieved*.
- **Site water supply and septic for Station and Town Hall compromised under this option. Civil Engineering solution(s) need to be explored before moving forward with this option.**
- **NO** solution is included for the addition of First Responder Bunk Rooms.
- This solution does **not** include an adequate amount of parking.
- New Firematic Storage and Equipment space will be created within the existing building and therefore will be designed with various **unavoidable limitations** as compared to a New Building Project.

- Firefighter Safety Upgrades for Hot-Cold Zone Containment are **not feasible** and therefore ***NOT Included*** under this option.

NOTE*: This option illustrates the limitations of this existing site if the bulk of the existing station is to remain. The resulting solution is limited to the rear of the site and the* ***exit path of the apparatus does not work****. The existing building to remain will be full of air leak points and compromised egress paths within the existing limits of the fire station proving this an* ***unviable solution****.*

COST ESTIMATE - OPTION 2.2										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 2.2 - Renovate the Existing Facility & Build an Addition Facing East									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1, 2, 7] - Renovations by performing Priority 1 thru 3 corrections	$30,600	$174,700	$1,022,200	$1,227,500	$36,825	$184,125	$1,448,450	$108,634	$186,850	$1,743,934
Building Addition -5 Lane Apparatus Bay[3]	$0	$0	$2,911,000	$2,911,000	$87,330	$465,760	$3,464,090	$259,807	$446,868	$4,170,764
Building Demolition[4] - Select Demolition	$0	$0	$8,000	$8,000	$240	$400	$8,640	$648	$1,115	$10,403
New Wood Trailer Shed	$0	$0	$10,000	$10,000	$300	$200	$10,500	$788	$1,355	$12,642
Hazardous Abatement - as Renovation[5]	$0	$0	$150,000	$150,000	$4,500	$7,500	$162,000	$12,150	$20,898	$195,048
New Building Construction - N/A[6]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Temporary Apparatus Bay - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL	$30,600	$174,700	$4,101,200	$4,306,500	$129,195	$657,985	$5,093,680	$382,026	$657,085	$6,132,791

1. Priority 1, 2, & 3 costs per Rough Order of Magnitude estimate in Assessment Report. Items corrected or deemed N/A by new Addition have been removed from Priority Totals.
2. Existing Building Square Footage calculated as 5,011 sf.
3. Building Addition size calculated as 5,822 sf.
4. Building Demolition size calculated as 100 sf.
5. Hazardous Abatement estimate presented as an Allowance for an Occupied Building during Renovations.
6. New Stand-alone Building size calculated as 0 sf.
7. PARTIAL Hot-Zone/Cold-Zone containment measures are included in these costs.

NOTE: Option 2.1 and 2.2 are nearly identical in costs except for several thousand dollars of Demolition costs.

Option 2.2 Cost Estimate = $6,132,791

- **Move forward** with Building Addition at the existing site. Perform *Select* Priority 1, 2 & 3 Upgrades within the limits of the current building footprint at a cost of **$1.74M**. New Addition costs are **$4.17M** and Abatement of occupied structure will be **$195K.**
- **No** new Bunk Rooms and inadequate parking due to site limitations under this option.
- Only **Partial** Firefighter Hot-Cold Zone Containment Measures are included in the above upgrades to stop the **migration of carcinogens** within the Apparatus Bays from entering Administrative and Living Spaces within the existing Fire Station due to the cost-prohibitive layout of the existing facility.
- Hazardous materials (Asbestos and Lead) will need to be mitigated from the existing building during phases of limited, building occupancy. This is the **costliest way** to perform abatement in an existing building per State and Federal requirements.
- Exiting Fire Apparatus from the New Apparatus Bay successfully exits onto North Road as part of this option.
- Project Construction Timeline for this Option 2.2 will be approximately 20-22± months.

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OPTION 3.1 – Demolish Existing Station & Build New Facility as Phased Construction w/Bunk Rooms

Building Size Existing	5,011 sf
New Building Size	17,172 sf
Program area ***not*** included	0 sf

Perform a very select few maintenance upgrades and repairs (Priorities 1 & 2 only) to the existing fire station within a period of 1-2 years. Priority repairs costs are **reduced by $1.91M** from Option 1.1 due to the elimination of the entire existing station. The few select repairs remaining **keep the existing station operable while the new Apparatus Bay is constructed.** The new Apparatus Bay would be built on the only feasible site location under this Option 3.1 which is **atop the 2 existing site wells and the site septic**. New well locations would be needed and it should be noted that the existing Station does not currently have potable water. **An analysis by a Civil Engineer would be necessary to determine if the site septic can fit on the remaining site open area before any further design scope is performed under this Option 3.1**.

This Option will require a scaled down version of hazardous abatement and full building demolition. When Fire Department Operations move into the new Apparatus Bay, partial Owner Occupancy will take place and the HFD will begin operations out of the new bays while abatement and demolition occur. Once that is completed, the remaining portion of the new Station will be constructed. Project Construction Timeline for this Option 3.1 is approximately 18-20± months.

Option 3.1 Cost Notes

- Priority 1 & 2 repairs and deficiency corrections total **$38K** when calculated over a 1-2 year period.
- Apparatus exiting the New Station onto North Road is *appropriately achieved*.
- **Site water supply and septic for Station and Town Hall compromised under this option. Civil Engineer solution(s) need to be explored before moving forward with this option.**
- This solution does **not** include an adequate amount of parking.
- This solution *includes* the addition of First Responder Bunk Rooms.
- New Firematic Storage and Equipment space *will be created* within the New Station therefore providing a clean, uncluttered Apparatus Bay floor.
- Firefighter Safety Upgrades for Hot-Cold Zone Containment *will be provided* within the New Station under this option.

***NOTE**: This option **will** deliver a state-of-the-art facility with current Building Code, NFPA and OSHA Regulation compliancy. The solution is dependent on a Phased Construction approach to allow Fire Operations to be maintained as a no-cost benefit to the Town and HFD. The Phased Construction approach will **lengthen** the time of the project by about **6-7± months** to that of Options 2.1 and 2.2*

COST ESTIMATE - OPTION 3.1										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 3.1 - Demolish the Existing Facility & Build a New Facility as Phased Construction w/Bunk Rooms									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1,2] - Select Priority 1 & Priority 2 corrections performed	$18,100	$8,500	$0	$26,600	$798	$3,990	$31,388	$2,354	$4,049	$37,791
Building Addition - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Demolition[3] - Complete Demolition	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Wood Trailer Shed - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hazardous Abatement - as Demolition[4]	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Building Construction[5,6] - Phased[7]	$0	$0	$9,444,600	$9,444,600	$283,338	$944,460	$10,672,398	$800,430	$1,376,739	$12,849,567
Temporary Apparatus Bay - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL	$18,100	$8,500	$9,544,600	$9,571,200	$287,136	$953,450	$10,811,786	$810,884	$1,394,720	$13,017,390

1. Priority 1 & 2 costs per Rough Order of Magnitude estimate in Assessment Report. Items corrected or deemed not applicable by new Building have been removed from Priority Totals.
2. Existing Building Square Footage calculated as 5,011 sf.
3. Building Demolition size calculated as 5,011 sf.
4. Hazardous Abatement estimate presented as an Allowance for an Unoccupied Building scheduled for Demolition.
5. New Stand-alone Building size calculated as 17,172 sf with an estimated cost of $500/sf.
6. COMPLETE Hot-Zone/Cold-Zone containment measures are included in these costs.
7. Phased construction costs are provided with a 10% project mark-up versus non-phased construction projects ($550/sf).

Option 3.1 Cost Estimate = $13,017,390

- Perform *Select* Priority 1 & 2 Upgrades within the limits of the current building footprint at a cost of **$38K**. Begin construction of the New Apparatus Bay while Fire Operations still respond from the existing station. **No** Temp OPS structure required.
- Upon completion of the New Apparatus Bay, the HFD will move all apparatus and operations from the existing bays to the new bays. Unoccupied building abatement will then be performed followed by complete existing station demolition. Abatement and Demolition are estimated at **$130K** total.
- Phased Construction is estimated with a complexity factor of +10% versus a single-phased construction project.
- New Bunk Rooms, new Firematic Storage and Equipment Space are all provided with this option.
- Firefighter Hot-Cold Zone Containment Measures **are included** in the above option to stop the migration of carcinogens within the Apparatus Bays from entering Administrative and Living Spaces within the New Fire Station.
- Exiting Fire Apparatus from the New Station successfully exits onto North Road as part of this option.
- Project Construction Timeline for this Option 3.1 will be approximately 18-20± months.

OPTION 3.2 – Demolish Existing Station & Build New Facility as Phased Construction w/o Bunk Rooms

Building Size Existing	5,011 sf
New Building Size	15,522 sf
Program area ***not*** included	1,650 sf

Perform a very select few maintenance upgrades and repairs (Priorities 1 & 2 only) to the existing fire station within a period of 1-2 years. Priority repairs costs are **reduced by $1.91M** from Option 1.1 due to the elimination of the entire existing station. The few select repairs remaining **keep the existing station operable while the new Apparatus Bay is constructed.** The new Apparatus Bay would be built on the only feasible site location under this Option 3.2 which is **atop the 2 existing site wells and the site septic**. New well locations would be needed and it should be noted that the existing Station does not currently have potable water. **An analysis by a Civil Engineer would be necessary to determine if the site septic can fit on the remaining site open area before any further design scope is performed under this Option 3.2**.

This option will require a scaled down version of hazardous abatement and full building demolition. When Fire Department Operations move into the new Apparatus Bay, partial Owner Occupancy will take place and the HFD will begin operations out of the new bays while abatement and demolition occur. Once that is completed, the remaining portion of the new Station will be constructed. Project Construction Timeline for this Option 3.2 is approximately 17-19± months.

Option 3.2 Cost Notes

- Priority 1 & 2 repairs and deficiency corrections total **$38K** when calculated over a 1-2 year period.
- Apparatus exiting the New Station onto North Road is *appropriately achieved*.
- **Site water supply and septic for Station and Town Hall compromised under this option. Civil Engineer solution(s) need to be explored before moving forward with this option.**
- This solution does **not** include an adequate amount of parking.
- This solution **does not include** the addition of First Responder Bunk Rooms.
- New Firematic Storage and Equipment space *will be created* within the New Station therefore providing a clean, uncluttered Apparatus Bay floor.
- Firefighter Safety Upgrades for Hot-Cold Zone Containment *will be provided* within the New Station under this option.

***NOTE**: This option **will** deliver a state-of-the-art facility with current Building Code, NFPA and OSHA Regulation compliancy. The solution is dependent on a Phased Construction approach to allow Fire Operations to be maintained as a no-cost benefit to the Town and HFD. The Phased Construction approach will **lengthen** the time of the project by about **5-6± months** to that of Options 2.1 and 2.2.*

COST ESTIMATE - OPTION 3.2										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 3.2 - Demolish the Existing Facility & Build a New Facility as Phased Construction w/o Bunk Rooms									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1,2] - Select Priority 1 & Priority 2 corrections performed	$18,100	$8,500	$0	$26,600	$798	$3,990	$31,388	$2,354	$4,049	$37,791
Building Addition - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Demolition[3] - Complete Demolition	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Wood Trailer Shed	$0	$0	$10,000	$10,000	$300	$200	$10,500	$788	$1,355	$12,642
Hazardous Abatement - as Demolition[4]	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Building Construction[5,6] - Phased[7]	$0	$0	$8,537,100	$8,537,100	$256,113	$853,710	$9,646,923	$723,519	$1,244,453	$11,614,895
Temporary Apparatus Bay - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL	$18,100	$8,500	$8,647,100	$8,673,700	$260,211	$862,900	$9,796,811	$734,761	$1,263,789	$11,795,360

1. Priority 1 & 2 costs per Rough Order of Magnitude estimate in Assessment Report. Items corrected or deemed N/A by the new Building have been removed from Priority Totals.
2. Existing Building Square Footage calculated as 5,011 sf.
3. Building Demolition size calculated as 5,011 sf.
4. Hazardous Abatement estimate presented as an Allowance for an Unoccupied Building scheduled for Demolition.
5. New Stand-alone Building size calculated as 15,522 sf with an estimated cost of $500/sf.
6. COMPLETE Hot-Zone/Cold-Zone containment measures are included in these costs.
7. Phased construction costs are provided with a 10% project mark-up versus non-phased construction projects ($550/sf).

Option 3.2 Cost Estimate = $11,795,360

- Perform *Select* Priority 1 & 2 Upgrades within the limits of the current building footprint at a cost of **$38K**. Begin construction of the New Apparatus Bay while Fire Operations still respond from the existing station. **No** Temp OPS structure required.
- Upon completion of the New Apparatus Bay, the HFD will move all apparatus and operations from the existing bays to the new bays. Unoccupied building abatement will then be performed followed by complete existing station demolition. Abatement and Demolition are estimated at **$130K** total.
- Phased Construction is estimated with a complexity factor of +10% versus a single-phased construction project.
- New Firematic Storage and Equipment Space are provided with this option.
- Firefighter Hot-Cold Zone Containment Measures **are included** in the above Option to stop the migration of carcinogens within the Apparatus Bays from entering Administrative and Living Spaces within the New Fire Station.
- Exiting Fire Apparatus from the New Station successfully exits onto North Road as part of this option.
- Project Construction Timeline for this Option 3.2 will be approximately 17-19± months.

OPTION 4.1 – Demolish Existing Station, Move Operations to DPW Yard & Build New Facility w/Bunk Rooms

Building Size Existing	5,011 sf
New Building Size	17,172 sf
Program area ***not*** included	0 sf

Perform a very select few maintenance upgrades and repairs (Priority 1 only) to the existing fire station immediately. Priority repairs costs are **reduced by $1.92M** from Option 1.1 due to the elimination of the entire existing station. The few select repairs remaining **keep the existing station operable while the new Facility is designed.** The new Administration, Public and Bunking portion of the new Facility would be built on the only feasible site location under this Option 4.1 which is **atop the existing station site well and in close proximity to the Town well and the site septic**. A new well location(s) would be needed and it should be noted that the existing Station does not currently have potable water. **An analysis by a Civil Engineer would be necessary to determine solutions for the wells and the site septic on the remaining site open area before any further design scope is performed under this Option 4.1**.

This option will require a scaled down version of hazardous abatement and full building demolition. When Fire Department Operations move to the DPW Yard, abatement and demolition occur. Once that is completed, the non-Phased Construction approach of the new Facility will begin. Project Construction Timeline for this Option 4.1 is approximately 14-16± months.

Option 4.1 Cost Notes

- Priority 1 repairs and deficiency corrections total **$26K** when calculated over a 1-2 year period.
- Apparatus exiting the New Station onto North Road is *appropriately achieved*.
- **Site water supply and septic for Station and Town Hall are compromised under this option. Civil Engineer solution(s) need to be explored before moving forward with this option.**
- This solution does **not** include an adequate amount of parking.
- This solution *includes* the addition of First Responder Bunk Rooms.
- New Firematic Storage and Equipment space *will be created* within the New Station therefore providing a clean, uncluttered Apparatus Bay floor.
- Firefighter Safety Upgrades for Hot-Cold Zone Containment *will be provided* within the New Station under this option.

***NOTE**: This option **will** deliver a state-of-the-art facility with current Building Code, NFPA and OSHA Regulation compliancy. The solution is dependent on a non-Phased Construction approach with the HFD responding from the Town DPW Yard to allow Fire Operations to be maintained as a low-cost benefit to the Town and HFD. The non-Phased Construction approach will **shorten** the time of the project from Option 3.1 or 3.2 by about **3-4± months but still delivers a completed project with inadequate parking**.*

COST ESTIMATE - OPTION 4.1										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 4.1 - Demolish the Existing Facility & Build a New Facility as non-Phased Construction w/Bunk Rooms									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1,2] - Select Priority 1 corrections performed	$18,100	$0	$0	$18,100	$543	$2,715	$21,358	$1,602	$2,755	$25,715
Building Addition - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Demolition[3] - Complete Demolition	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Wood Trailer Shed - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hazardous Abatement - as Demolition[4]	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Building Construction[5,6]	$0	$0	$8,586,000	$8,586,000	$257,580	$858,600	$9,702,180	$727,664	$1,251,581	$11,681,425
Temporary Apparatus Bay[7,8]	$0	$0	$25,000	$25,000	$750	$750	$26,500	$1,988	$3,419	$31,906
TOTAL	$18,100	$0	$8,711,000	$8,729,100	$261,873	$867,065	$9,858,038	$739,353	$1,271,687	$11,869,078

1. Priority 1 costs per Rough Order of Magnitude estimate in Assessment Report. Items corrected or deemed not applicable by new Building have been removed from Priority Totals.
2. Existing Building Square Footage calculated as 5,011 sf.
3. Building Demolition size calculated as 5,011 sf.
4. Hazardous Abatement estimate presented as an Allowance for an Unoccupied Building for Demolition.
5. New Stand-alone Building size calculated as 17,172 sf with an estimated cost of $500/sf.
6. COMPLETE Hot-Zone/Cold-Zone containment measures are included in these costs.
7. Use of adjacent DPW Yard Buildings is assumed for TEMP OPS. An Allowance for electrical drop line needs, gear lockers/firematic equipment relocation and exhausting requirements of $25,000 is provided.
8. Costs associated with a stand-alone, heated Temporary Operations Tent Structure for 12-14 months is estimated to be $200,000±.

Option 4.1 Cost Estimate = $11,869,078

- Perform *Select* Priority 1 Upgrades within the limits of the current building footprint at a cost of **$26K**.
- HFD will have needed, minor modifications performed to DPW building(s) to allow for efficient Fire Operations to be deployed from the existing DPW site next door. When upgrades are complete, the HFD will move all apparatus and operations to the DPW Yard. Fees for these minor upgrades will total approximately **$32K** and can be utilized by the DPW when Fire Operations move to the New Station.
- Unoccupied building abatement will then be performed followed by complete existing station demolition. Abatement and Demolition are estimated at **$130K** total.
- New Bunk Rooms, Firematic Storage and Equipment Space are all provided with this option.
- Firefighter Hot-Cold Zone Containment Measures **are included** in the above option to stop the migration of carcinogens within the Apparatus Bays from entering Administrative and Living Spaces within the New Fire Station.
- Exiting Fire Apparatus from the New Station successfully exits onto North Road as part of this option.
- Project Construction Timeline for this Option 4.1 will be approximately 14-16± months.

OPTION 4.2 – Demolish Existing Station, Move Operations to DPW Yard & Build New Facility w/o Bunk Rooms

Building Size Existing	5,011 sf
New Building Size	15,522 sf
Program area ***not*** included	1,650 sf

Perform a very select few maintenance upgrades and repairs (Priority 1 only) to the existing fire station immediately. Priority repairs costs are **reduced by $1.92M** from Option 1.1 due to the elimination of the entire existing station. The few select repairs remaining **keep the existing station operable while the new Facility is designed.** The new Administration and Public portion of the new Facility would be built on the only feasible site location under this Option 4.2 which is **atop the existing station site well and in close proximity to the Town well and the site septic**. A new well location(s) would be needed and it should be noted that the existing Station does not currently have potable water. **An analysis by a Civil Engineer would be necessary to determine solutions for the wells and the site septic on the remaining site open area before any further design scope is performed under this Option 4.2**.

This option will require a scaled down version of hazardous abatement and full building demolition. When Fire Department Operations move to the DPW Yard, abatement and demolition occur. Once complete, the non-Phased Construction approach of the new Facility will begin. Project Construction Timeline for this Option 4.2 is approximately 13-15± months.

Option 4.2 Cost Notes

- Priority 1 repairs and deficiency corrections total **$26K** when calculated over a 1-2 year period.
- Apparatus exiting the New Station onto North Road is *appropriately achieved*.
- **Site water supply and septic for Station and Town Hall are compromised under this option. Civil Engineer solution(s) need to be explored before moving forward with this option.**
- This solution does **not** include an adequate amount of parking.
- This solution *includes* the addition of First Responder Bunk Rooms.
- New Firematic Storage and Equipment space *will be created* within the New Station therefore providing a clean, uncluttered Apparatus Bay floor.
- Firefighter Safety Upgrades for Hot-Cold Zone Containment *will be provided* within the New Station under this option.

***NOTE**: This option **will** deliver a state-of-the-art facility with current Building Code, NFPA and OSHA Regulation compliancy. The solution is dependent on a non-Phased Construction approach with the HFD responding from the Town DPW Yard to allow Fire Operations to be maintained as a low-cost benefit to the Town and HFD. The non-Phased Construction approach will **shorten** the time of the project from Option 3.1 or 3.2 by about **4-5± months but still delivers a completed project with inadequate parking**.*

COST ESTIMATE - OPTION 4.2										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 4.2 - Demolish the Existing Facility & Build a New Facility as non-Phased Construction w/o Bunk Rooms									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1,2] - Select Priority 1 corrections performed	$18,100	$0	$0	$18,100	$543	$2,715	$21,358	$1,602	$2,755	$25,715
Building Addition - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Demolition[3] - Complete Demolition	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Wood Trailer Shed - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hazardous Abatement - as Demolition[4]	$0	$0	$50,000	$50,000	$1,500	$2,500	$54,000	$4,050	$6,966	$65,016
New Building Construction[5,6]	$0	$0	$7,761,000	$7,761,000	$232,830	$776,100	$8,769,930	$657,745	$1,131,321	$10,558,996
Temporary Apparatus Bay[7,8]	$0	$0	$25,000	$25,000	$750	$750	$26,500	$1,988	$3,419	$31,906
TOTAL	$18,100	$0	$7,886,000	$7,904,100	$237,123	$784,565	$8,925,788	$669,434	$1,151,427	$10,746,649

1. Priority 1 costs per Rough Order of Magnitude estimate in Assessment Report. Items corrected or deemed not applicable by new Building have been removed from Priority Totals.
2. Existing Building Square Footage calculated as 5,011 sf.
3. Building Demolition size calculated as 5,011 sf.
4. Hazardous Abatement estimate presented as an Allowance for an Unoccupied Building for Demolition.
5. New Stand-alone Building size calculated as 15,522 sf with an estimated cost of $500/sf.
6. COMPLETE Hot-Zone/Cold-Zone containment measures are included in these costs.
7. Use of adjacent DPW Yard Buildings is assumed for TEMP OPS. An Allowance for electrical drop line needs, gear lockers/firematic equipment relocation and exhausting requirements of $25,000 is provided.
8. Costs associated with a stand-alone, heated Temporary Operations Tent Structure for 12-14 months is estimated to be $200,000±.

Option 4.2 Cost Estimate = $10,746,649

- Perform *Select* Priority 1 Upgrades within the limits of the current building footprint at a cost of **$26K**.
- HFD will have needed, minor modifications performed to DPW building(s) to allow for efficient Fire Operations to be deployed from the existing DPW site next door. When upgrades are complete, the HFD will move all apparatus and operations to the DPW Yard. Fees for these minor upgrades will total approximately **$32K** and can be utilized by the DPW when Fire Operations move to the New Station.
- Unoccupied building abatement will then be performed followed by complete existing station demolition. Abatement and Demolition are estimated at **$130K** total.
- New Administration, Firematic Storage and Equipment Space are all provided with this option.
- Firefighter Hot-Cold Zone Containment Measures **are included** in the above option to stop the migration of carcinogens within the Apparatus Bays from entering Administrative and Living Spaces within the New Fire Station.
- Exiting Fire Apparatus from the New Station successfully exits onto North Road as part of this option.
- Project Construction Timeline for this Option 4.2 will be approximately 13-15± months.

OPTION 5.1 – New Facility w/Bunkrooms on New Site – Use Existing Station until New is Complete

Building Size Existing	5,011 sf
New Building Size	17,172 sf
Program area ***not*** included	0 sf

Perform a very select few maintenance upgrades and repairs (Priority 1 & 2 only) to the existing fire station within a period of 1-2 years. Priority repairs costs are **reduced by $1.91M** from Option 1.1 due to the construction of a New Station. The few select repairs remaining **keep the existing station operable while the new Facility is designed and constructed.**

The New Facility will include **ALL** programming spaces and adequate parking for Staff, First Responders, Bunking Firefighters and the Public.

This option will require no need for hazardous abatement nor building demolition. When Fire Department Operations move to the New Facility, the Town can put the building and site up for public sale to assist in defraying the costs of the new site. Once that is completed, the non-Phased Construction approach of the new Facility will begin. Project Construction Timeline for this Option 5.1 is approximately 12-13± months.

Option 5.1 Cost Notes

- Priority 1 & 2 repairs and deficiency corrections total **$38K** when calculated over a 1-2 year period.
- Apparatus exiting the New Station will have adequate driveway apron lengths, proper ingress/egress with the adjoining road and the ability to have **Drive-Thru Bays**.
- Site water supply and septic for the new Station will be easily achieved due to the larger site size. No compromises will be made regarding these utilities based on an undersized site for this Essential Facility.
- This solution *includes* adequate parking.
- This solution *includes* the addition of First Responder Bunk Rooms.
- New Firematic Storage and Equipment space *will be created* within the New Station therefore providing a clean, uncluttered Apparatus Bay floor.
- Firefighter Safety Upgrades for Hot-Cold Zone Containment *will be provided* within the New Station under this option.
- The larger and more suitably sized site properly allows for *dedicated building entrances* for First Responders, Bunkers and the Public as well as properly located ADA parking at the Main Public Entrance.

***NOTE**: This option **will** deliver a state-of-the-art facility with current Building Code, NFPA and OSHA Regulation compliancy. The solution is **NOT** dependent on a Phased Construction approach **NOR** will it require the creation of a Temporary Operations location during construction. This Construction approach will **shorten** the time of the project from Options 3.1 or 3.2 by **up to 7± months** and **up to 3± months** over Options 4.1 or 4.2.*

COST ESTIMATE - OPTION 5.1										
Town of Hampden Facilities Assessment and Future Expansion Study				Date: 6-17-20						
OPTION 5.1 - New Facility w/Bunkrooms on a New Site; Use Existing Facility until New is Complete									Prepared by: KJG	
ITEM	Priority 1 Costs 2021 Funding	Priority 2 Costs 2021-2023	Priority 3 Costs 2023-2025	Priority Totals 2021-2025	Owner's Const Contingency (3%)	Project Soft Costs	SubTotals	Owner's Total Project Contingency (7.5%)	Existing Facility Escalation Costs for Fall 2022 Start (12.9%)	Totals
Existing Fire Station[1,2] - Select Priority 1 & Priority 2 corrections performed	$18,100	$8,500	$0	$26,600	$798	$3,990	$31,388	$2,354	$4,049	$37,791
Building Addition - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Demolition[3] - TBD	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Wood Trailer Shed - N/A	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hazardous Abatement[4] - TBD	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Building Construction[5,6]	$0	$0	$8,791,000	$8,791,000	$263,730	$879,100	$9,933,830	$745,037	$1,281,464	$11,960,331
New Site[7]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL	$18,100	$8,500	$8,791,000	$8,817,600	$264,528	$883,090	$9,965,218	$747,391	$1,285,513	$11,998,122

1. Priority 1 & 2 costs per Rough Order of Magnitude estimate in Assessment Report. Items corrected or deemed N/A by the new Building have been removed from Priority Totals.
2. Existing Building Square Footage calculated as 5,011 sf.
3. Building Demolition size calculated as 5,011 sf. Town to determine if demolition or sale of building is more beneficial. As such, costs set as $0 assuming no abatement will occur.
4. Hazardous Abatement costs deferred until determination of Note #3 by Town.
5. New Stand-alone Building size calculated as 17,172 sf with an estimated cost of $500/sf.
6. COMPLETE Hot-Zone/Cold-Zone containment measures are included in these costs.
7. Cost offsets for a new 3.0+ acre site versus the potential sale of the existing site and building with Utility connections are being considered as a net of $0 .

Option 5.1 Cost Estimate = $11,998,122

- Perform *Select* Priority 1 & 2 Upgrades within the limits of the current building footprint at a cost of **$38K**.
- **$0** costs are necessary for Temporary Operations.
- **$0** costs are necessary for building abatement or demolition.
- New Bunk Rooms, Firematic Storage and Equipment Space are all provided with this option.
- Firefighter Hot-Cold Zone Containment Measures **are included** in the above option to stop the migration of carcinogens within the Apparatus Bays from entering Administrative and Living Spaces within the New Fire Station.
- Exiting Fire Apparatus from the New Station have appropriate driveway apron lengths, adequate egress pathing to the adjacent roadway and drive-thru bays.
- Project Construction Timeline for this Option 5.1 will be approximately 12-13± months

Options Summary of Costs, Scope and Construction Timelines

The below chart weighs all proposed options across multiple project categories. While cost is always an important factor when considering any new construction project, the end-product level of quality, durability and viability is what will or will not endure for generations to come.

Overall project costs do not tell the whole story. Questions such as, "*Does the outcome completely satisfy the Program*?" or "*Will the final building be a safer and healthier environment for the First Responders*?" are critical for the Town to consider when deciding the importance of one option versus another. Final cost does not solely dictate the best option whether it be the lowest cost or the highest cost. "*How long will the design and construction take?"* is always dependent upon the complexity of the solution. Interior renovations on a 60-year old building will open up many unforeseen situations and added Town costs based on our decades of experience in both new construction and renovation/addition projects. The older the building, the greater chance for uncovering costly project change orders. Designing and constructing on a clear, open lot eliminates many unknown underground issues as well as the multitude of issues that could arise when opening up walls and ceiling on buildings over half a century old.

It is with these factors in mind we ask you review and consider the below comparative chart of the options presented in this Study.

OPTIONS SUMMARY										
OPTIONS	OVERALL COST	BUILDING OUTCOMES								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 1.1	$2,157,628	NO	NO	5,011	NO	YES	NO	NO	NO	10-12 mos.
Option 2.1	$6,128,890	YES	NO	10,833	NO	YES	PARTIAL	NO	NO	20-22 mos.
Option 2.2	$6,132,791	YES	NO	10,833	NO	YES	PARTIAL	NO	NO	20-22 mos.
Option 3.1	$13,017,390	N/A	YES	17,172	YES	YES	FULL	NO	NO	18-20 mos.
Option 3.2	$11,795,360	N/A	YES	15,522	YES	YES	FULL	NO	NO	17-19 mos.
Option 4.1	$11,869,078	N/A	YES	17,172	YES	YES	FULL	YES	NO	14-16 mos.
Option 4.2	$10,746,649	N/A	YES	15,522	YES	YES	FULL	YES	NO	13-15 mos.
Option 5.1	$11,998,122	N/A	YES	17,172	YES	NO	NO	NO	YES	12-13 mos.

1.4 Reporting

Based on the list of project requirements and deliverables provided above in *Section 1.1 Overview and Scope*, the ensuing sections of this Study are broken out as follows:

- Section 2 – Current Facility Conditions
  Based on field visits and observations by our Team, the HFD facility was assessed for deficiencies. The resultant report provides written and photographic documentation of the found deficiencies and organizes them into prioritized categories for repairs/upgrades. Rough Order of Magnitude (ROM) costs for each of the deficiencies are tabulated for Town and HFD review and action.

- Section 3 – Programming
  Through a series of MA Team-led interviews with end-user representatives, complete programming for the Hampden Fire Department was conducted. The resulting output is a spreadsheet identifying room-by-room needs for all HFD functions. Implementing shared-space economics, areas of general building function "overlap" are consolidated to aid in resulting cost savings for construction and maintenance.

- Section 4 – Project Options
  Using the results of *Section 3 Programming*, MA has provided multiple conceptual site plan options ranging in increasing levels of scope, construction and program satisfaction as follows:

  1. No Addition with work scope limited to the existing building footprint.
  2. New Bay Addition adjacent to the existing station with interior renovations and deficiency upgrades within the existing facility.
  3. Phased Construction approach with New Bay Addition constructed followed by the complete demolition and new construction of the new Fire Station.
  4. Non-Phased Construction approach with HFD Operations moving to a temporary location to allow complete demolition and new construction of the New Fire Station.
  5. Selection of a New Site with adequate acreage for the New Fire Station programming to be completely satisfied. Existing Station provided with minimal maintenance to allow continued use until New Station is completed.

- Section 5 – Recommendations
  In this Section all outcomes, analyses and determinations are listed in order of increasing scope towards the goal of ***complete program fulfillment*** for the Town and HFD to review, assess and advance the efforts of this Study. Tasks for stabilizing and protecting the existing Station are summarized from the Facility Assessment Report. Plans for the Town and HFD to continue on to Phases 2 & 3 with the Mitchell Architects Team should begin with the development of Schematic Plans and Elevations for the selected Project Option. The ensuing tasks would involve professional Schematic Cost Estimating based on CSI Divisional Estimating followed by Construction Documents for Bidding and Construction.

The findings of this Study include extensive detail and documentation of the condition of the existing facility and 2021 construction start cost projections for repairs and improvements. The repairs and improvements have been prioritized on a scale of 1 to 5. Priority 1 addresses deficiencies which should be corrected immediately and Priority 5 identifies as-needed/as-able corrections. *Section 5 – Recommendations* outlines actions to be undertaken and sum totals for Priority 1 corrections for the existing facility which amounts to $175,600, and Priority 2 corrections amounting to $174,700. $157,500 of the Priority 1 corrections are for electrical and mechanical upgrades to the building systems and existing Apparatus Bay corrections. These costs would be removed from the Priority 1 list if Options 3, 4 or 5 is approved. $166,200 of the overall $174,700 allotted for Priority 2 repairs would be removed from the repairs list if Option 3, 4 or 5 is approved.

A total of over $300K would be removed from the Priority 1 & 2 repairs list if the existing fire station is approved to be fully demolished or abandoned by moving HFD to a new site. If Priority 3 repairs are considered into the above totals, the project cost savings would be in excess of $1.5M as detailed in tabular format in *Section 5 – Recommendations*.

It is important to note that unidentified Asbestos Containing Materials (ACM's) and Lead-Based Materials are sure to exist in the current fire station due to the time of original construction. Mitigation per State and Federal Requirements would be considerably less expensive to remove and monitor on an entire building scheduled to be demolished. Air monitoring and mitigation guidelines are eased for buildings not in use. It will only be until a formal Environmental Investigation and Report is complete that these different costs can be more accurately assessed and quantified for Options, 1, 2, 3 or 4. Option 5 requires NO building abatement of hazardous materials.

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1.5 Conclusions

Phase 1 conclusions are summarized below:

Option 1: Renovate the Existing Facility – Perform Priority 1 & Priority 2 Upgrades for the facility. Perform Priority 3, 4, & 5 in the future when possible. No planned expansion.

> ***Not Recommended*** *– Providing no additional space for the cramped conditions in the existing Apparatus Bays is hazardous for continued firefighter operations out of this existing facility.*

Options 2: Renovate the Existing Facility and Build an Addition – Provide select Priority 1 & Priority 2 corrections/upgrades while design and construction of an addition is being performed. Options will include different orientations of the new Apparatus Bays.

> ***Not Recommended*** *– While improvements are attained by a new state-of-the-art Apparatus Bay, the renovations to the existing station will be lengthy, costly and require hazardous abatement. The solution would require civil engineering solutions for disturbed wells and septic which will likely not fit on the existing 1.0 acre lot. The construction of the existing building cannot support complete facility hot/cold zone containment and the final solution cannot support program parking needs.*

Options 3: Demolish the Existing Facility and Build a New Station as Phased Construction – Perform select Priority 1 & Priority 2 corrections which are necessary to maintain the facility as operational for the period of 24-26± months to allow for design, bidding and construction of the New Station. Perform phased construction to allow a new Apparatus Bay to be built and operational prior to the demolition of the existing Bays. Options will include the final constructed facility to be with or without Bunk Rooms.

> ***Not Recommended*** *– While the final result will be a new state-of-the-art Fire Station, the phased construction approach, hazardous abatement and building demolition will lengthen the project by 6-7± months. The solution would require civil engineering solutions for disturbed wells and septic which will likely not fit on the existing 1.0 acre lot. The final solution cannot support program parking needs.*

Options 4: Demolish the Existing Facility and Build a New Station without Phased Construction – Provide a temporary space for HFD Apparatus within the existing DPW series of buildings in the adjacent lot. Upon temporary relocation of apparatus, demolish the existing station and begin construction of the new facility. Options will include the final constructed facility to be with or without Bunk Rooms. This Option 4 will provide a shorter construction period by approximately 3-4± months and lower construction costs than Option 3.

> ***Not Recommended*** *– While the final result will be a new state-of-the-art Fire Station, the project would require hazardous abatement and building demolition which will lengthen the project by 2-3± months. The solution would require civil engineering solutions for*

disturbed wells and septic which will likely not fit on the existing 1.0 acre lot. The final solution cannot support program parking needs

Option 5: New Station on a New Site – Perform select Priority 1 & Priority 2 corrections which are necessary to maintain the facility as operational for the period of 18-20± months to allow for design, bidding and construction of the New Station on a New Site to be determined. Continue to occupy and respond to fire events from the existing station until occupancy of the New Station is attained. Demolish the existing station for sale of an empty lot *or* put property and building up for sale.

***Recommended** – While this option requires the searching and procurement of a New Site, the project scope does **not** involve hazardous abatement, building demolition, construction phasing or a Temporary Operations location. The project will produce a state-of-the-art Facility which satisfies **All** aspects of the Program and can be constructed **6-7± months quicker** than Options 3 or 4.*

Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

2.0 FACILITY CONDITIONS REPORT

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Town of Hampden Fire Station
Facility Conditions Report

Table of Contents

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2.1.a. Conditions Summary Report

a.1. Purpose

The Town of Hampden, (Town), requires a physical assessment of the Town of Hampden Fire Station located at 19 North Road, Hampden, MA for the purpose of an evaluation in a Town of Hampden Condition and Assessment Study. This investigation was performed in general conformance with *ASTM E2018-08 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process* and general industry standards.

a.2. Scope & Methodology

Our opinions are based on the results of our walkthrough visual survey of the existing conditions of the facility, as well as record documentation which has been obtained via our research or provided by the Town. During our site walkthrough, our field observer(s) surveyed the general physical condition of the subject property & structure, observed material systems and components, and identified material physical deficiencies based on visual survey. Testing, or preparing calculations of any system or component to determine adequacy, capacity, or compliance with any standard is outside the scope of this report.

a.3. Objective

The objective of this Conditions Assessment is to identify all existing conditions and deficiencies as related to intended use of this property. Further, this assessment will outline a Rough Order of Magnitude (ROM) schedule of probable costs, which would be required in order to begin a remediation program.

a.4. Definitions

Excellent: New or like new.

Good: Average to above-average condition for the building system or material assessed, with consideration of its age, design, and geographical location. Generally, other than normal maintenance, no work is recommended or required.

Fair: Average condition for the building system evaluated. Satisfactory, however some short-term and/or immediate attention is required or recommended, primarily due to the normal aging and wear of the building system, to return the system to a good condition.

Poor: Below average condition for the building system evaluated. Immediate remediation, significant work, or replacement in order to return the building system or material to an acceptable condition would be required.

Priority 1*: These are deficiencies that are threatening life safety or the facility's ability to survive. These types of deficiencies need to be corrected immediately.

Priority 2*: These are the deficiencies that have the potential to cause deterioration and/or destruction to the facility or are detrimental to Firefighter Safety and need to be addressed in 1 to 3 years.

Priority 3: These are important deficiencies that need to be corrected but can be temporarily postponed. These will need to be corrected/mitigated in 3 to 5 years.

Priority 4: These are far less severe deficiencies; they are upgrades that can be deemed cosmetic and/or convenience upgrades. These will still provide added value to your facility but are not considered critical or even important. These types of corrections can be done when extra funding becomes available or when convenient.

Priority 5: No action necessary at the time of this review.

AR: As- Required

a.5. Conditions Summary

Description	Priority*	Excellent	Good	Fair	Poor	Sect.
Civil/Site						
Overall Site	**2**					Section 2.1.c.1
Drainage	**2**					Section 2.1.c.1
Asphalt	1 & 3					Section 2.1.c.1
Architectural						
Exterior Building	**1 & 2**					Section 2.1.c.2
Interior Building – Firematic Spaces	**2**					Section 2.1.c.3
Interior Building – People Spaces	**2**					Section 2.1.c.3
ADA Compliance	3					Section 2.1.c.5
Structural						
Roof Structure**	3	-	-	-	-	Section 2.1.c.4
Exterior Walls	**2**					Section 2.1.c.4
Interior Walls	3					Section 2.1.c.4
Slab on Grade – Apparatus Bay	3					Section 2.1.c.4
Slab on Grade – People Spaces	**2**					Section 2.1.c.4
Mechanical/Electrical/Plumbing/Fire Protection						
Mechanical System	**1 & 2**					Section 2.1.c.6
Electrical System	**1** & 5					Section 2.1.c.6
Fire Protection System	3				-	Section 2.1.c.7
Firefighter Life Safety/Health Risks	**1**					Section 2.1.c.7

* Priority Items **1** and **2** are bolded for emphasis.

** Access to underside of roof framing members not accessible at time of visit.

2.1.b. General Description

b.1. Site

The Town of Hampden Fire Station is located on the west side of North Road in the Town of Hampden, MA. The Fire Station is bound to the south by the Hampden Town Hall & Library and Main Street, beyond. North Road is a 2-lane, two-way street that runs north to south and bounds the property to the east. The Town DPW yard is located directly to the west of the property and private residential properties are located to the north. The property is listed as 1 acre in size and has good street frontage with over 200 feet in length at North Road. An apparent error exists on the Town GIS website which lists the street frontage to be 80' in length; this is visually not correct and should be corrected. The site has an adequately sized asphalt apron out of the 3 bays facing North Road and the bay at the rear of the building faces south and exits through the asphalt parking and drive to reach North Road. Parking by firefighters occurs on the south side of the building. A permanent lot egress easement exists at the existing gravel drive to the north of the building for a neighboring parcel.

AERIAL VIEW ↑ North
Not to Scale

b.2. Building

The original building was built in 1963 and was 50' wide x 60' deep totaling 3,000sf. In 1988 an L-shaped addition was constructed to the north adding 1,493sf to the Fire Station. In 2011, the last addition occurred which added a 22' x 23.67' addition to the southwest corner of the station adding 520 sf to the building. The Station has a current gross area of 5,013± square feet per the web-based *CAI AxisGIS* website for the *Town of Hampden Property Card*. The original building has a mix of 12" CMU exterior single wythe walls and walls comprised of 8" CMU bonded to 4" face brick for the same overall 12" dimension. The 1988 L-shaped addition to the north is a two-wythe exterior wall similar to the original construction. The 2011 small southwest addition was construction of single-wythe, reinforced 12" CMU. The roof is an asphalt shingle roof system with standard-sized gutters on the north and south sides of the building.

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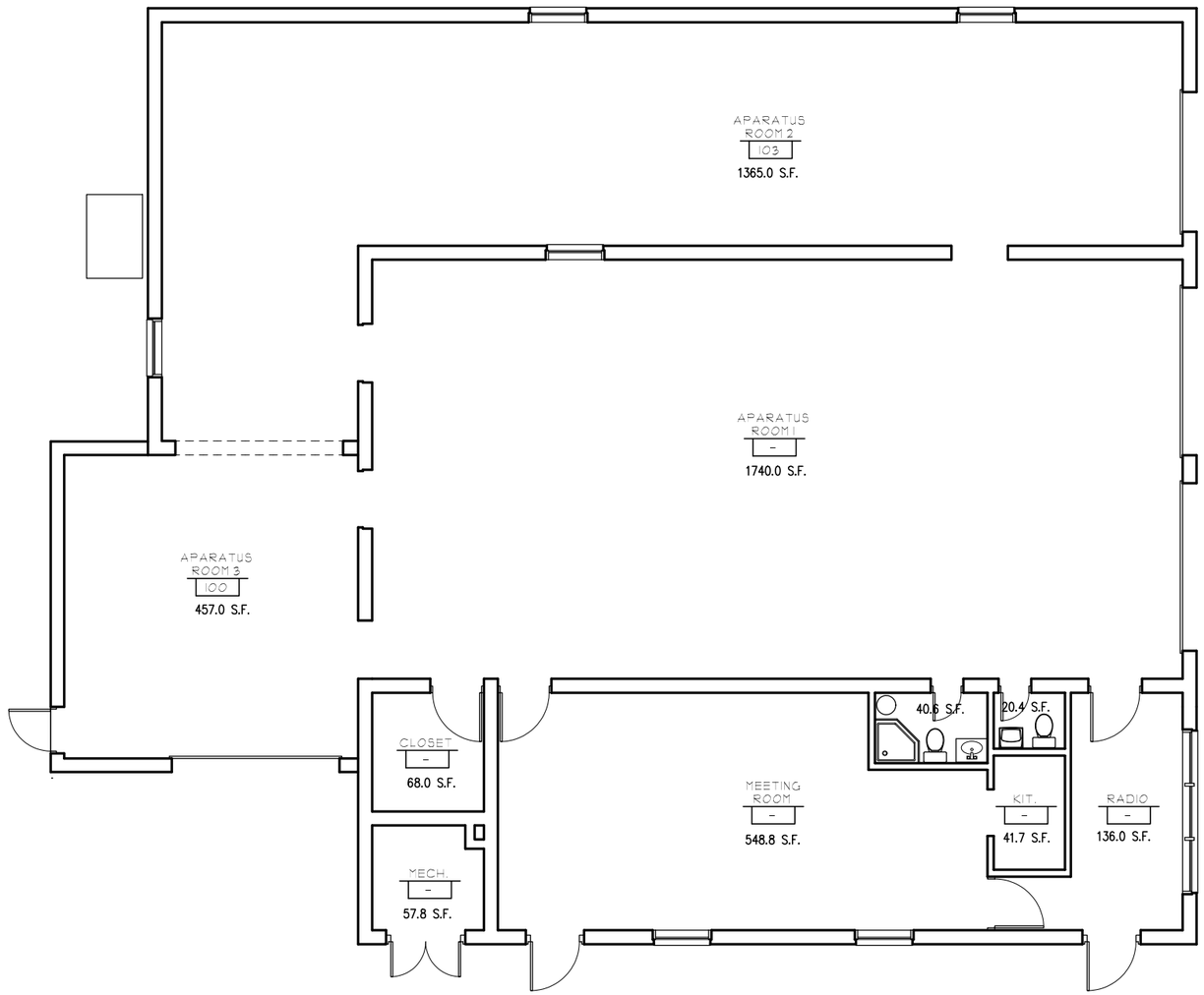

1/100 HAMPDEN FIRE STATION
FLOOR PLAN

SCALE: NTS

N

GROSS = 5,011 SF
NET = 4475 SF

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2.1.c. Conditions Assessment

c.1. Site

The existing site is accessed from North Road with two sets of egress drives to the road. One drive provides dedicated egress for the fire apparatus bays at the north side of the site and the other drive provides egress for Apparatus Room #3 as well as firefighter and visitor parking on the south side of the site; see *Images-001 through -006*. Additional firefighter parking exists on the northernmost portion of the asphalt driveway beyond the bay door openings; see *Images-007 and -008*. Only one striped parking space exists on the site and there is no dedicated accessible parking space, although room exists and simply needs to be signed and striped.

Image-001

Image-002

Image-003

Image-004

Image-005

Image-006

Image-007

Image-008

The site has asphalt surfacing wrapping around the building on three sides - to the east, south and west - and was replaced approximately 6 years ago by Department of Public Works (DPW) personnel. Overall, the asphalt is in good condition although areas of settling are developing primarily on the southeastern and southern portions of the site. Sizable cracks have developed, and immediate sealing is needed to stop the increase of water infiltration, erosion, and further settlement; see *Images-009 through -014.*

Image-009

Image-010

Image-011

Image-012

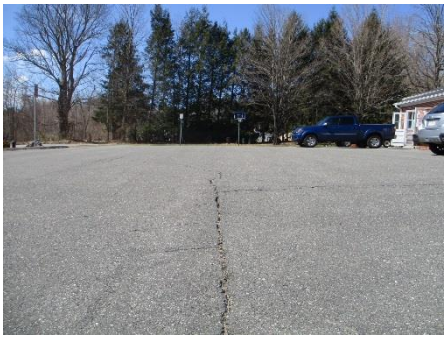

Image-013

Image-014

The site has a steep slope down toward the building at the north and northwest of the building. An erosion swale has developed as a result of this condition and the moisture and lack of sun on the north side of the building has created large areas of moss development and moisture retention at the building base; see *Images015 through -017.* The west side of the property offers a more level grading and appears relatively flat and free of water retention; see *Image-018*.

Image-015

Image-016

Image-017

Image-018

Separate building concrete aprons do not exist at the 3 bay door openings facing North Street; rather, the site asphalt aprons run back to the leading edge of the Apparatus Bay concrete slabs. This is atypical for current station design as asphalt aprons are not as robust as concrete aprons that sit on the foundation walls. Asphalt aprons have tendencies to settle and need replacement every 10-20 years, while properly formed and designed concrete aprons should have a life expectancy of 50+ years thus greatly reducing the possibility for water intrusion at and under the structural bay slabs. The current asphalt aprons are cracked and have begun the water infiltration process creating further settling and widening of the cracks. These should be repaired/sealed to eliminate further deterioration; see *Images-019 through -022*. The bay opening for Apparatus Room 3 was designed and built with a building

concrete apron and its condition was observed to be in good condition; see *Images 023 and 024*. It should be noted that this building apron is integral to the Bay concrete slab and future cracking at the interior top edge of the foundation wall may occur.

Image-019

Image-020

Image-021

Image-022

Image-023

Image-024

c.2. Exterior Building

The facades of the fire station are in **fair to poor condition** depending on which façade is viewed. The south and west facades are in fair condition, while the north and east facing façades are in fair to poor condition; see *Images-025 through -030*. The east facing façade spans from the Radio Room at the south to the 1988 addition at the northern end of the building. Most of the issues on the eastern façade are due to **water damage and infiltration into the exterior wall system**.

Image-025 - Southeast

Image-026 – Southwest

Image-027 - North

Image-028 - West

Image-029 - East

Image-030 - East

The eastern façade is comprised of a mix of two different construction projects. The Radio Room and two Bays adjacent to the Radio Room were part of the original 1963 build. The brick façade is mostly in fair condition except for **significant cracking and spalling of the brick sill units** most likely due to water entering the wall assembly. Spalling occurs when moisture gets inside the brick and freezes, causing the face to spall off, vastly increasing the deterioration process for bricks. **Mitigating these conditions is important to slow down the deterioration;** see *Images031 through -034.*

A replacement window was installed at the Radio Room due to severe rotting of the original 3-unit window assembly. Sealant at the bottom of the new window assembly appears intact and properly installed. This is the likely point of previous water entry into the exterior wall causing the **cracking/spalling bricks** at the sill and **efflorescence** (white "staining" caused by salt and lime pulled out from inside the brick by water). Sealant is missing from beneath the steel lintel above the Radio Room window and should be installed immediately to prevent more water from entering the wall assembly; see *Images-035 and -036*.

Image-031

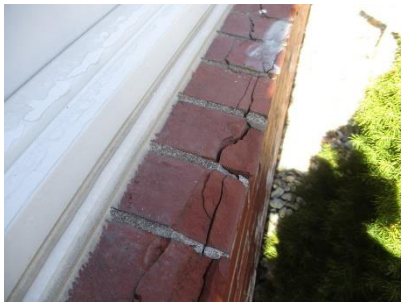

Image-032

Image-033

Image-034

Image-035

Image-036

Further signs of efflorescence exist on the east façade above the original two bay door openings. It was inconclusive from our field visit the source of **water entry into the exterior wall assembly** at these locations; see *Image-037*.

A field test was performed with the Chief and members of the Fire Department to confirm if this was a previous condition that was since resolved when a new roof was installed several years ago. A small test spot under the letter "A" was cleaned using just warm water to use as a test area, to see if the condition reappeared or not. With correspondence from the current Chief, Ed Poulin, it was confirmed that the white stains did partially reappear. Further investigation would be required to determine if the source of water infiltration still exists; see *Image 038* from 5/20/20.

Further conditions needing remediation are a failing rain gutter system on the north side of the facility and additional areas of **efflorescence** also exist on the northern side of the 1988 addition; see *Images-039 through -042*.

Other conditions on all facades requiring attention **are failing masonry expansion joints, deteriorating wood trim throughout, rusting steel lintels, failing window sealant and sunken concrete exit pads**; see *Images-043 through -050*. **All wood trim on the exterior façade at roofline and windows should be replaced in its entirety.**

Image-037

Image-038

Image-039

Image-040

Image-041

Image-042

Image-043

Image-044

Image-045

Image-046

Image-047

Image-048

Image-049

Image-050

Exterior doors, likely from the original 1963 construction, have single pane vision glass and are past their useful life and should all be **replaced with exterior grade doors with tempered/insulated glass**; see *Images-051 through -054*.

Image-051

Image-052

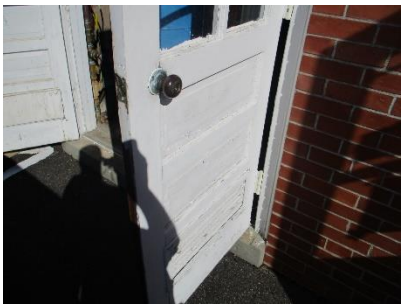

Image-053

Image-054

An exterior, open-faced shed on the west side of the building houses the building generator. The generator sits atop a small concrete slab which is surrounded by a larger concrete slab which supports the shed walls. Cracks have developed at the corners of larger concrete slab, at the corners of the smaller generator pad. These cracks should be sealed immediately to prevent further deterioration. The shed appears to have been built in-place and is inadequately framed with only the corner posts tied down to the slab. The sill plates are raised above the slab with wood blocking. Drilled in epoxy embedded anchor bolts should be added at each blocking location.
The roof rafters should have hold-down brackets installed per current Code for to prevent roof uplift; see *Images-055 through -058*.

See Section 2.1.c.7 for condition and recommendations regarding the facility generator.

Image-055

Image-056

Image-057

Image-058

c.3. Interior Building

Firematic Space – Apparatus Bay

The Station houses three (3) interconnected Apparatus Bays:

1. Original 1963 2-Bay @ 1,740 SF which exits onto North Road to the east
2. 1988 Addition "L-shaped" Bay @ 1,365 SF which also exits onto North Road to the east
3. 2011 Bay @ 520 SF exiting to the south towards Town Hall; it should be noted this "bay" is actually an extension to the short leg of the 1988 "L" addition to provide additional bay length for the Tanker shown in the below images.

Original 1963 Apparatus Bay

2-bays with 12' x 12' apparatus openings, these bays represent what is quite common for 1960's era station design. With narrower trucks, the 12' opening widths were appropriate for the time of construction but with modern apparatus averaging a full 8' in width and large side mirrors often extending the widest points of the apparatus from 11' to 12' in overall width, modern bay openings are designed at 13'-4" to 14' in width to allow better clearances at the bay doors as well as down the bay aisles. Fire Safety Code deficiencies and deployment egress issues with the existing aisle widths are exhibited in *Images-059 through -064*.

Image-059

Image-060

Image-061

Image-062

Image-063

Image-064

Turnout Gear wooden lockers line both sides of the interior walls of this double-bay **reducing side clearances further than recommended by OSHA and NFPA.** Opened apparatus doors can create egress restrictions or injury to firefighter personnel while responding to a fire call. Further, wooden lockers do not represent an effectively cleanable surface and **commonly harbor voids and crevices for germs and harmful bacteria to accumulate.** Replacement of all lockers with metal, open-grid style lockers is strongly recommended.

1988 Bay Addition (Addition #1)

The "L-shaped" addition in 1988 added a third bay facing North Road. The design's roofline called to follow the existing slope of the adjacent roof, limiting the height of the bay opening to only 10' and a width of 10'. This was in-use at the time of our visit as a maintenance bay for smaller EMS or fire vehicles. Also, in this bay is the SCBA fill equipment and an antique apparatus.

While only 32 years old at the time of this report, **this bay's use is quite limited due to the size of modern-day firefighting apparatus** and should be repurposed for other facility needs.

The design intent of the north-south section of bay representing the short leg of the "L" is unclear. This bay currently houses a hose rack and firematic storage at the back end of the station's tanker. See *Images-065 through -072*.

Image-065

Image-066

Image-067

Image-068

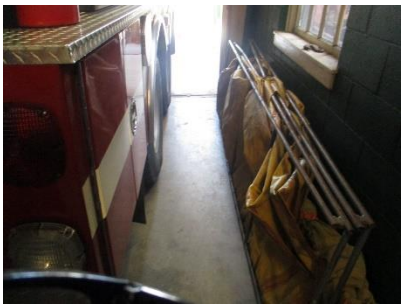

Image-069

Image-070

Image-071

Image-072

2011 Addition (Addition #2)

The 2011 addition was a small, square addition on the southwest corner of the facility which lengthened the short bay facing south in the 1988 addition. The extended bay now houses the Fire Department's T-1 Tanker. While acceptable in length, the width of this bay does not meet the needs of a modern-day apparatus bay. The clear distance between the side of the truck to the wall between the 2 additions is less than 20". This is far narrower than the required OSHA and Building Code clearances and recommendations from NFPA; see *Images-073 through -080*.

Image-073

Image-074

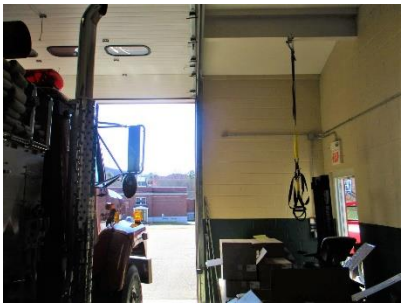

Image-075

Image-076

Image-077

Image-078

Image-079

Image-080

As mentioned above, firematic equipment and materials are stored in the narrow bays and at the back of bays **further reducing egress and creating safety concerns for First Responders**. While the side clearance next to the apparatus in *Image-080* above is more like modern-day designs, the floor is covered with storage boxes due to the **lack of dedicated Storage Rooms,** thus reducing the egress path to a non-conforming width**;** see *Images-081 and -082* for further examples of floor space **hazards**.

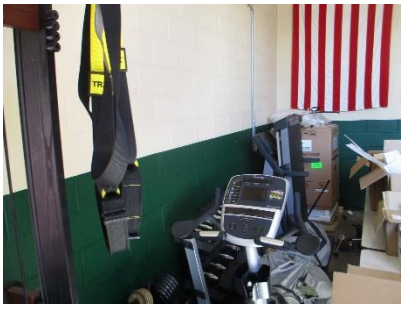

Image-081

Image-082

The bay slabs are a mix of different drain types and sloping arrangements.

The 1963 bays are 6" thick slabs, per the original building plans, and are each sloped separately to two (2) square cast iron drains centered in each bay. Despite their age, these slabs appear in moderately good condition. The bay concrete slabs are unfinished (i.e., not seal-coated nor broom finished) and have an average to below-average slip resistance for firefighter safety. Some minor surface cracking was observed throughout, although these cracks can be corrected by removing all loose materials, air blasting to remove any dust and particulates, and infilling the slabs with a structural crack sealer.; see Images-*083 through -086*.

Image-083

Image-084

Image-085

Image-086

The 1988 Addition main bay (facing North Road) is sloped to the center of the bay and drains to two (2) round cast iron grates atop a larger drain plate. The slab had no observed cracking or settlement issues. The slab did exhibit a good amount of floor grease from the on-going maintenance in this bay. The Bay concrete slab is unfinished (i.e., not seal-coated nor broom finished) but has an apparently acceptable slip resistance for firefighter safety; see *Images087 through -090*.

Image-087

Image-088

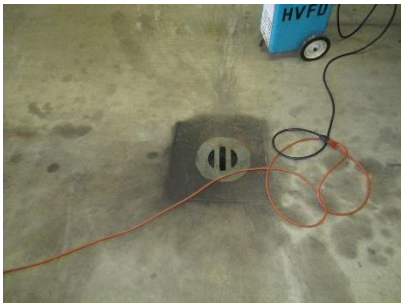

Image-089

Image-090

The 2011 small Addition on the southwest has a single cast iron drain centered in the 22' x 23' bay. The slab has developed numerous cracks which appear to be shrinkage cracks and not settlement cracks, although that has not been confirmed under the limited scope of this visual field investigation. The Bay concrete slab is unfinished (i.e., not seal-coated nor broom finished) but has an apparently acceptable slip resistance for firefighter safety; see *Images-091* through *-094*.

Image-091

Image-092

Image-093

Image-094

See Section 2.1.c.4 for Structural concrete slab information.

No dedicated space exists for firematic or personnel equipment. Turnout Gear lockers are located in the Bays as are the hose storage racks, the SCBA fill equipment, and the firefighter workout equipment. Firefighters working out in the Apparatus Bays presents one of the more serious health and safety concerns, as confirmed by a 2017 Harvard and MIT Study, and supported by the *National Institute for Occupational Safety and Health* (NIOSH). Prolonged exposure in these environments with diesel exhaust contaminants in the apparatus bays are believed to be one of the causes leading to a significant rise in cancer cases in firefighters, as compared to the general public; see Section 2.1.c.7, *Firefighter Health Risks & the Role of the Fire Station* for additional information and statistics.

There are no residential style washer/dryers for cleaning rags and responder personal clothing after a fire event. No Washer/Extractor nor Gear Dryer for cleaning turn-out gear exists in the station. (It should be noted that the current Chief was implementing a plan to install a newly acquired washer/extractor into a wall niche into the current Woman's Restroom.) There are no sinks, drinking fountains, or hand-washing stations located anywhere in the three bays. All maintenance tools and firefighting gear are located within the bay egress paths on both sides of the apparatus; see *Images-095 through -102*.

Image-095

Image-096

Image-097

Image-098

Image-099

Image-100

Image-101

Image-102

The station has no vehicle fume exhaust system in any of the bays. While a few exhaust fans are installed in some of the bays, they do not meet current Code and certainly do not meet any current NFPA Standards for Fire Stations; see Section 2.1.c.6 for additional information. Existing ceiling heights may make retrofitting fume exhaust systems into these existing bays difficult and costly.

The original building drawings call for a "2-HR fiberglass" ceiling. This fire rating would have been required based on the wooden roof framing above. It was unclear from our field observation, if the current bay ceilings were original from the 1963 build, or if they were replaced at some time. If original, the ceiling tiles are likely asbestos-containing materials (ACM's), which would require full, certified

remediation/removal or full encapsulation if any changes occur at the ceilings of the original 1963 building.

The overhead (OH) bay doors appear to be in good working order and have safety devices such as obstruction sensors, but do not have red/green lights installed. The doors are operated by a trolley hoist system. The bottom EPDM "U-type" bottom seal is showing signs of wear and should be replaced during the next maintenance visit by the vendor. The steel support lintels are showing **signs of initial rusting and efflorescence is visible directly above all three bay openings** facing North Road. The surrounding masonry at the bay door openings are slowly **failing** due to internal moisture and brick facings are seen "popping off" the brick units which will speed up the weathering deterioration of these masonry walls. Rust mitigation and sealant are needed to prolong the life of the steel and brick facade; see *Images-103 through -110*.

Image-103

Image-104

Image-105

Image-106

Image-107

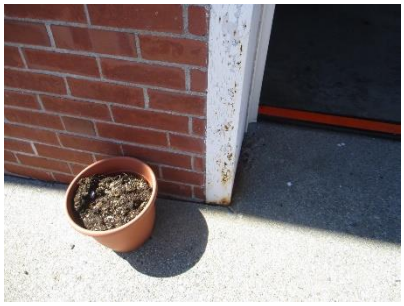

Image-108

Image-109

Image-110

Administrative/People Space

Little space exits in this station for non-firematic activity. The people/administrative space occurs in the Meeting Room and adjacent Kitchen which totals less than 600 square feet. The **Kitchen is smaller in size than the Apparatus Bay Closet** and provides poor amenities for the Town's Firefighters. While the Meeting Room space is large enough for its function, it also doubles as a delivery staging and check-in area, as observed during our field visit. The floor is VCT tiles of a **size and appearance which strongly suggest ACM's are present in the tile, the glue or possibly both**. (It was noted at this projects Bid Walk that formal testing of any of these materials has not been performed by the Town to anyone's knowledge.) While encapsulation is generally an accepted practice, the room **concrete slab is exhibiting multiple signs of cracking and settlement,** especially noticeable at the building entrances. The floor tiles should be tested and removed to determine remediation measures for the concrete slab; see *Images-111 through -118.*

Image-111

Image-112

Image-113

Image-114

Image-115

Image-116

Image-117

Image-118

The restrooms are extremely small and cannot be modified without **extensive demolition** and full rework of all plumbing and sanitary lines. The **restrooms do not meet ADA compliancy for accessibility** in any of the required categories and are equipped with 24" wide doors offering a 22 ½" clear opening. The Woman's Room contains the facility shower stall, water heater and soon to be installed Washer/Extractor mentioned earlier in this **Section 2.1.c.3**; see *Images-119 through -124*.

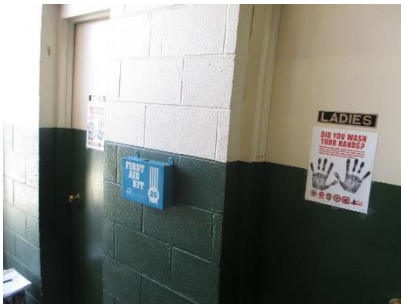

Image-119

Image-120

Image-121

Image-122

Image-123

Image-124

c.4. Building Structure

Roof

The roof for this facility was recently replaced in its' entirety sometime during or after the last addition in 2011. Architectural asphalt shingles have been installed on plywood roof decking. It was confirmed that the previous layers of shingles were removed as part of that installation. Flashings at pipe penetrations and the cupola appear in good condition as observed from ground. The flashing conditions at the brick chimney were not observed. There is efflorescence near the top of the chimney, and signs of moisture at the interior Mechanical Room CMU. This should be investigated at the FD's earlies ability; see *Images-125 through -128*.

Image-125

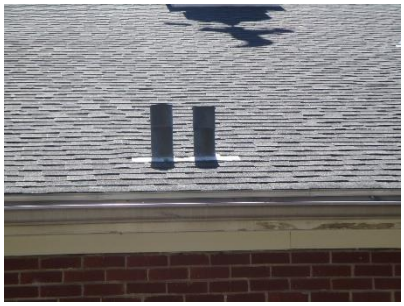

Image-126

Image-127

Image-128

Exterior Walls

The exterior walls of the original 1963 building have moisture issues on the East side of the facility ranging from **deteriorating brick window sills at the Radio Room** to **efflorescence at most areas** at and around the bay door openings. The 1988 addition exterior walls to the North and West are slightly better in condition although similar efflorescence markings were observed at the East and North exterior wall assemblies. The brick walls on most sides of the building have intermittent areas of **missing mortar, cracked bricks, missing and spalling bricks**; see *Images 129 through 134*.

Image-129

Image-130

Image-131

Image-132

Image-133

Image-134

Partially **open and completely failing expansion joints** were observed on all sides of the building. Water will enter these points unless corrected and create further exterior wall damage and decay. It seems that there are not enough expansion joints installed on the building exterior to prevent cracking. A further review of the various building additions should be performed to determine if **new expansion/control joints should be cut into the existing exterior wall(s)** to properly follow the guidelines of the *National Concrete Masonry Association TEK 10-2C* for CMU and the *Brick Institute of America tech Note 18A* for brick for locations and spacing of these joints. The east façade has no expansion joints. The 1988 addition was "toothed-in" instead of providing an expansion joint between the new and the existing walls; see *Images-135 and -136.*

Image-135

Image-136

Cracking at the exterior walls were found primarily on the west side of the facility, at newest building addition. Areas of inside corner construction are showing settlement or expansion cracks, although seemingly at their early stages. These cracks should be remediated immediately to avoid increased damage due to water infiltration. Grinding out of these cracks and infilling with silicone sealant is the best course of preventative action; see *Images-137 through -142*.

Image-137

Image-138

Image-139

Image-140

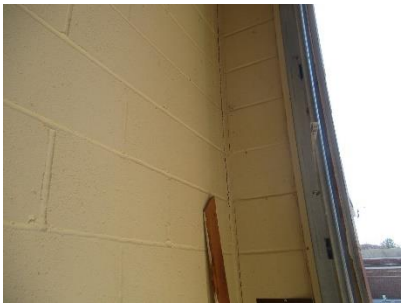

Image-141

Image-142

Interior Walls

Interior walls were generally in good condition. No areas of observed cracking were found. All wall cracking observed was either the interior or exterior sides of the exterior walls.

Slabs on Grade

The apparatus bay slabs all have signs of **minor to moderate cracking** as detailed in **Section 2.1.c.3**. The slabs are in essentially fair to good condition. Salt deterioration was not found to be present.

The small to moderate cracks should be repaired as soon as possible. Structural crack sealant should be used on all of the existing slab crack locations. This will limit/eliminate water from finding its way into the cracks and possibly opening the cracks up more. Similar **preventative maintenance should be performed at the slab** perimeter in the entire bay. Concrete sealant should be installed at all open joints around the edge of the slabs; see *Images-143 through -146*.

Image-143

Image-144

Image-145

Image-146

The perimeter of building concrete slabs, and exterior concrete entrance pads, are all showing signs of **cracking and significant settlement**. These are usually indications of inferior sub-base preparation. Any new interior finishes installed at the settlement crack locations will quickly telegraph the existing cracks; see *Images-147 through -150.*

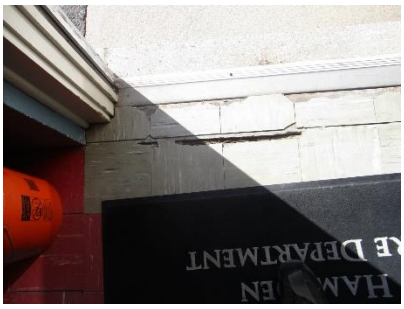

Image-147

Image-148

Image-149

Image-150

c.5 ADA Compliance

EXTERIOR –As mentioned earlier in the report, a building mounted ADA sign and painted stripes can be provided at the main entrance by the Radio Room. The site parking at/near the building is appropriate for persons with disabilities.

There are no accessible entrances to the building because of the 8+" step at all building doorways; see *Images 151 through 154*.

Image-151

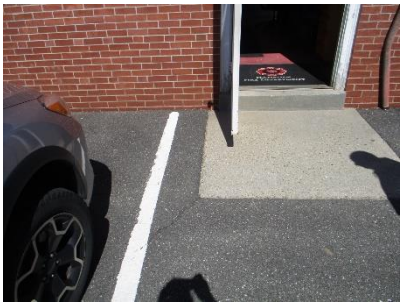

Image-152

Image-153

Image-154

INTERIOR – Once inside the building, all interconnected spaces are at the same elevation, with only some minor slopes between points of building additions.

Both the kitchen and bathrooms fail to meet many of the ADA. Doorway widths, bathroom fixture mounting heights, countertop heights and maneuvering clearances are non-compliant throughout these spaces.

Other than level floors, **no interior aspects of this building meet the basic requirements for ADA accessibility standards.** Firefighters working in this facility will find the paths of egress inside the facility to be barely accessible. This is a **Building Code and Life Safety Code violation.** Few spaces have adequate egress widths; see *Images-155 through -160*.

Image-155

Image-156

Image-157

Image-158

Image-159

Image-160

c.6 Mechanical & Electrical Systems

(For Section 2.1.c.6 photos, see Section 2.1.g.)

Mechanical

Building heating is provided by a combination of Natural Gas Fired furnace manufactured by Metromatic and gas fired unit heaters. The furnace is located in a small mechanical room on the south west side of the building. This unit serves the Meeting Room, Kitchen, Radio Room and the two original Apparatus Bays. The unit heaters are ceiling hung in the two newer Apparatus Bays that were added in 1988 and 2011. All heating units are controlled via wall mounted thermostats; see *Images M-1 through M-5*.

The furnace breaching discharges into a masonry chimney which runs to the roof; see *Image M-6*. The gas fired heaters discharge through metal ducts to the roof; see *Image M-7*. There are no fresh air provisions as required by the current Code. Both the Apparatus Bays and administrative areas should be provided with ventilation air. Currently only the operable windows provide ventilation to the admin areas and infiltration from the bay doors provide ventilation to the Apparatus Bays.

The furnace takes return air from a duct which has return grilles in the original Apparatus Bay and Meeting Room. This is a Code violation since return air may be drawn from the Apparatus Room and discharged via the supply duct into the Meeting Room. Vehicle exhaust can result in Carbon monoxide being supplied to the occupants during times when the trucks are started up or idling; see *Images M-8 and M-9.*

The furnace is in fair condition. Its capacity appears to be a 200,000 btu's based upon the nameplate marking. We would recommend that the entire heating system be replaced with a new system and the apparatus bays currently served by this system should be isolated from the administrative areas.

There is also no mechanical exhaust or ventilation from the apparatus rooms when the trucks are started up (other than the bay doors when opened) which is a Code requirement as well. Consideration to install a CO/NO2 detection system tied into the ventilation system is recommended for personnel protection.

There is no central air-conditioning system for the facility. According to the facility personnel, window units are utilized currently. As part of the renovation or planned improvement, we would recommend consideration for a central combined air conditioning/heating system be provided of all admin areas.

The Meeting Room is equipped with an exhaust fan with a backdraft damper located in the dropped ceiling and ducted to the roof. It was originally used to exhaust smoke fumes during large assembly meetings. It is no longer in use.

Domestic water is currently provided via a well water system. The well pump is located on the southwest side of the building in a pit in the parking lot. This pump supplies a Well-X-Trol, 86-gallon pressurized water storage tank which, in turn, supplies both the domestic water to the lavatories and Kitchen as well as to the truck fill lines; see *Images PL-1 through PL-3*. The staff reports that the water from the well has a brown color and, although it has passed testing, it is not potable.

Hot water is derived from a 40-gallon electric hot water heater located in the shower lavatory (Woman's Room) off the Apparatus Room. This unit is in good condition; see *Images PL-4 and PL-5*.

There are two lavatories, both off the apparatus bays. Each is equipped both with a sink and water closet with one having the previously mentioned shower stall. Both rooms are in relatively poor overall condition and they do not meet ADA guidelines. Future upgrades should be considered along with additional fixtures and showers for both the men's and women's rooms. The hot water heater should be relocated to a mechanical room. The fire department also recently received a new washer/extractor through a grant. This unit is going to be installed and connected to the plumbing hot and cold-water lines and sanitary line in the lavatory; see *Images PL-6 through PL-8*.

The facility is supplied with natural gas from the local utility company. The gas meter is located on the north side of the building and serves the furnace, unit heaters and generator. The meter is sized for 425 CFH; see *Images PL-9 and PL-10*.

There is a manhole and what has been confirmed as an underground storage tank on the north side of the building in the grass area by a recent underground utility survey performed by the HFD. This may be a collection tank for the apparatus bay floor drains although facility personnel were not able to identify this definitively during our visit. Further investigation is required, especially if the future plans call for expansion of the facility to the north side; see *Image PL-11*.

There are no interior roof drains. The pitched roof drains go to exterior leaders and gutters. The north side gutter requires replacement; see *Image PL-12*.

There is a small kitchen off the main Meeting Room. The Kitchen equipment includes a refrigerator, gas fired stove with 4 burners, a microwave and a sink. All the equipment is in fair operating condition. There are no exhaust provisions in the kitchen to the exterior. This should be considered as part of any future improvements; see *Images K-1 and K-2*.

There are interior floor drains located in each apparatus bay. The floor drains *may* be connected to the suspected buried tank mentioned above. We did not observe an oil water separator and none of the provided record documents make mention to same.

The sanitary system is an onsite system, which drains to a septic system on the south side of the property, shared with the adjacent municipal building. The system is in operational condition and there are no reported problems.

Electrical

(For Section 2.1.c.6 photos, see Section 2.1.g.)

Electric Service is provided from an overhead riser pole on the southeast corner of the property off North Road. The service lateral is run down the pole and underground to the meter pan located on the south east corner of the building exterior. From there it enters the building to the main service panel located in the communications room. Service to the building is a 100 amp, 120/240, single phase service. There have been multiple taps and disconnects added over the years to accommodate new equipment. Based upon the equipment being used in the firehouse, this **service is marginal, at best**. There are occasions where certain equipment, such as the compressor cannot be used while other electrical loads are being used. Additionally, the conduit at the building wall which protects the service lateral conduit from the riser pole to the electric utility meter is damaged due to being hit by a vehicle. A **service upgrade is recommended**, especially if the master plan calls for further expansion of the firehouse; see *Images EL-1 through EL-4*.

Communication/data cabling from the utility also enters the communication room from the same riser pole. Several empty underground PVC conduits were previously installed for additional cabling, if required in the future; see *Images EL-5 and EL-6*.

Interior lighting is primarily older style surface mounted strip fluorescent fixtures throughout the facility. The surface mounted fixtures do not have protective sleeves and the current fixtures are not energy efficient. **Replacement with new LED type fixtures is recommended to provide adequate light levels and more energy efficiency lighting which would comply with the current energy Codes** as well as save significant energy costs; see *Images EL-7 through EL-9*.

Exterior lighting is sparse. There are several incandescent fixtures outside the personnel doors and the one Apparatus Room door facing south. These should be replaced with LED type lighting as well adding security lighting around the building perimeter. The lighting outside the personnel doors should also be provided with battery backup or connected to a UL 2200 emergency generator; see *Image EL-10*.

Backup power is provided for the facility by a free-standing Onan 20 KW, 120/240 volt, single phase, natural gas-powered generator. This unit is located in a wooden shed in the rear yard. The unit is inter-connected with the main electrical service panel via a Kohler digital transfer switch to a 100 Amp disconnect. It is **not adequately sized to service the entire building in the event of a utility outage**. Additionally, the generator is not listed as an "emergency" generator. It is only listed for standby as marked on the nameplate. It is in **fair to poor condition**. Replacement with a new unit with the capacity to serve the entire building load and UL 2200 rated is recommended; see *Images EL-11 through EL-13*.

c.7 Fire Protection & Life Safety/Health Risks

(For Section 2.1.c.7 photos, see Section 2.1.g.)

Fire Protection

The building is protected with a Bosch Fire Alarm panel with heat (thermal) detectors located on the ceilings throughout the admin rooms and apparatus bays. There is no smoke detection coverage. **There is also no carbon monoxide (CO) detectors installed as required by the current Building Code**; see *Images FA-1 through FA-3*.

Fire Sprinklers do not exist. Installation of a fire sprinkler system in this facility should be considered, although the lack of public water would require storage tanks and additional costs to provide this protection. If bunk rooms are added to the facility in the future, a sprinkler system would be required.

In light of the lack of a public utility water source, as a minimum, it is **recommended that the Fire Alarm System be replaced and upgraded to provide smoke and thermal protection** where applicable as well as visual and audible notification devices to **provide full protection in accordance with NFPA 72** standards and requirements. **CO detection should be installed** in all areas where fuel combustion equipment is located.

Only one (1) portable fire extinguisher (FE) was found mounted to a wall in the entire facility. The one mounted FE was however hidden behind a recycling box at the Kitchen doorway and not readily visible. While a good location, the box should be moved and a vertical NFPA approved sign should be mounted above on the wall. Several FE's were found on a steel shelving unit in the 1988 Addition alongside the bay wall. These should be verified to have current inspection stickers and wall mounted in each Bay (min of 1 per bay) as well as one mounted in the Mechanical Room. Install signage for all that are mounted.

With working motors throughout the facility and a flammables cabinet in the northernmost bay being heated with sunlight coming through the window, a minimum of one FE per single lane bay and two (at opposing corners) in the original double-lane bay should be installed; see *Images-161 through -164*. **All existing FE's on site need to be confirmed to be fully charged and up to date on inspections.**

Image-161

Image-162

Image-163

Image-164

Life Safety – Firefighter Safety / Health Risks

Except for one lit Exit Sign at the west exit door of the 2011 Addition, we did not observe Illuminated exit signs at the exit doors or in the apparatus bays to meet Life Safety Egress requirements. We would assume, based upon the panel schedule listing, that the lighting is backed up by the generator, although

as noted above, the existing generator is not UL 2200 rated for Life Safety (10 second start and switchover). As such, **the emergency lighting Life Safety requirement per NFPA 101 is not met**.

The Emergency Egress path through the Apparatus Bay is extremely narrow and **does not have the minimum width required by current Code**.

To meet Code, exit signs and emergency lighting with self-contained battery packs or lighting connected to a UL 2200 emergency generator would be required to provide 90 minutes of lighted egress in the event of AC service disruption.

Failing concrete floors at most building entrance doorways create **potential trip hazards** for visitors and especially First Responders during times of alarm response. Cracks, voids, and floor height differentials should be mitigated at the earliest ability; see *Images-165 and -166*.

Image-165

Image-166

The *hot/cold* zone separation provided in the facility for firefighter safety and well-being was observed as **poor** due, in part, to the age of the facility. The drop ceilings and multitude of wall and ceiling voids makes it **difficult and costly to restrict the flow of air between the apparatus bays and the administration side of the building, and thus the spread of contaminants.**

There is no decontamination (DECON) space nor the ability to accommodate such containment measures due to the physical limitations of the existing building. There are no DECON showers or eyewash devices in any of the bays.

Turnout gear lockers are located in the bays, which is not recommended by current NFPA Standards; see **Section 2.1.g.** for additional information and photos. Having the gear lockers in the bay is a Life Safety issue The firefighters must put on their gear, while the trucks are pulling out of the bay, putting the firefighters at risk of coming into contact with a moving truck.

Unsealed wall penetrations and open areas between active firematic space and administration space can cause the **spread of toxins** to the *cold* (or safe) zone of the facility. Items such as caulking and infilling all open voids, door seals and sweeps at doors separating *hot* zone from *cold* zone are some common ways to stop the migration of contaminated air to other parts of the building. There should also be areas between the hot zones and the cold zones called warm zones. These are typically vestibules that can serve as an air lock between the hot & cold zones. In this Fire Station however, the bay widths are too narrow to allow the installation of air locks between the Bays and the rest of the building spaces.

The Radio Room is located directly next to the original 1963 Apparatus Bays and has a poor hollow core wooden door with a faulty closure device. This results in the Radio Room to fill up with exhaust fumes when the apparatus is started. With poor ventilation other than the windows and main door, this is an **unhealthy situation that requires a solution as soon as possible**; see *Images-167 through -174*.

Image-167

Image-168

Image-169

Image-170

Image-171

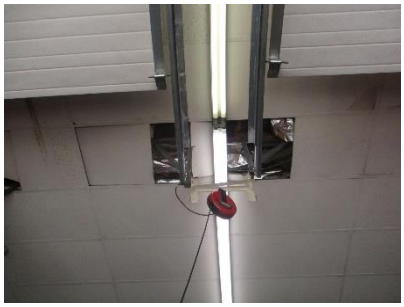

Image-172

Image-173

Image-174

Firefighter Health Risks & the Role of the Fire Station

Cancer in the Fire Service

Cancer has become acknowledged as a major threat to firefighters. Exposure occurs both at the fire scene and back at the fire station. Additionally, there is direct evidence that firefighters are going home contaminated and exposing their families. Firefighters are exposed to significant levels of polycyclic aromatic hydrocarbons (PAHs) as by-products of combustion which are understood to cause cancer.

The following information is typical of the current understanding of the risk:

- Cancer caused 61 percent of the career firefighter line-of-duty deaths (LODD) from January 1, 2002, to March 31, 2017, according to data from the International Association of Fire Fighters (IAFF). Heart disease caused 18 percent of career LODDs for the same period.
- Cancer caused 70 percent of the line-of-duty deaths for career firefighters in 2016.
- Firefighters have a 9 percent higher risk of being diagnosed with cancer and a 14 percent higher risk of dying from cancer than the general U.S. population, according to research by the CDC/National Institute for Occupational Health and Safety (NIOSH).

The cancers mostly responsible for this higher risk were respiratory (lung, mesothelioma), GI (oral cavity, esophageal, large intestine), and kidney.

Firefighters' risks are significantly higher for some specific types of cancer than the general population.

In 2013, NIOSH reported firefighters having a two-fold rate of malignant mesothelioma relative to the general population, and a 129 percent increased risk of dying from mesothelioma. A 2006 meta-analysis by Grace LeMasters of 32 firefighter cancer studies noted a two-fold excess for testicular cancer. Firefighters have a 62 percent higher risk of getting esophageal cancer, and they have a 39 percent increased risk of dying from esophageal cancer, according to the NIOSH research.

Specific additional risks for firefighters have been noted including:

- testicular cancer - 2.02 times the risk (again: 100% = double = 2 times);
- mesothelioma - 2.0 times greater risk;
- multiple myeloma -1.53 times greater risk;
- non-Hodgkin's lymphoma - 1.51 times greater risk;
- skin cancer - 1.39 times greater risk;
- malignant melanoma - 1.31 times greater risk;
- brain cancer -1.31 times greater risk;
- prostate cancer - 1.28 times greater risk;
- colon cancer -1.21 times great risk; and
- leukemia - 1.14 times greater risk.

Infectious disease exposure in the Fire Service

Compared with only 1.5% of the general US population, 22% of firefighters recently studied were carriers of Methicillin-resistant Staphylococcus Aureus (MRSA). The researchers pooled 1,064 samples from medic and fire trucks, fire gear, apparatus bays, kitchens, bathrooms, bedrooms and other areas in two firehouses. Of the 600 samples collected during the first sampling, 4.3% tested positive for MRSA. Medic trucks contained 50% of MRSA, followed by kitchens (11.5%) and other areas such as computer keyboards and desks (7.7%). As of 2010, it was estimated that MRSA cause 19,000 deaths per year in the USA.

The fire station must take on an active role in the task of decontaminating firefighters and their equipment and protect them from exposure returning from the fire scene and while in the station. Currently

recommended steps to be taken immediately upon arrival at the fire station include, but are not limited to, the following:

- Perform a thorough decontamination of equipment (radio, tools, fire hose, etc.) following manufacturers' recommendations.
- Perform a thorough decontamination of PPE (helmet, turnout gear, SCBA, etc.) following NFPA 1851 and manufacturers' recommendations.
- Perform a thorough decontamination of the apparatus cab.
- Return apparatus to a state of readiness.
- Take a "shower within the hour" after being exposed to any products of combustion.
- Change into clean station uniform wear.
- Units that have been approved to go out of service for decon shall be unavailable according to policy.

All fire stations should be configured to protect the occupants from exposure while in the station and to prevent contamination from being carried to the firefighter's home. This requires the following minimum steps:

- Isolate all contaminants in a portion of the station referred to as the *hot* zone.
- Isolate all living and office spaces in a portion of the building referred to as the *cold* zone.
- Provide airlocks between the hot and cold zones referred to as the warm zone.
- Seal any potential pathways for migration of gases and polycyclic aromatic hydrocarbons (PAHs) from the hot to the cold zones.
- Provide direct tailpipe exhaust from all fire apparatus.
- Provide gross and fine decontamination facilities for personnel and gear.
- Provide proper laundry equipment to decontaminate personal protective equipment (PPE).

2.1.d. Conclusions & Recommendations

It is evident from the visual site survey, interviews with on-site staff, and review of all available documents for this site that the overall facility is in generally **fair to poor condition.** Immediate corrective actions as well as termed upgrades are noted throughout the individual portions of this Report as well as summarized below. Areas in need of immediate, short-termed and long-termed corrective action have been listed in **Section 2.1.f** with associated Rough Order of Magnitude estimates of probable costs.

A regular maintenance schedule is recommended to remediate other issues outlined throughout this report. A full, thorough review of the entire building and site is recommended to identify all non-conforming issues with areas of necessary destructive testing implemented as needed to observe, assess and quantify concealed conditions.

A concise list of prioritized corrective actions is presented below; **bolded** items are Priorities 1 or 2 and need immediate or scheduled repairs:

Site

- **Asphalt crack and void repairs**
- Asphalt complete remediation
- **Regrade north and northwest portions of site to restrict the flow of stormwater toward the building**
- **Replace concrete driveway aprons at overhead doors**
- **Replace concrete building entrance pads**
- **Investigate the presence of any underground tanks or oil/water separators**

Exterior Building

- **Replace brick sills**
- **Replace masonry expansion joint sealant**
- **Investigate East and North masonry wall moisture infiltration**
- **Investigate and repair masonry chimney moisture source**
- **Repair or replace gutter and down leader**
- Replace and caulk exterior wood in its entirety.
- Replace exterior wood doors
- Repair generator shed slab cracks
- Upgrade generator shed framing connections
- **Provide sealant at building base at areas of impervious concrete/asphalt (East, West and South facades)**
- Façade restoration – repair mortar joints, repair/replace broken and loose bricks, install new flashing and weeps to allow water to shed from the exterior wall at all Bay door openings
- **Repair & caulk overhead door openings**
- **Window sealant upgrades**

Interior Building

- Building Addition (87'-4" x 66'-8") to the west to resolve inadequate and unsafe Apparatus Bays, building Firematic and Life Safety deficiencies. The proposed addition is considered to include:
    - New 5-Lane, double deep Apparatus Bay (5,822sf)

- Building Renovation to include remediation and construction for the following spaces (5,011sf):
    - Decontamination (Decon) Room
    - Turnout Gear Room
    - Ready Room
    - Firematic Storage
    - New Kitchen and
    - ADA compliant Restrooms
    - Exercise Room
- Assess & mitigate asbestos and lead hazardous materials (approximately 3,000sf)
- Replace overhead doors
- Remove existing Bay drop ceilings
- Provide new turnout gear lockers (not in apparatus bays)

Building Structure

- Saw cut and caulk new masonry expansion/control joints
- Remove rust, paint, and caulk exterior steel lintels
- Concrete Bay apron replacements (part of Priority 3 Renovation & Expansion)
- Building Base/Concrete Sealant Replacement
- Repair apparatus bay slab cracks and provide salt guard sealer

ADA Compliance

- Included in building expansion/renovation tasks above (part of Priority 3 Renovation & Expansion)
    - New Bathrooms
    - New Kitchen
- Provide ADA Parking space striping and signage
- Replace concrete building pads

Mechanical & Electrical

- Replace existing furnace heating system serving admin and apparatus rooms
- Replace existing interior and exterior lighting fixtures with LED lighting
- Replace standby generator with UL 2200 emergency generator
- Upgrade electrical service
- Provide Code required ventilation and exhaust for apparatus bays
- Provide CO/NO2 detection system in Apparatus bays
- Provide mechanical ventilation in kitchen

Fire Protection & Life Safety

- Improve bay aisle width (part of Priority 3 Renovation & Expansion)
- Replace Fire Alarm System to meet NFPA 72 requirements
- Add exit and emergency lighting per the Life Safety Code NFPA 101
- Add Apparatus Vehicle Fume Exhaust System – All Bays
- Provide wall mounted, portable eyewash station and Emergency Shower in Apparatus Bay
- Provide fire extinguishers and signage
- Install a fire sprinkler system

- Provide airtight wall construction for Hot/Cold Zones (part of Priority 3 Renovation & Expansion)
- Hazardous materials sampling/testing investigation and Hazardous materials abatement

This Report's findings for **Priority 1 and Priority 2** deficiencies should be corrected at the earliest ability of the building's stakeholders. Most items in these Categories are of a nature that can be performed by local Contractor(s) with simple narrative-type direction without the need of any drawings. Some items may require written Specifications to assure quality workmanship, appropriate materials and corrective oversight is maintained throughout the process.

For Priority 3, 4 and 5 deficiencies and recommendations, direction should be provided by the Town based on the results of the programming portion of this Study. Follow-up scope for this facility should be led by an architect knowledgeable in Fire Station renovation and design to further investigate the ability for the Town of Hampden to address some or all of this Report's findings. See **Section 2.1.g.** for additional information.

While expansion of the existing facility may be a viable option, the costs to:

- mitigate the concrete slab conditions,
- research and correct the unknown causes of exterior wall moisture intrusion and resulting efflorescence across two exterior facades,
- provide roof framing structural upgrades to meet current Code wind uplift and snow loads,
- provide ADA compliant egress paths and amenities,
- provide adequate facilities and spaces for male and female firefighters and
- mitigate potential asbestos and lead materials on an active construction site

would likely **exceed the cost to demolish the existing station and build a new facility**.

Renovate or Build New?

The process to renovate the existing bays and convert to Firematic Storage Room(s), Firematic Equipment Spaces and people and administrative spaces would essentially require a new roof, new exterior walls (upon the results of a water infiltration investigation) and a new or remediated set of concrete floors would likely *not* be the most cost effective solution to satisfy the needs of the Hampden Fire Department. A renovation of this magnitude would almost assuredly trigger an Existing Building Code requirement to upgrade the entire existing building (ADA, Structural loading and Seismic Forces, Mechanical, Electrical, Plumbing and Fire Alarm and Suppression) per the State of Massachusetts Existing Building Code (IBC 2015). It is recommended the Town of Hampden review a cost analysis performed to weigh options, based on costs and time of construction for (a) expand and renovate versus demolish and build all new.

It should be noted that the design could incorporate maintaining a portion of the existing building necessary to allow the HFD to perform their Fire Protection Services while select demolition and new construction begins for new, modern Apparatus Bays; this would be considered Phase 1 of a 2-Phase project. When the new bays are complete and operational, the HFD could relocate all apparatus over to the new bays which would then allow the demolition or the renovation of the existing station and the start of Phase 2 of the construction process.

The decision for demolition or renovation would be determined by the Town of Hampden and the Hampden Fire Department upon review of the provided cost comparative options in Section 4.0. The Rough Order of Magnitude Cost Estimate provided in Section 2.1.f provides rough cost estimates to build the new Apparatus Bay and renovate the existing station as detailed throughout this report.

2.1.e. Limitations

This Facility Condition Assessment report was prepared to document readily visible materials and building system defects that might significantly affect the value of the property and determine if conditions exist which may have a significant impact on the viability of continued use of this facility for the future.

Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by reputable professionals practicing in this or similar situations. The interpretation of the field data is based on good judgment and experience. However, no matter how qualified the professional or detailed the investigation, pre-existing conditions cannot always be revealed beyond the limits of actual visual observation. No other warranty, expressed or implied, is made as to the professional advice included in this report. The recommendations contained in this report are intended for design and remediation purposes only. Contractors and others involved in the construction or remediation of this property are advised to make an independent assessment of existing conditions for the purpose of establishing quantities, schedules and construction techniques.

2.1.f. Costs

f.1 Rough Order of Magnitude Correction Costs

ROUGH ORDER OF MAGNITUDE*						
Town of Hampden Condition & Facility Assessment Study				**DATE: 6-10-20**		
Hampden Fire Station – 19 North Road				**PREPARED BY: KJG**		
DESCRIPTION	**PRIORITY**	**UNIT**	**QTY**	**UNIT COST**	**SUB-TOTAL**	**NOTES**
Asphalt crack repairs	**1**	Allow.[1]	-	-	$2,000	
Building entrance pad replacements [2]	**1**	Allow.[1]	-	-	$4,000	Demo pads, provide min. 12" new sub-base and install new pads
ADA parking space markings/signage	**1**	Allow.[1]	-	-	$600	
Upgrade electrical service	**1**	Allow.[1]	-	-	$35,000	To be sized per future building expansion needs
Replace generator with UL2200 model	**1**	Allow.[1]	-	-	$50,000	
Provide Code required ventilation and exhaust in Bays [2]	**1**	Allow.[1]	-	-	$60,000	Includes new Vehicle Fume Exhaust System with assumed six (6) hose drops
Fire extinguisher and signage adds [2]	**1**	Allow.[1]	-	-	$1,500	
Emergency and Exit lighting adds [2]	**1**	Allow.[1]	-	-	$7,500	
Building base sealant replacement	**1**	Allow.[1]	-	-	$3,000	Backer rods and sealant throughout
Existing masonry expansion joint replacement	**1**	Allow.[1]	-	-	$1,000	
Apparatus Bay crack repairs and slab sealant replacement	**1**	Allow.[1]	-	-	$6,000	
Wall-mount eyewash & E-shower in Bay [2]	**1**	Allow.[1]	-	-	$5,000	
				TOTAL PRIORITY 1 ROM		**$175,600.00**
Underground tank investigation	**2**	Allow.[1]	-	-	$3,000	Remediation/design fees not included
Site re-grading	**2**	Allow.[1]	-	-	$25,000	Re-work existing grades to the north and west of the building to reverse the flow of stormwater towards the northern portion of the building
Gutter repairs and down leader re-work	**2**	Allow.[1]	-	-	$2,000	To be performed upon completion of site re-grading
Replace bay opening concrete aprons	**2**	Sq Ft	144	$50/sf	$7,200	North Road-bays only
Masonry Exterior Wall & Chimney Moisture Investigation	**2**	Allow.[1]	-	-	$25,000	Field investigation and report of recommendations
Masonry brick sill replacement and steel lintel rust mitigation & sealant	**2**	Allow.[1]	-	-	$4,000	Upon completion of exterior wall moisture investigation
Façade restoration [3]	**2**	Estimate	-	-	$45,000	
New expansion joint wall cuts	**2**	Allow.[1]	-	-	$5,000	
Overhead door opening repairs & sealant	**2**	Allow.[1]	-	-	$2,500	
Window and sealant replacement	**2**	Allow.[1]	-	-	$8,500	
Replace furnace heating system	**2**	Allow.[1]	-	-	$40,000	
Provide CO/NO2 detection system in Bays	**2**	Allow.[1]	-	-	$7,500	
				TOTAL PRIORITY 2 ROM		**$174,700.00**

DESCRIPTION	PRIORITY	UNIT	QTY	UNIT COST	SUB-TOTAL	NOTES
New Building Addition	3	Sq Ft	5,822	$500/sf	$2,911,000	87'-4" x 66'-8" Apparatus Bay with 5 deep aisles
Existing Building Renovation	3	Sq Ft	5,011	$200/sf	$1,002,200	Renovation of spaces to include Decon/Laundry, Turnout Gear Room, SCBA Fill Room, Ready Room, Janitor's Room, Exercise Room and Firematic Storage
Exterior wood doors and wood trim replacements	3	-	-	-	-	Included in above Expansion and Renovation project
Bay drop ceiling removal	3	-	-	-	-	
New Turnout Gear lockers [2]	3	-	-	-	-	
Concrete bay apron replacements	3	-	-	-	-	
ADA compliance upgrades	3	-	-	-	-	
Bay aisle width Code violations [2]	3	-	-	-	-	
Replace Fire Alarm System	3	Allow.[1]	-	-	$10,000	In existing building
Hazardous Materials Investigation/Testing	3	Allow.[1]	-	-	$10,000	
Hazardous Materials Abatement/Remediation [3]	3	Estimate	-	-	$250,000	Includes allowance for 3rd Party air monitoring and based on original 1963 building of 3,000sf
					TOTAL PRIORITY 3 ROM	**$4,183,200.00**
Building Expansion Firematic Equipment	4	Allow.[1]	-	-	$18,500	New decon sink and emergency shower, gear dryer, storage shelving,
					TOTAL PRIORITY 4 ROM	**$18,500.00**
Install Fire Sprinkler System	5	Allow.[1]	-	-	$100,000	Considered here as standalone costs if no action is taken by the Town on Addition or Renovation. Upon completion of the building addition and renovation, this scope can be assumed to be incorporated within the above Priority 3 costs.
Provide mechanical ventilation in Kitchen	5	Allow.[1]	-	-	$2,500	
Replace older light fixtures with LED	5	Allow.[1]	-	-	$15,000	
					TOTAL PRIORITY 5 ROM	**$117,500.00**
					TOTAL ALL PRIORITIES ROM	**$4,669,500.00**

*Notes:

a) The above Rough Order of Magnitude (ROM) costs are based on visible site conditions and assumptions that these corrective actions are limited to their respective standalone scope described herein. Additional scope items such as structural reinforcement, utility power upgrades, subsurface/concealed condition conflicts, etc. directly related to the upgrade recommendations are unknown under the parameters of this report and could present higher construction costs than those presented above based on the results of a comprehensive architectural/engineering design investigation to correct these items.

[1] Allowance fee used.

[2] Description item addresses, in whole or part, firefighter health risk reduction.

[3] Estimated costs as no hard data is available at the time of this report.

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2.1.g. Additional Photographs

01 – Old ceiling assembly and hanging detector

02 – Various Bay and floor slab cracks

03 – Ceiling and Chimney in Mech. Room

04 – Efflorescence all over chimney flue

05 –"Drying racks" in the Apparatus Bay

06 – Storage located throughout bays

07 – Lack of electric drop reels creates hazard

08 – Door protectors needed on gear lockers

09 – Water heater located in Bay Bathroom

10 – Restrooms old and beyond repair

11 – No room inside building to dry hoses

12 – Cracks in Radio Room from water damage

M-1 Heating Furnace Shutoff

M-2 Furnace Nameplate

M-3 Gas Fired Unit Heater

M-4 Thermostat Controls

M-5 Heating Duct from Furnace to Apparatus Room

M-6 Furnace Breeching and Chimney

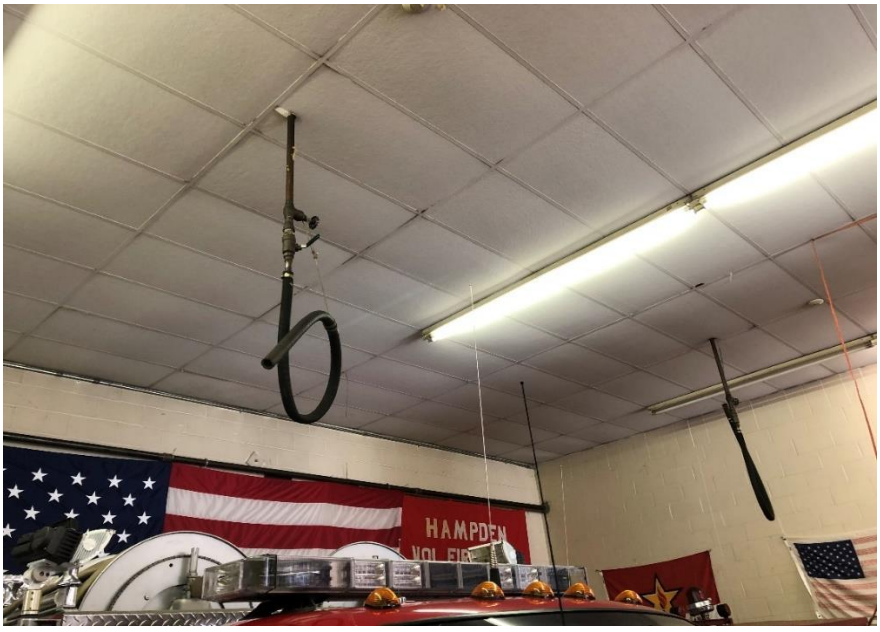
M-7 Unit Heater Exhaust Duct

M-8 Return Grille from Meeting Room

M-9 Return Grill from Apparatus Room

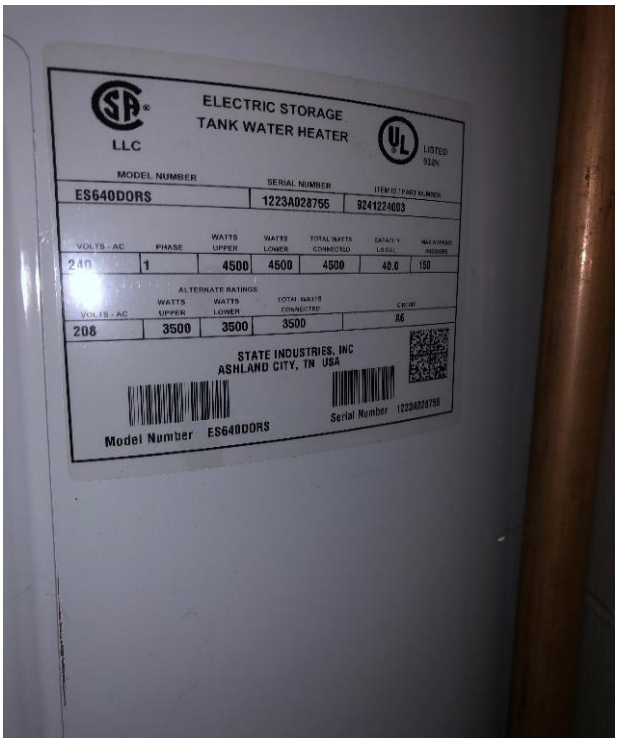
PL-1 Domestic Water Well Pump Storage Tank

PL-2 Domestic Water Well Pump Storage Tank



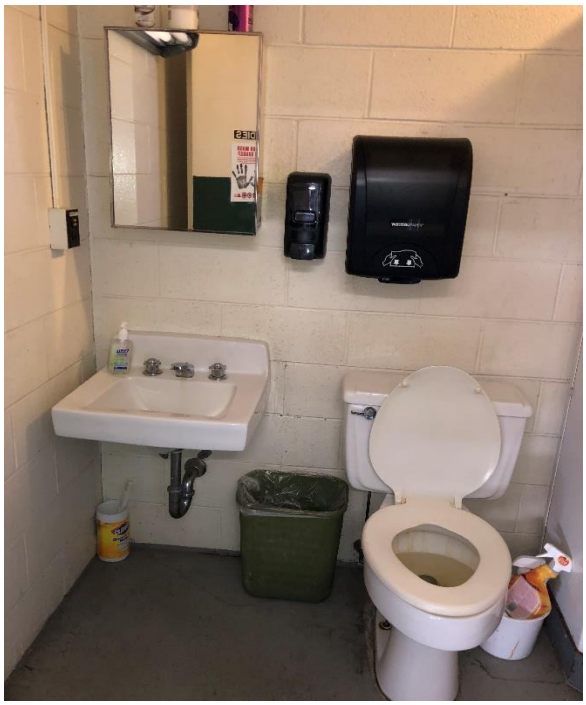
PL-3 Truck Fill Lines

PL-4 Hot Water Heater

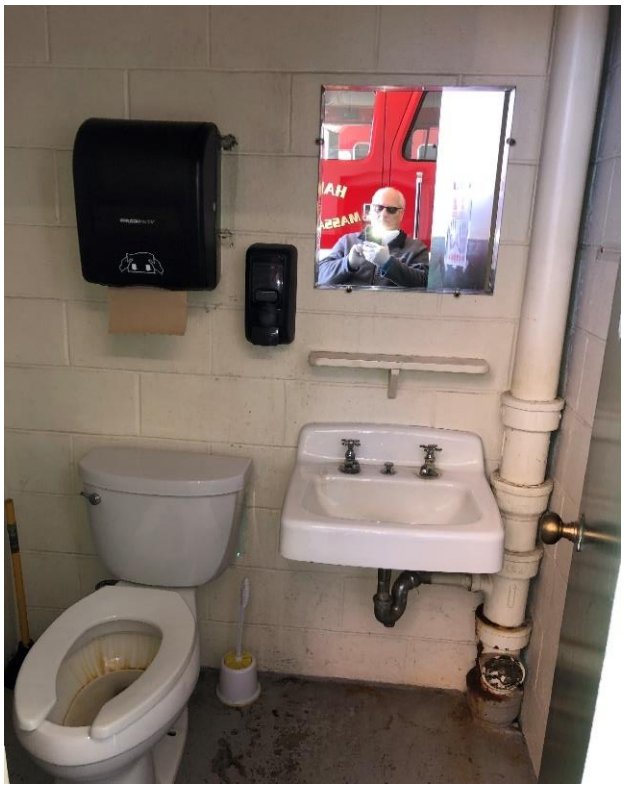


PL-5 Domestic Hot Water Heater Nameplate

PL-6 Shower Stall



PL-7 Lavatory



PL-8 Lavatory

PL-9 Utility Gas Meter

PL-10 Gas Meter Nameplate

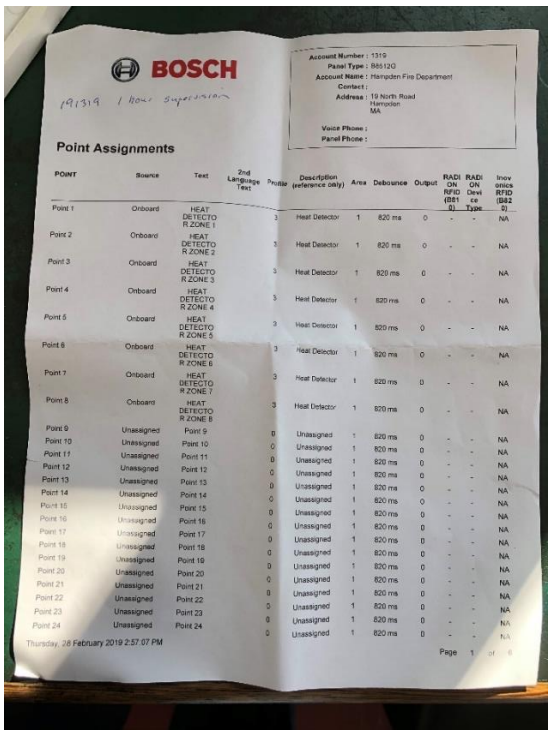
PL-11 Exterior Manhole

PL-12 North Side Gutter

K-1 Kitchen Area

K-2 Gas Range

FA-1 Bosch Fire Alarm Panel



BOSCH

Account Number : 1319
Panel Type : B6512D
Account Name : Hampden Fire Department
Contact :
Address : 19 North Road
Hampden
MA
Voice Phone :
Panel Phone :

Point Assignments

POINT	Source	Text	2nd Language Text	Profile	Description (reference only)	Area	Debounce	Output	RADION RFID (B810)	RADION Device Type	Inovonics RFID (B820)
Point 1	Onboard	HEAT DETECTOR ZONE 1		3	Heat Detector	1	820 ms	0	-	-	NA
Point 2	Onboard	HEAT DETECTOR ZONE 2		3	Heat Detector	1	820 ms	0	-	-	NA
Point 3	Onboard	HEAT DETECTOR ZONE 3		3	Heat Detector	1	820 ms	0	-	-	NA
Point 4	Onboard	HEAT DETECTOR ZONE 4		3	Heat Detector	1	820 ms	0	-	-	NA
Point 5	Onboard	HEAT DETECTOR ZONE 5		3	Heat Detector	1	820 ms	0	-	-	NA
Point 6	Onboard	HEAT DETECTOR ZONE 6		3	Heat Detector	1	820 ms	0	-	-	NA
Point 7	Onboard	HEAT DETECTOR ZONE 7		3	Heat Detector	1	820 ms	0	-	-	NA
Point 8	Onboard	HEAT DETECTOR ZONE 8		3	Heat Detector	1	820 ms	0	-	-	NA
Point 9	Unassigned	Point 9		0	Unassigned	1	820 ms	0	-	-	NA
Point 10	Unassigned	Point 10		0	Unassigned	1	820 ms	0	-	-	NA
Point 11	Unassigned	Point 11		0	Unassigned	1	820 ms	0	-	-	NA
Point 12	Unassigned	Point 12		0	Unassigned	1	820 ms	0	-	-	NA
Point 13	Unassigned	Point 13		0	Unassigned	1	820 ms	0	-	-	NA
Point 14	Unassigned	Point 14		0	Unassigned	1	820 ms	0	-	-	NA
Point 15	Unassigned	Point 15		0	Unassigned	1	820 ms	0	-	-	NA
Point 16	Unassigned	Point 16		0	Unassigned	1	820 ms	0	-	-	NA
Point 17	Unassigned	Point 17		0	Unassigned	1	820 ms	0	-	-	NA
Point 18	Unassigned	Point 18		0	Unassigned	1	820 ms	0	-	-	NA
Point 19	Unassigned	Point 19		0	Unassigned	1	820 ms	0	-	-	NA
Point 20	Unassigned	Point 20		0	Unassigned	1	820 ms	0	-	-	NA
Point 21	Unassigned	Point 21		0	Unassigned	1	820 ms	0	-	-	NA
Point 22	Unassigned	Point 22		0	Unassigned	1	820 ms	0	-	-	NA
Point 23	Unassigned	Point 23		0	Unassigned	1	820 ms	0	-	-	NA
Point 24	Unassigned	Point 24		0	Unassigned	1	820 ms	0	-	-	NA

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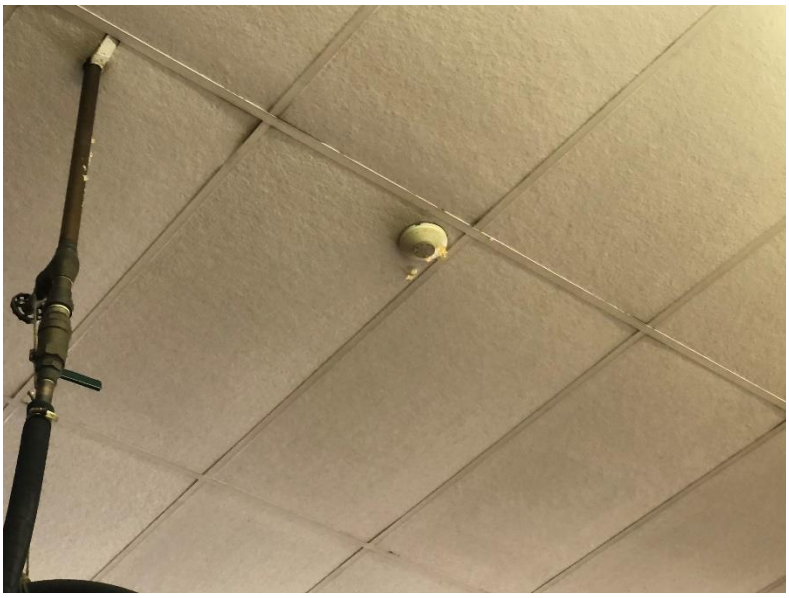
FA-2 Heat Detection Zones

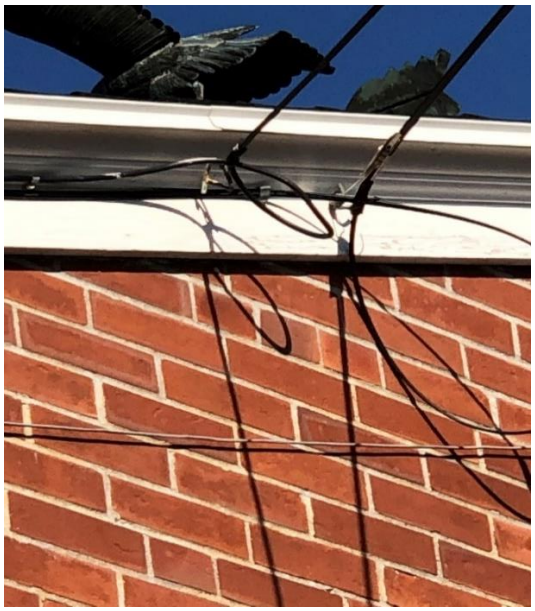


FA-3 Thermal Detector (TYP)

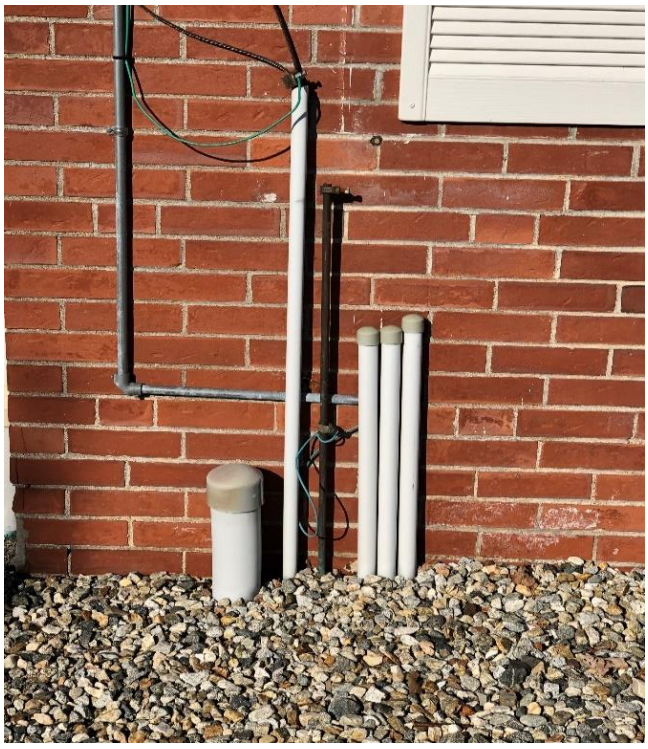
EL-1 Utility Riser Pole

EL-2 Damaged Service Meter

EL-3 Main Service Panels/Switches

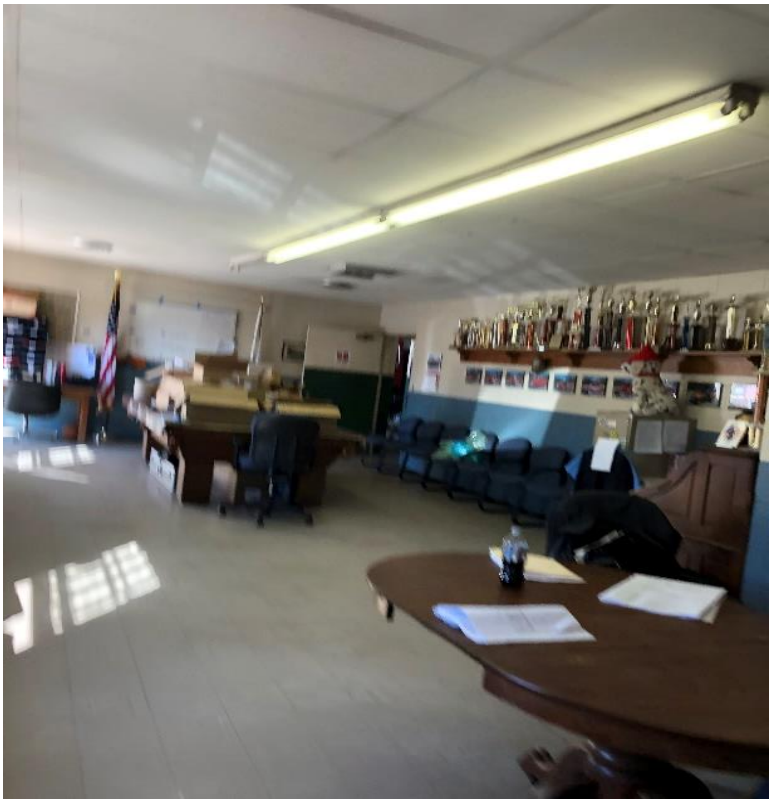


EL-5 Communications Cable



EL-6 Communication Conduit

EL-7 Apparatus RM LTG.

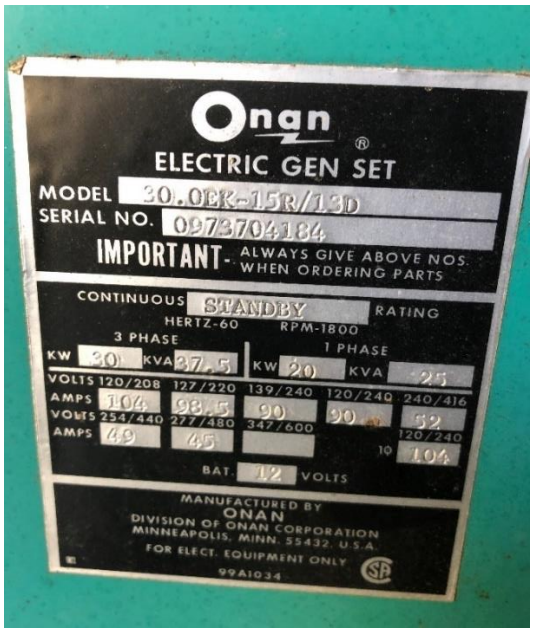


EL-8 Meeting RM

EL-9 Lavatory LTG.

EL-10 Exterior Wall MTD. LTG

EL-11 Generator



EL-12 Gen. Nameplate

EL-13 Gen. Transfer Switch

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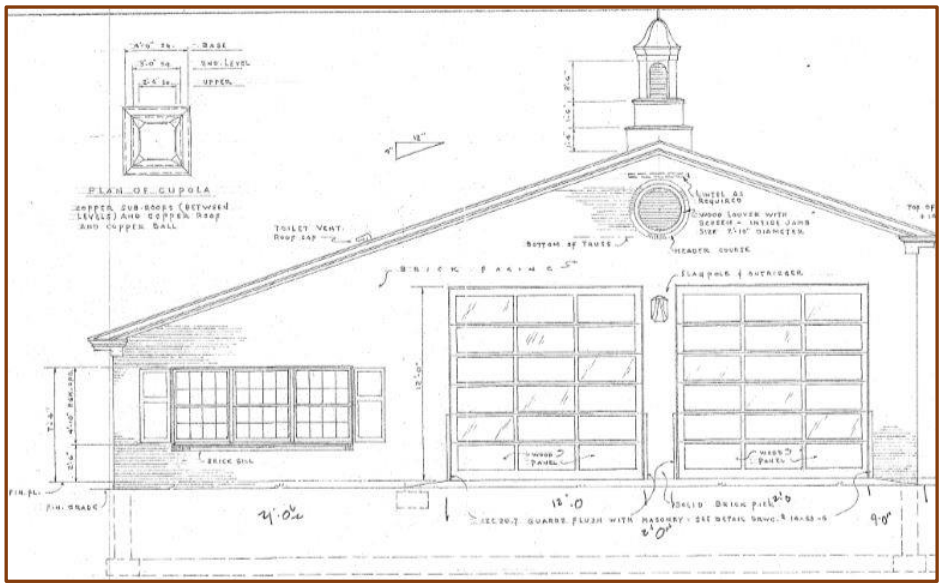
Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1



3.0 PROGRAMMING

3.1 INTRODUCTION

3.2 FINAL PROGRAMMING RESULTS

3.3 PROGRAM DOCUMENTS

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3 Section 3.1 Introduction to Programming

Programming was carried out for the Town of Hampden Fire Department (HFD). The programming process is an in-depth *needs assessment* that describes current operations and the projects future needs, allowing detailed descriptions of space needs and layout criteria. The process dynamically defines needs and goals by offering expertise and guidance from design professionals on the team. It identifies priorities and the facility plan's potential impact on its mission, inter-office and intra-office efficiencies, public access, response and operational issues, training opportunities, necessary adjacencies, and areas of economy.

Programming informs and simplifies the design process. During programming, information is collected from the project stakeholders in order to fully understand the needs of the HFD. For this report, information was collected through site visits and interviews with the HFD staff regarding operation, safety requirements, personnel needs, and space usage such that each room in during preliminary design is correctly sized and located.

- Room locations and adjacencies are determined to support the evolution of operations, not to be an impediment.
- Assumptions regarding calculated areas for corridors & walls are validated against a database of similar facilities.
- Based on the *Program*, a space usage analysis spreadsheet specifies probable room and building size.
- Economy of design takes into account potential savings through shared spaces.
- Safety is considered in terms of appropriate full access and limited access spaces within the facility and appropriate combined and separate entrance and egress.

The following pages contain detailed text, spreadsheets and room diagrams that describe the specific space requirements for the HFD operations.

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

3.0 PROGRAMMING

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Hampden Fire Department **Spaces Summary - 6/22/20**

Option 5.1 - New Facility w/Bunkrooms on New Site; Use Existing Facility until New is Complete

Area/Room Title	Existing Building			New Building			Increase or (Decrease)		
	1st Floor	Mezzanine	Total	1st Floor	Mezzanine	Total	1st Floor	Mezzanine	Total
Apparatus									
Apparatus Bay	1,740		1,740	5,822	0	5,822	4,082	0	4,082
Apparatus Bay 2	1,365		1,365	867	0	867	(498)	0	(498)
Apparatus Bay 3	457		457	0	0	0	(457)	0	(457)
Subtotal - Apparatus	**3,562**		**3,562**	**6,689**	**0**	**6,689**	**3,127**	**0**	**3,127**
Firematic Support									
Mezzanine	0		0	0	779		0	779	779
Storage Room	68		68	112	0	112	44	0	44
Hose Storage	0		0	55	0	55	55	0	55
Cold Water Rescue Storage Room	0		0		142	142	0	142	142
Hazardous Waste	0		0	12	0	12	12	0	12
Turnout Gear Storage	0		0	458	0	458	458	0	458
EMS Storage	0		0	100	0	100	100	0	100
Decon/Laundry	0		0	303	0	303	303	0	303
Hot Side Shower	0		0	121	0	121	121	0	121
Hot Side Clothing Lockers	0		0	135	0	135	135	0	135
Apparatus Floor Bathroom	61		61	67	0	67	6	0	6
Work Room	0		0	205	0	205	205	0	205
Utility Recess	0		0	32	0	32	32	0	32
Hydration	0		0	75	0	75	75	0	75
SCBA Compressor	0		0	0	149	149	0	149	149
SCBA Fill Station	0		0	120	0	120	120	0	120
Janitor's Closet	0		0	64	0	64	64	0	64
Ready Room	0		0	267	0	267	267	0	267
Radio Room	136		136	175	0	175	39	0	39
Subtotal - Firematic Support	**265**		**265**	**2,301**	**1,070**	**3,371**	**2,036**	**1,070**	**3,106**
Adminstration									
Offices (Chief, Admin. & Officers)	0		0	629	0	629	629	0	629
Administrative Bathroom	0		0	67	0	67	67	0	67
Fire Prevention Storage	0		0	100	0	100	100	0	100
Subtotal - Administration	**0**		**0**	**796**	**0**	**796**	**796**	**0**	**796**
Firefighters									
Day Room (incl. Kitchen)	41		41	525	0	525	484	0	484
Exercise	0		0	400	0	400	400	0	400
Bunkrooms	0		0	520	0	520	520	0	520
Bunker Bathrooms	0		0	165	0	165	165	0	165
Laundry Nook	0		0	40	0	40	40	0	40
Subtotal - Firefighters	**41**		**41**	**1,650**	**0**	**1,650**	**1,609**	**0**	**1,609**
Public Spaces									
Meeting/Training Room	549		549	1,000	0	1,000	451	0	451
Table & Chair Storage	0		0	180	0	180	180	0	180
Public Restrooms (M & F)	0		0	256	0	256	256	0	256
Subtotal - Public Spaces	**549**		**549**	**1,436**	**0**	**1,436**	**887**	**0**	**887**
Miscellaneous									
Entry Vestibules (2)	0		0	100	0	100	100	0	100
Janitors Closet	0		0	48	0	48	48	0	48
Mechanical/Electrical	58		58	360	0	360	302	0	302
Sprinkler	0		0	70	0	70	70	0	70
Subtotal - Miscellaneous	**58**		**58**	**578**	**0**	**578**	**520**	**0**	**520**
Subtotal (SF)	**4,475**		**4,475**	**13,450**	**1,070**	**14,520**	**8,975**	**1,070**	**10,045**
Corridors, chases, walls, etc.	536		536	2608	44	2,652	2,072	44	2,116
Total Area	**5,011**		**5,011**	**16,058**	**1,114**	**17,172**	**11,047**	**1,114**	**12,161**
								% Increase	**243%**

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

3.0 PROGRAMMING

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Fire Station Program Document

Project Name: Hampden Fire Department

1st Program Meeting Date: **4/15/2020**

Printout Date: **June 11, 2020** Filename: Hampden Fire Program Full.docx

This document is not meant to be limited to an inventory of what you currently have.

Indicate what you currently need for proper operations and try to forecast what you will need for the future.

A General Information

A1. Number of Members: total: 26 active: 26 female: 2

3 full-time (8am - 4pm), the rest On-Call

A2. Typical Turnout: 6

A3. On-Call: 26

A4. Firefighting Staffing: 3 fulltime 8 am - 4pm, the rest on-call

A5. Number of calls/year: 400 - 500, 125 - 150 fire

A6. Response pattern:

A6.1. Station: 26

A6.2. Fire: 0

A7. Administrative Staffing: chief, secretary, deputy chief, EMS director

A8. Board Members: Selectmen Board Members

A8.1. Donald Davenport

A8.2. Mary Ellen Glover

A8.3. John Flynn

A8.4. Town Admin. Bob Markel

A8.5. _____

A8.6. _____

A9. Building Committee:

Meeting Attendance/Date:	4/15/20	4/21/20	4/28/20	4/30/20				
A5.1. Chief Ed Poulin	☒	☒	☒	☒	☐	☐	☐	☐
A5.2. Mark Barba	☒	☐	☐	☐	☐	☐	☐	☐
A5.3. _____	☐	☐	☐	☐	☐	☐	☐	☐
A5.4. _____	☐	☐	☐	☐	☐	☐	☐	☐

A10. Attorney: _____

A10.1. Address: _____

A10.2. Phone: _____; fax: _____; email: _____

A11. Type of entity:

A11.1. Municipality: YES Town Department

A11.2. Other: _____

A12. 501C.3: _____

A13. Describe Business & Social Structure: Part time staff with one annual awards banquet and Memorial Day function

A14. Number of Companies or Departments involved: One department

A15. Date of Dept. monthly meeting: every 1st Monday of the month

A16. Location: _____

A17. Tax Map Number: 35-018-000

A18. Zoning: _____

A19. Allowable use: _____; Special exception: _____; Variance: _____

A20. Exempt from zoning: _____

A21. Other Jurisdictions: APA, Neighborhood Groups, etc.: _____

A22. Prevailing Code: Massachusetts State Building Code (IBC 2015)

A23. SEQRA: _____; Short form: _____; Long form: _____

A24. Subdivision required: _____; Assigned to: _____

A25. Waiver of fees obtained: _____; Assigned to: _____

B Functional Activities in Building

B1. Types of response:

B1.1. Fire: 40

B1.2. EMS: 392

B1.3. Heavy Rescue: 21

B1.4. HAZ MAT: 14

B1.5. Water Rescue: No

B1.6. Ambulance: No Transporting: No

B1.7. Other: Fly Car, EMS 392

B2. Training activities in building:

B2.1. Lectures with PowerPoint

B2.2. Search & Rescues - CPR - EMS

B2.3. Mezz training

B3. Training activities on site:

B3.1. Drafting & Pumping Operations

B3.2. Cistern tank in ground

B3.3. Hydrant

B4. Fuel Filling Station: Located at Highway Department

B5. Other uses of apparatus bay:

B5.1. Social events: Awards Banquet and Dinner Meeting - 60 or more

B5.2. Other: Training

B6. Sleeping Over:

B6.1. Now

.6.1.1. Intermittent, short duration: N.A.

.6.1.2. Long term: _____

B6.2. Future

.6.2.1. Intermittent, short duration: _____

.6.2.2. Long term: _____

B7. Standing by: For mutual aid occasionally

B7.1. Will other fire companies park their apparatus in the bay under certain circumstances? YES

.7.1.1. Describe: Mutual aid - station coverage - the most twice a year

.7.1.2. Is their access to the building to be limited: NO

B8. Emergency Shelter:

B8.1. Who stays in building: As of now, no one, possibly future bunking.

B9. Social Business:

B9.1. Describe: Awards Banquet and Dinner Meeting - 60 or more

B10. Meetings:

B10.1. Type: Association Mtgs; size: 18 - 25; frequency: every 1st Monday of the month

B10.2. Type: Officers mtg; size: 18 - 25; frequency: every 1st Monday of the month

B11. Social Life:

B11.1. Daily recreation – describe: Small exercise room

B11.2. Outdoor recreation – describe BBQ for banquet

B11.3. Basketball hoop

B11.4. Socially improve relations with community

B12. Access control:

B12.1. Electronic access: FOBs

C Site

C1. Size: See survey

C2. Shape: _____

C3. Frontage: _____; Depth: _____

C4. Soils: _____

C5. Slope: _____

C6. Existing structures: _____

C7. Existing trees: _____

C8. Vegetation: _____

C9. Wetland: _____

C10. Ingress/Egress onto: _____; Adequate: _____

C11. View lines ok: Yes

C12. Who owns the road at apron: Town

C13. Survey status: We need an updated survey; topo: _____

C13.1. Surveyor name: Gary Weiner

C13.2. Address: _____

C13.3. Phone: 413-374-4467; fax: _____; email: m53hamp@gmail.com

C14. Geotechnical report status: Needed

C15. Geotechnical Engineers Name: _____

C15.1. Address: _____

C15.2. Phone: _____; fax: _____; email: _____

C16. Traffic control: NO

C17. Number of primary responder parking spaces needed: 25

C18. Number of other parking spaces needed: No

C19. Number of spaces needed for visiting apparatus: No

C20. Recreation requirements (Pavilion, grill, patio, etc.): No

C21. Site signage requirements: No

C22. Dumpster: Shared at Town hall

C23. Utilities in the street at site (if there is a lateral into the site, identify that as well):

C23.1. Water: Well; Size: _____

C23.2. Sewer: Septic; Size: _____

C23.3. Storm: _____; Size: _____

C23.4. Electric: 100A phase: 1 Phase

C23.5. Gas: _____; Size: _____; Adequate pressure for generator? _____

C23.6. Phone: _____

C23.7. Cable: _____

C24. Electric company: National Grid

C24.1. Contact: _____

C24.2. Follow-up assigned to: _____

C25. Gas company: Columbia Gas

C25.1. Contact: _____

C25.2. Follow-up assigned to: _____

C26. Telephone company: Verizon

C26.1. Contact: _____

C26.2. Follow-up assigned to: _____

C27. Cable company: Charter

C27.1. Contact: _____

C27.2. Follow-up assigned to: _____

C28. Alarm/Security company: Fire Alarm

C28.1. Contact: _____

C28.2. Follow-up assigned to: _____

C29. Dispatch: No self-dispatch, regional dispatch in the future

APPARATUS

1 Apparatus Bays

1.1 Number of vehicles: 7 # of bays: 5

Front Line Vehicles

1.1.1 Name: E1 type: Engine length: 34'-11" weight: _____

1.1.2 Name: E2 type: Engine length: 30'-5" weight: _____

1.1.3 Name: Tanker 1 type: Tanker length: 33'-5" weight: _____

1.1.4 Name: Medic 1 type: Fly Car length: 16' weight: _____

Second Line Vehicles

1.1.5 Name: Squad 1 type: Mini-Pumper length: 21'-8"; weight: _____

1.1.6 Name: Brush 1 type: Brush length: 15'-9"; weight: _____

1.1.7 Name: Car 1 type: Officer Car length: 16'-5"; weight: _____

1.1.8 Name: Antique; type: 1937 Ford; length: 22'-4"; weight: _____

1.2 Type of bays:

1.2.1 Double deep, back-in: YES quantity: 5

1.3 Plan for future expansion of bays: No

1.4 Wash bay: Yes - 1 **;** Where: _____

1.5 Overhead doors:

1.5.1 Front:

1.5.1.1 Number: 5

1.5.1.2 Width: 13'-4"; Height: 14'-0"

1.5.1.3 Windows: 1 row

1.6 Trench drains: Yes; Layout: Centered on the truck

1.7 Wall mounted water hose reels: Yes Quantity: 3 Tempered: _____

1.8 Fume exhaust: Yes Type: Tailpipe

1.9 Truck fills:

1.9.1 Overhead: No Quantity:

1.9.2 Wall hydrant: Yes Quantity: 2

1.9.3 Also, center column

1.9.4 Outdoor hydrant: Yes Quantity: 1

1.10 Overhead electrical drops: YES Quantity: 10

1.11 Overhead airdrops: Yes Quantity: 10

1.12 Compressed air for tools: YES

1.13 Wall mounted air hose reels: Yes Quantity: 2

1.14 Utility sinks: Yes; Where: Utility recess

1.15 Hand wash sinks: Yes; Where: Leaving the bay

1.16 Water fountain/bottle filling station: Yes

1.17 Water Tank under the floor??

1.18 Storage of Diesel Exhaust Fluid: Yes

1.19 Epoxy flooring: No - Maybe Green Ice

1.20 Wall construction type: Block

1.21 Size: 5822 sq ft

2 Trailer Shed

2.1 Number of vehicles: Shed roof off the side; # of bays: 2

2.1.1 Name: Ice Rescue Trailer; type: _____; length: 14'-16'; weight: _____

2.1.2 Name: Board of Health Trailer; type: _____; length: 14'16'; weight: _____

2.2 Overhead doors:

2.2.1 Front:

2.2.1.1 Number: 1-2

2.2.1.2 Width: 12'; Height: 10'

2.2.1.3 Windows: No

2.3 Trench drains: No; Layout: Floor drains

2.4 Epoxy flooring: No

2.5 Wall construction type: CMU

2.6 Comments: This is more of a wish list item to get the trailers under cover

2.7 Size: 867 sq ft

FIREMATIC SUPPORT

3 Mezzanine

3.1 Use: Training

3.2 Training Features: Ladder evolutions, bail out, confined extrication, mask confidence, etc.

3.3 Manhole size/type: 24"

3.4 Items to be located in this space (from current inventory):

3.4.1 Quartermaster storage

3.5 Size 779 net sq ft, 1070 overall sq ft

4 Storage Room #1

4.1 Use: S.A.F.E. products, uniform shirts

4.2 Items to be stored:

4.2.1 Shelf Size: 18" on the side walls & a single row of 24" in the center & back wall

4.3 Security: FOB door

4.4 Adjacencies: Apparatus Bay

4.5 Comments: Preferably square

4.6 Size: 112 sq ft

5 Hose Storage

5.1 A room, or on the floor: Recess

5.2 Hose racks: YES; 2 existing DIY racks ; Size: 10' x 8'

5.3 Hose drying: NO

5.4 Hose washer: Yes - Maybe plan for future

5.5 Hose winder: NO

5.6 Inventory:

5.6.1 5" suction: NA

5.6.2 5" LDH: - @ 50', _____ @ 100' [7 ½" footprint]

5.6.3 4" LDH: - @ 50', _____ @ 100' [6 ½" footprint]

5.6.4 2 ½" LDH: 20 existing @ 50', _____ @ 100' [4" footprint]

5.6.5 1 ¾" LDH: 40 existing + 20 additional @ 50', _____ @ 100' [3" footprint]

5.6.6 1 ⅛" LDH: - @ 50', _____ @ 100' [2" footprint]

5.6.7 Total LF of hose rack = 21'-8" - 20'-0" will be good

5.7 Adjacencies: Recess in bay

5.8 Size: 55 sf

6 Cold Water Rescue Storage Room

6.1 Items to be stored:

6.1.1 Rope, Life Vest

6.1.2 Ice sled

6.2 Location: Mezzanine

6.3 Comments: Easily decontaminated surfaces, floor drain

6.4 Size: 142 sq ft

7 Hazardous Waste Storage

7.1 Location: under mezzanine stair

7.2 Containment floor, polymer door & frame

7.3 Easily decontaminated surfaces

7.4 Size: 12 sq ft

8 Turnout Gear Storage Room

8.1 Quantity of Lockers: 32

8.2 Describe Lockers: Gear grid

8.3 Locker Size: 30" w x 24" dp x 84" h

8.4 Adjacencies: Apparatus Bay

8.5 Comments: Provide exhaust fan in room

8.5.1 Replace existing lockers

8.6 Size: 458 sq ft

9 EMS Storage Room

9.1 Items to be located in this space (from current inventory):

9.1.1 3 Rubbermaid cabinets along wall (2) 69" hi x 27" wide 17" dp; (1) 70 ½" hi x 30" w x 20" dp

9.2 Security: FOB door

9.3 Adjacencies: Apparatus Bay

9.4 Comments: Easily decontaminated surfaces

9.5 Size: 100 sq ft

10 DeCon/Laundry

10.1 Operational Comments:

10.1.1 Essential decontamination of equipment, PPE and personnel

10.2 Sink(s): Yes; Foot Pedal Supply: NO; Knee Operated Drain: NO; # of sink chambers: 2

10.3 Gear washer/extractor: YES, size: Ready Rack EW22 (existing)

10.4 Cabinet gear dryer: Yes

10.5 Ventilated gear racks: NO

10.6 Residential type clothes washer & dryer: NO

10.7 Drench shower: Yes, but in the Apparatus Bay

10.8 SCBA Washing: In sink

10.9 Backboard/Etc. cleaning: in Apparatus Bay

10.10 Items to be located in this space (from current inventory):

10.10.1 Washer extractor

10.11 Additional items (not in current inventory):

10.11.1 Overhead stop on door to bay

10.12 Adjacencies: Apparatus Bay

10.13 Comments: Easily decontaminated surfaces, floor drain

10.14 Size: 303 sq ft

11 Hot Side Shower(s)

11.1 Operational Comments:

11.1.1 Single occupant private showers

11.1.2 Comply with recommendation of a hot shower within an hour of exposure

11.2 Quantity: 2 showers

11.3 Adjacencies: Decon laundry, and hot side lockers

11.4 Comments: Easily decontaminated surfaces, floor drain

11.5 Size: 121 sq ft

12 Hot Side Lockers

12.1 Operational Comments:

12.1.1 Clean clothes to replace those contaminated at scene

12.1.2 Comply with recommendation of a hot shower within an hour of exposure

12.2 Quantity: 34 lockers

12.3 Adjacencies: Hot side showers

12.4 Comments: Easily decontaminated surfaces, floor drain

12.5 Size: 135 sq ft

13 Apparatus Floor Restroom

13.1 Quantity: 1

13.2 Fixture: Sink, urinal, toilet

13.3 Shower: NA

13.4 Lockers: NA

13.5 Adjacencies: Apparatus bay

13.6 Comments: Easily decontaminated surfaces, floor drain

13.7 Size: 67 sq ft

14 Work Room

14.1 Use: Small repairs

14.2 Mechanic: Yes

14.3 Workbench: Yes

14.4 Tool storage: Yes

14.5 Stationary power tools: bench grinder

14.6 Air: yes

14.7 Water/Sink: hand sink here or close by

14.8 Flammable Storage: yes existing - need dimensions

14.9 Items to be located in this space (from current inventory):

14.9.1 none

14.10 Security: FOB

14.11 Adjacencies: Apparatus Bay

14.12 Comments: vice, rolling cart for parts & tools

14.13 Size: 205 sq ft

15 Utility Recess

15.1 Operational Comments:

15.1.1 To support truck cleaning

15.2 Slop sink: Yes

15.3 Truck cleaning tool & supplies: Yes

15.4 Garbage & recycling: Yes

15.5 Curb & floor drain: Yes

15.6 Adjacencies: Apparatus bay

15.7 Size: 32 sq ft

16 Hydration

16.1 Operational Comments:

16.1.1 Water and ice for rehab

16.2 Refrigerator with water bottles: Yes

16.3 Ice machine: Yes

16.4 Shelving for coolers & portable water container: Yes

16.5 Location: Warm or cold zone

16.6 Adjacencies: Apparatus bay

16.7 Size: 75 sq ft room

17 SCBA Compressor Room (Split Design)

17.1 Air compressor size:

17.2 Sound attenuation panels: no

17.3 External feed lines:

17.4 Cascade: 4 bottles

17.5 Oxygen Generator: No

17.6 House Air Compressor: Existing - Sanborn Mfg, Model 500A60 - Need size

17.7 Location: on mezzanine

17.8 Comments: Adequate ventilation for compressor heat

17.9 Size: 149 sq ft

18 SCBA Fill Station Room (Split Design)

18.1 "Public" access: No

18.2 Sink: Yes

18.3 Filling station:

18.4 SCBA storage: base & wall cabinets

18.5 SCBA repair: No

18.6 Air Bottles – Size & Quantity: storage for 6

18.7 Oxygen Generator: No

18.8 Oxygen Fill Station: No

18.9 Oxygen Bottles – Size & Quantity: Yes, 8 bottles, 2 liter size

18.10 Items to be located in this space (from current inventory):

18.10.1 None

18.11 Security:

18.12 Adjacencies: Apparatus Bay

18.13 Size: 120 sq ft

19 Janitor's Closet

19.1 Mop Receptor: Yes

19.2 Slop Sink: No

19.3 Floor Machine: Yes

19.4 Shelving: Yes

19.5 Mop/Broom Rack: Yes

19.6 Adjacencies: Apparatus bay

19.7 Comments: Easily decontaminated surfaces, floor drain

19.8 Size: 64 sq ft

20 Ready Room

20.1 Seating for how many: Table of 6

20.2 Food Counter: Yes

20.3 Sink: Yes

20.4 Refrigerator: Yes

20.5 Microwave: Yes

20.6 Vending machines: No

20.7 Adjacencies: Bay

20.8 Comments: "Dirty side" meeting, waiting, etc. Only if no bunking is this added.

20.9 Size: 267 sq ft

21 Radio Room

21.1 View control: Bay & apron

21.2 Seating for how many: 2 - 3

21.3 Items:

21.3.1 Door operator switches: Yes

21.3.2 Traffic device control: no

21.3.3 Light switches for app bay: No; Outside: No

21.3.4 Internal paging system: Possibly in the future

21.3.5 Siren trigger: No;

21.3.6 Computer equipment: yes, EMS & fire reports, 2nd computer possible

21.3.7 Closed Circuit TV, Phones, Weather Station: Describe: Closed Circuit, 1 phone

21.3.8 File cabinets: Yes; Describe: Drawer, Drawer, Box

21.3.9 Wall mounted items: Tack board outside & adjacent town maps maybe

21.3.10 Rechargeable items (flashlights, pagers): 6 bay radio charger on ledge under bay windows

21.3.11 Lockable storage: No

21.4 Items to be located in this space:

21.4.1 2 radios, 1 for Hampden fire, 1 for scanner

21.4.2 E Dispatch - notification/paging

21.5 Location: Looking into Bay & apron

21.6 Security: open door

21.7 Adjacencies: Apparatus Bay & Ready Room

21.8 Comments: Low countertop with shelf above

21.9 Size: 175 sq ft

ADMINISTRATION

22 Office #1 Chief

22.1 Seat how many: 1 plus 2 visitors

22.2 Security: FOB, soundproof walls

22.3 Adjacencies: _____

22.4 Comments: Workstation with drawer, drawer, box, & 2 chairs, coat closet, table for 4

22.5 Size: 201 sq ft

23 Office #2 Admin

23.1 Seat how many: 1 plus 2 visitors

23.2 Security: FOB, soundproof walls

23.3 Adjacencies: _____

23.4 Comments: Workstation with 2 box file cabinet, Lateral legal 2 drawers file cabinet

23.5 Size: 246 sq ft

24 Office #3 Officers

24.1 Seat how many: 2 seats + 1 shared by 3 people

24.2 Comments: built-in counters with open wall shelves above, drawer, drawer, box

24.3 Size: 182 sq ft

25 Office Support Workroom

25.1 Purpose:

25.1.1 Network printer/copier

25.1.2 Fax

25.1.3 Recycling

25.1.4 Mailboxes

25.1.5 Work Surface

25.1.6 Storage Cabinet(s)

25.2 Location: In Office 2

25.3 Comments: Wall cabinets, copier, (16) mailboxes

26 Records Storage

26.1 Location: In Office 2

26.2 Comments: Wall of file cabinets, - (4) 4 drawer letter size

27 Office Area ADA Compliant Restrooms

27.1 Quantity: 2?

27.2 Fixture: Sink, toilet & urinal

27.3 Size: 67 sq ft

28 Fire Prevention Storage

28.1 Security: FOB

28.2 Adjacencies: _____

28.3 Comments: Uniforms, gloves, shirts flags fire prevention radio batteries

28.4 Size: 100 sq ft

FIREFIGHTERS

29 Day Room

29.1 Kitchen/Kitchenette: Yes

29.2 Dining/Eating: Yes

29.3 Living/T-V: Yes

29.4 Items to be located in this space:

29.4.1 5 seats at the counter

29.4.2 Couch & recliners for 6

29.4.3 Residential appliances, frig, sink, stove, microwave coffee maker

29.5 Comments: If no bunking, no day room

29.6 Size: 525 sq ft

30 Exercise

30.1 Equipment:

30.1.1 Cardio: YES

30.1.2 Weights: YES

30.1.3 Equipment:

30.1.3.1 Rower

30.1.3.2 Weight rack

30.1.3.3 Treadmill

30.1.3.4 Stationary Bike

30.1.3.5 Bench

30.1.3.6 Tire for outdoor use

30.2 Location: In warm zone near hot side lockers

30.3 Security: _____

30.4 Adjacencies: _____

30.5 Comments: Sound dampening walls, gasketed door, lockers not necessary

30.6 Size: or 400 sq ft

BUNKING

31 Bunkers/Bedrooms

31.1 Number of rooms: 5 rooms

31.2 Beds per room: 1 bed per

31.3 Storage: 4 lockers - 24" x 24", lockers can be outside rooms, 1 locker in room

31.4 Desks: No

31.5 Comments: Sound dampening walls, gasketed door – 24 hours on, 24 hours off, 24 hours on, 5 days off, then 48 hours on

31.6 Size: 104 sq ft with lockers

32 Bunker's Bathrooms

32.1 Quantity: 2

32.2 Details: Uni-sex, single occupant

32.3 Fixtures: Toilet, urinal, shower, sink & bench

32.4 Security: Privacy lock

32.5 Adjacencies: Bunk rooms

32.6 Comments: Easily decontaminated surfaces, floor drain

32.7 Size: Bunkers bathrooms (1) @ 73, (1) @ 92 sq ft

33 Bunker's Kitchen

33.1 Equipment: In Day Room

34 Bunker's Dining Room

34.1 Location: In Day Room

35 Bunker's Living Room

35.1 Location: In Day Room

36 Bunker's Bulk Storage

36.1 Location: In lockers outside the room

37 Bunker's Area Laundry Room

37.1 Details: Washing of bedding & station uniforms

37.2 Location: Bunking area

37.3 Comments: Easily decontaminated surfaces, floor drain

37.4 Size: Nook - 40 sq ft

PUBLIC SPACES

38 Meeting/Training Room

38.1 Intended population: 60

38.2 Public access: YES, but not for private events

38.3 Uses:

38.3.1 Department meetings: Every Monday night - some Saturdays

38.3.2 Training: YES

38.3.3 Fundraising dinners: NO

38.3.4 Political/Municipal: NO

38.3.5 Boy Scouts or other similar groups: NO

38.3.6 Rental: NO

38.4 Purpose: Training

38.4.1 Avg. people: 23

38.4.2 Max people: 30

38.4.3 Frequency: Every Monday night & some weekends

38.4.4 Seating: 30

38.5 Purpose: Banquets

38.5.1 Max people: 60

38.5.2 Frequency: 2 x a year

38.5.3 Seating: 60

38.6 Number of tables & size: now Folding cafeteria tables with benches built in

38.7 11 cafeteria style, 2 - 4 without benches,

38.8 ; future _____

38.9 Number of chairs: now 20 folding chairs ; future _____

38.10 Trophy case: Shelves up high in the corridor for several trophies; Size _____

38.11 Plaque: 3

38.12 Glassboard: Yes ; Size _____; location _____

38.13 Bulletin board: Yes ; Size 6x4 ; location _____

38.14 Projector & screen: Either big flatscreen or projector & screen

38.15 Coat rack: Yes, in corridor

38.16 Items to be located in this space (from current inventory):

38.16.1 Tables & chairs

38.17 Adjacencies: Close to Day Room kitchen

38.18 Comments: No folding partition

38.19 Size: 1,000 sq ft

39 Meeting/Training Room Table & Chair Storage

39.1 Table rack quantity: 3 **@ 10 tables each**

39.2 Chair rack quantity: 6 **@ 16 chairs each**

39.3 Existing folding Tables: 11 on 1 rack

39.4 Existing folding Chairs: 20 on 1 cart

39.5 Adjacencies: Meeting/training

39.6 Comments: Robust walls

39.7 Size: 180 sq ft

40 Meeting/Training Room A/V Equipment

40.1 Location: Cabinets in training room

41 Public Toilets

41.1 Quantity: 2

41.2 Adjacencies: Meeting/Training Room

41.3 Comments: Handicapped accessible,

41.4 Size: 256 sq ft

MISCELLANEOUS SPACES

42 Entry Vestibules (2)

42.1 Size: 100 sq ft

43 Office Side Janitors Closet

43.1 Mop Receptor: Yes

43.2 Slop Sink: No

43.3 Floor Machine: No

43.4 Shelving: Yes

43.5 Mop/Broom Rack: Yes

43.6 Comments: Easily decontaminated surfaces, floor drain

43.7 Size: 48 sq ft

44 Mechanical, Electrical, Plumbing, HVAC, Sprinkler, Alarm, etc.

44.1 Fuel type at site: Natural Gas

44.2 Heating type in apparatus bay: In-floor radiant

44.3 Heating type elsewhere: Ducted

44.4 Building to be sprinklered: If bunking, yes

44.4.1 Adequate water pressure: Well water

44.4.2 Storage tank: Probably required

44.5 Hose bibs for exterior: Yes

44.6 Bay lighting type: _____

44.7 Site lighting type: _____

44.8 Other lighting considerations: _____

44.9 Access control type (fob?): FOB

44.10 Security cameras: _____; Describe: _____

44.11 Alarm: _____; Describe: _____

44.12 Location: _____

44.13 Adjacencies: _____

44.14 Comments: _____

44.15 Size: 360 sq ft

45 Sprinkler Room

45.1 Assume 70 sq ft

46 Generator

46.1 Location: Exterior

46.2 Adjacencies: _____

46.3 Comments: _____

46.4 Size: _____ x _____; or _____sq ft

47 Miscellaneous Issues

Comments: Drinking water from well is brown

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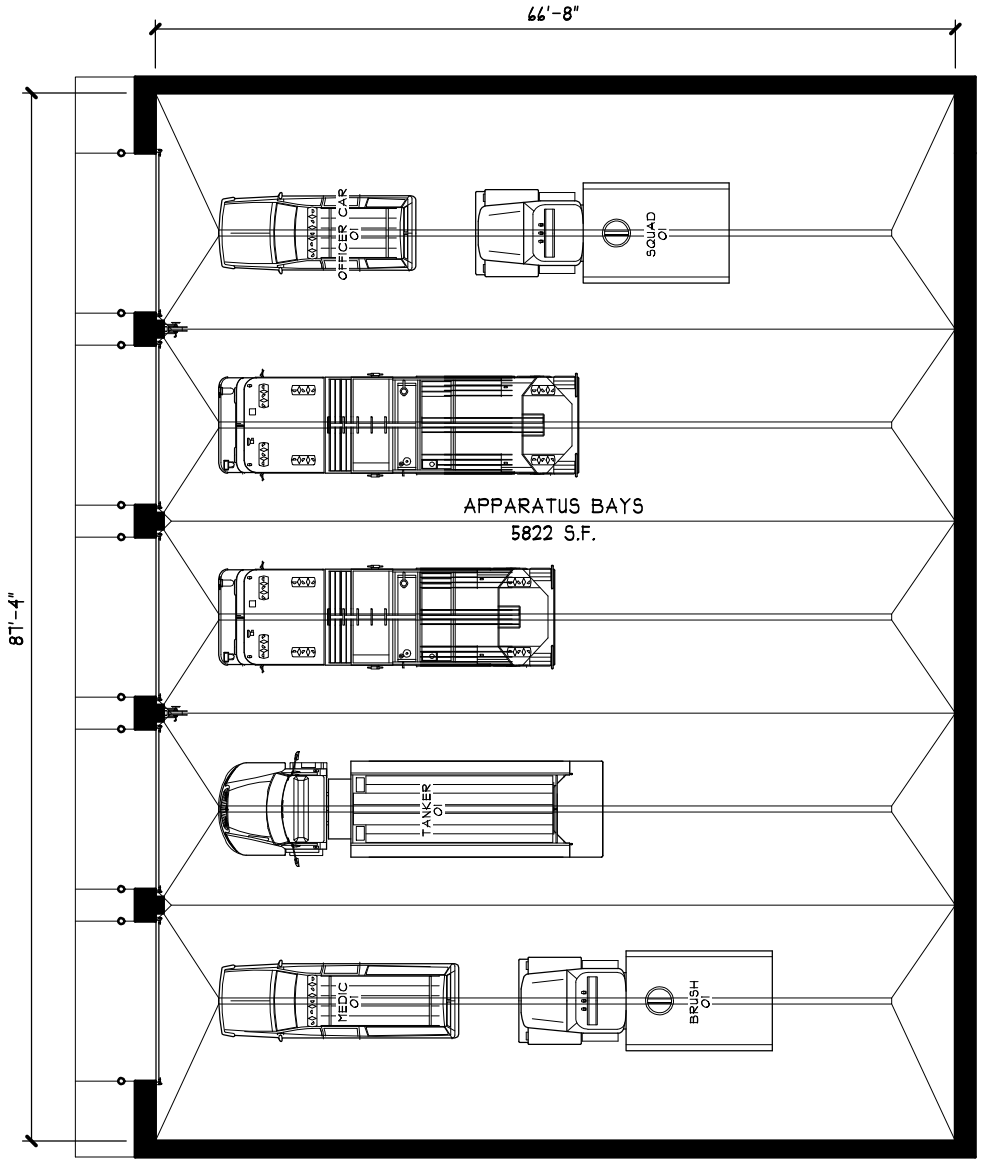


MITCHELL ASSOCIATES ARCHITECTS PLLC

5 DOUBLE DEPTH BAYS

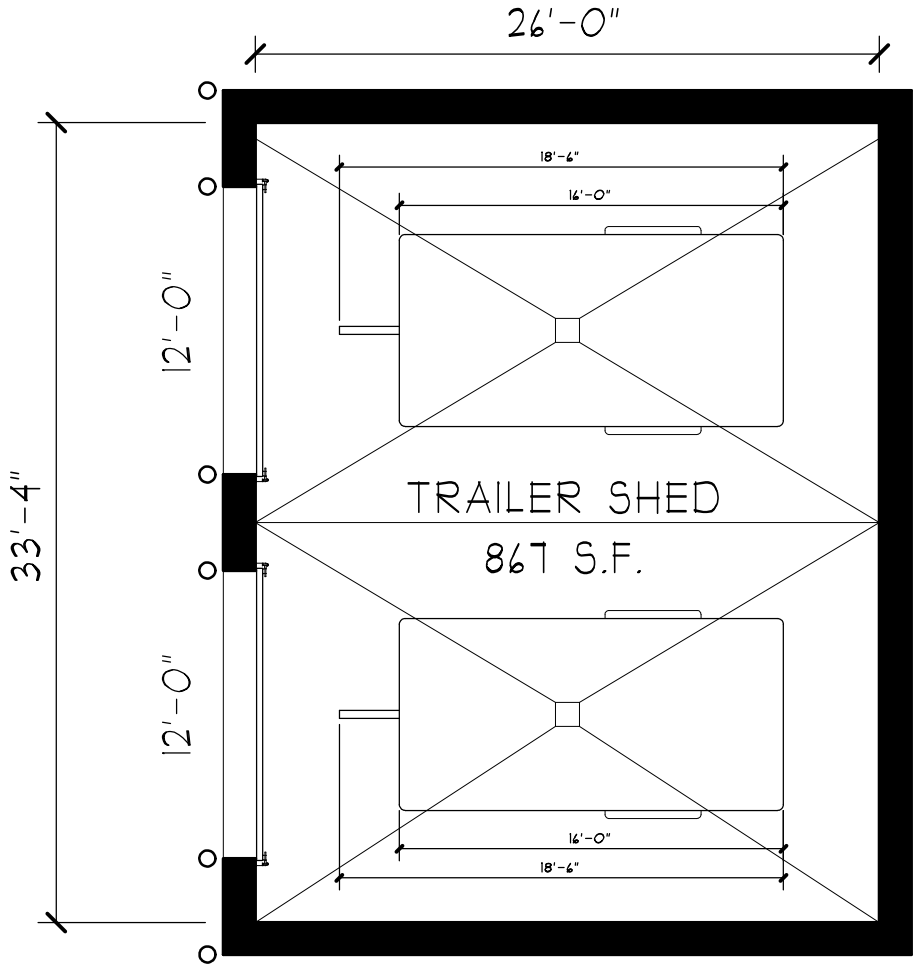
SCALE: 1/16" = 1'-0"

DATE: 6/11/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay & Firematic Support\01 5 Double Depth Bays w 13' 4 Doors

01

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

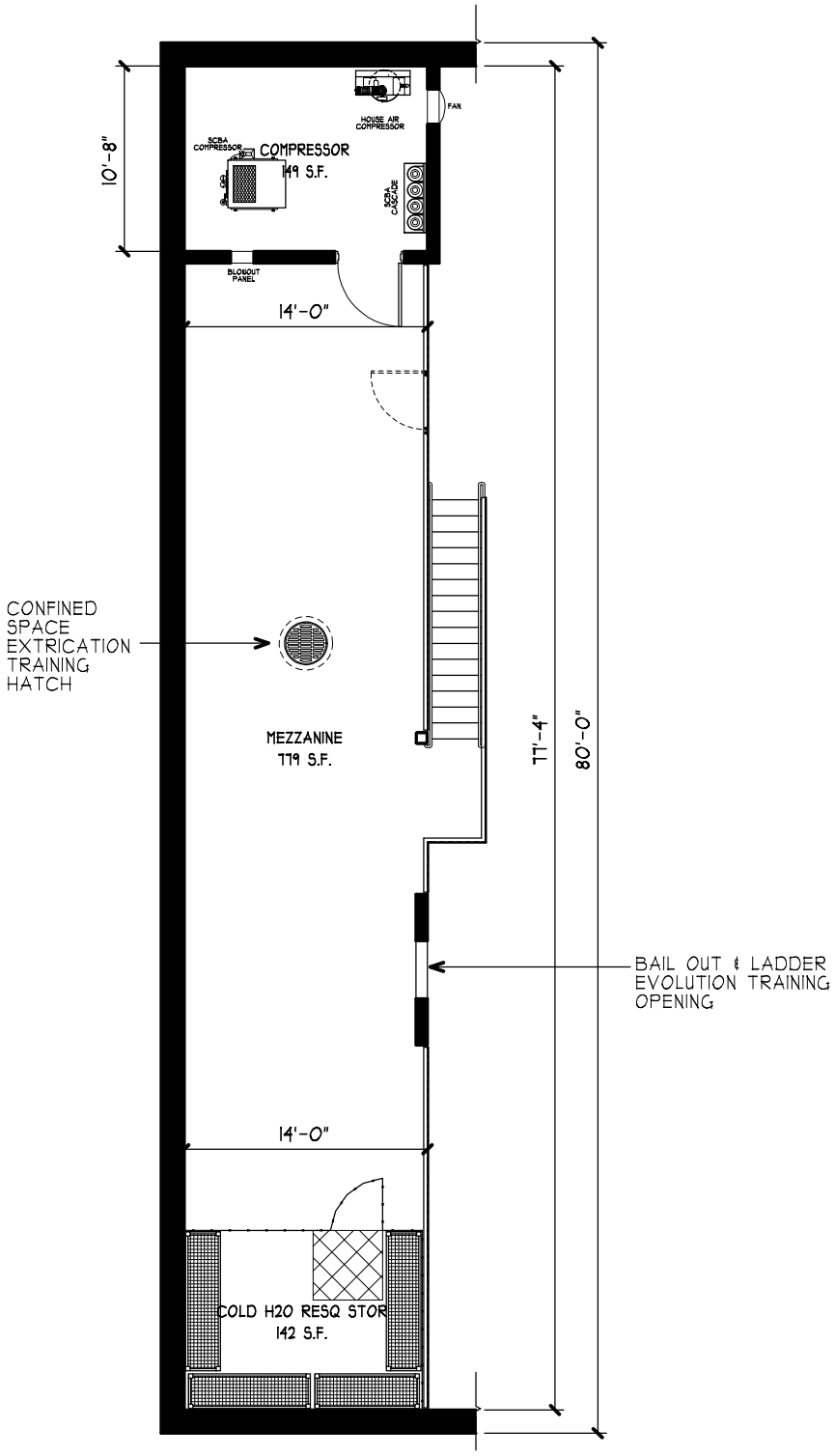
TRAILER SHED

SCALE: 1/8" = 1'-0" | DATE: 6/11/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\02 Trailer Shed - 12 ft doors

02

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

MEZZ/H20 RESQ/COMPRESSOR

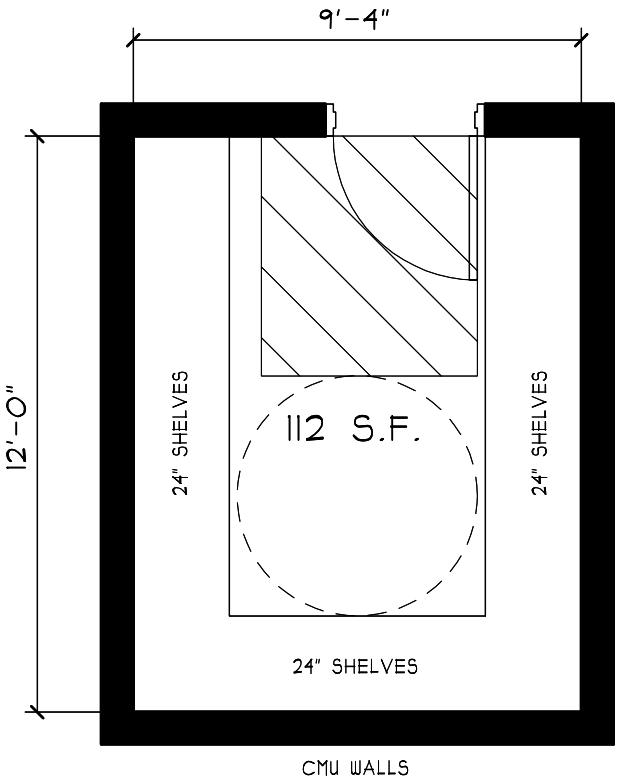
SCALE: 3/32" = 1'-0"

DATE: 6/1/2020

03-06-17

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\03-06-17 Mezz-H20 Resq-Compressor

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

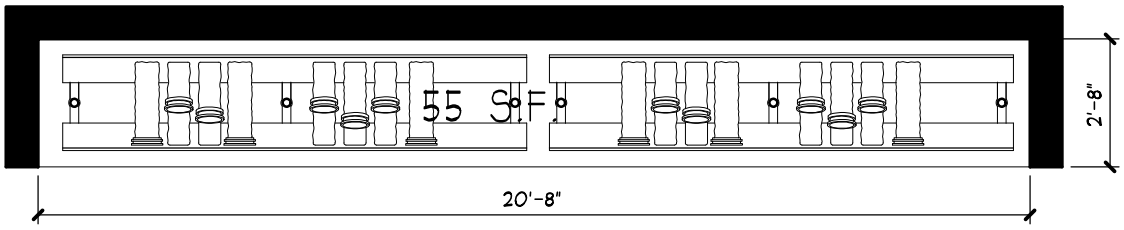
STORAGE

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\04 Storage

04

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

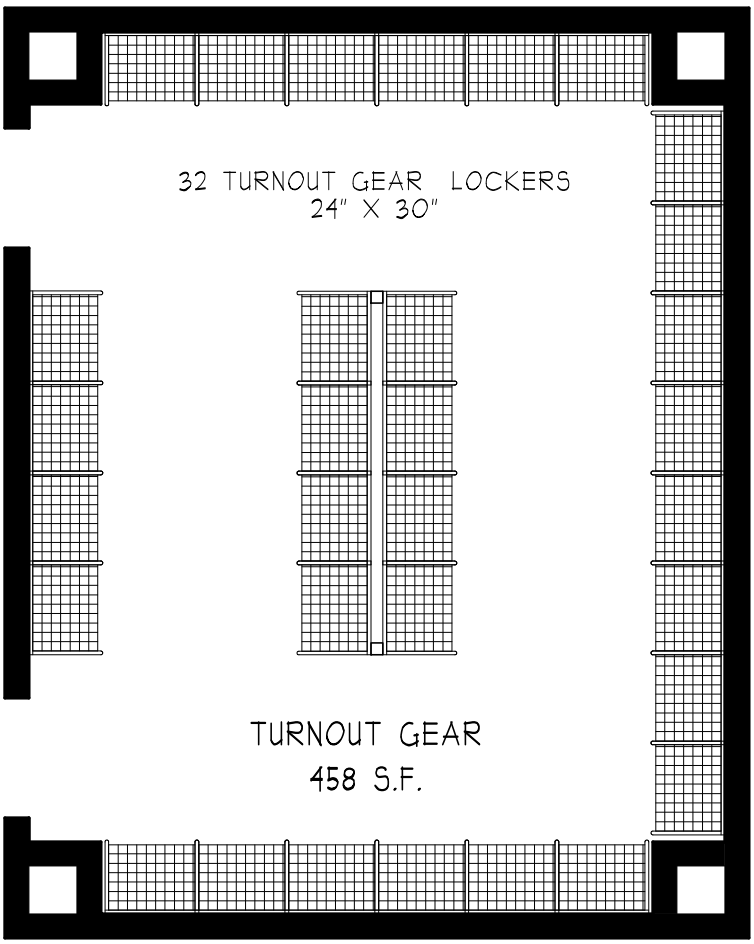
HOSE RECESS

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampdon MA\Individual Rooms\1- Bay 1 Firematic Support\05 Hose Recess

05

ROOM #



MITCHELL ASSOCIATES ARCHITECTS

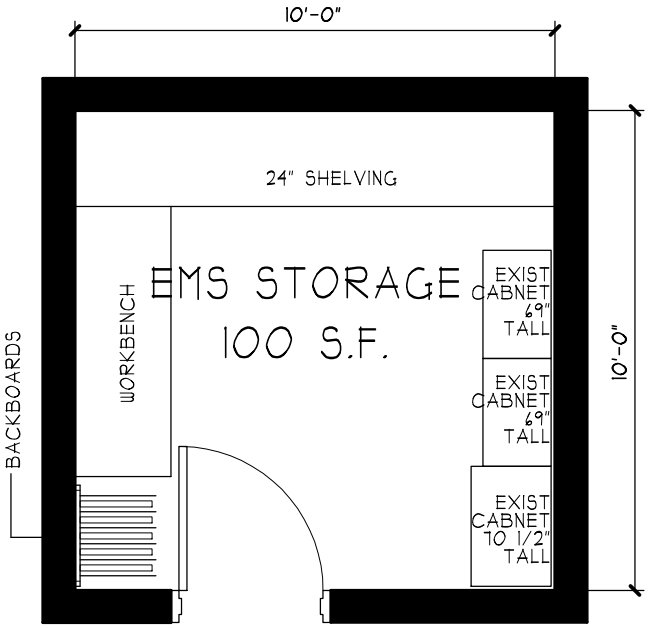
TURNOUT GEAR

SCALE: 3/16" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampdon MA\Individual Rooms\1- Bay 1 Firematic Support\08 Turnout Gear

08

ROOM # 144



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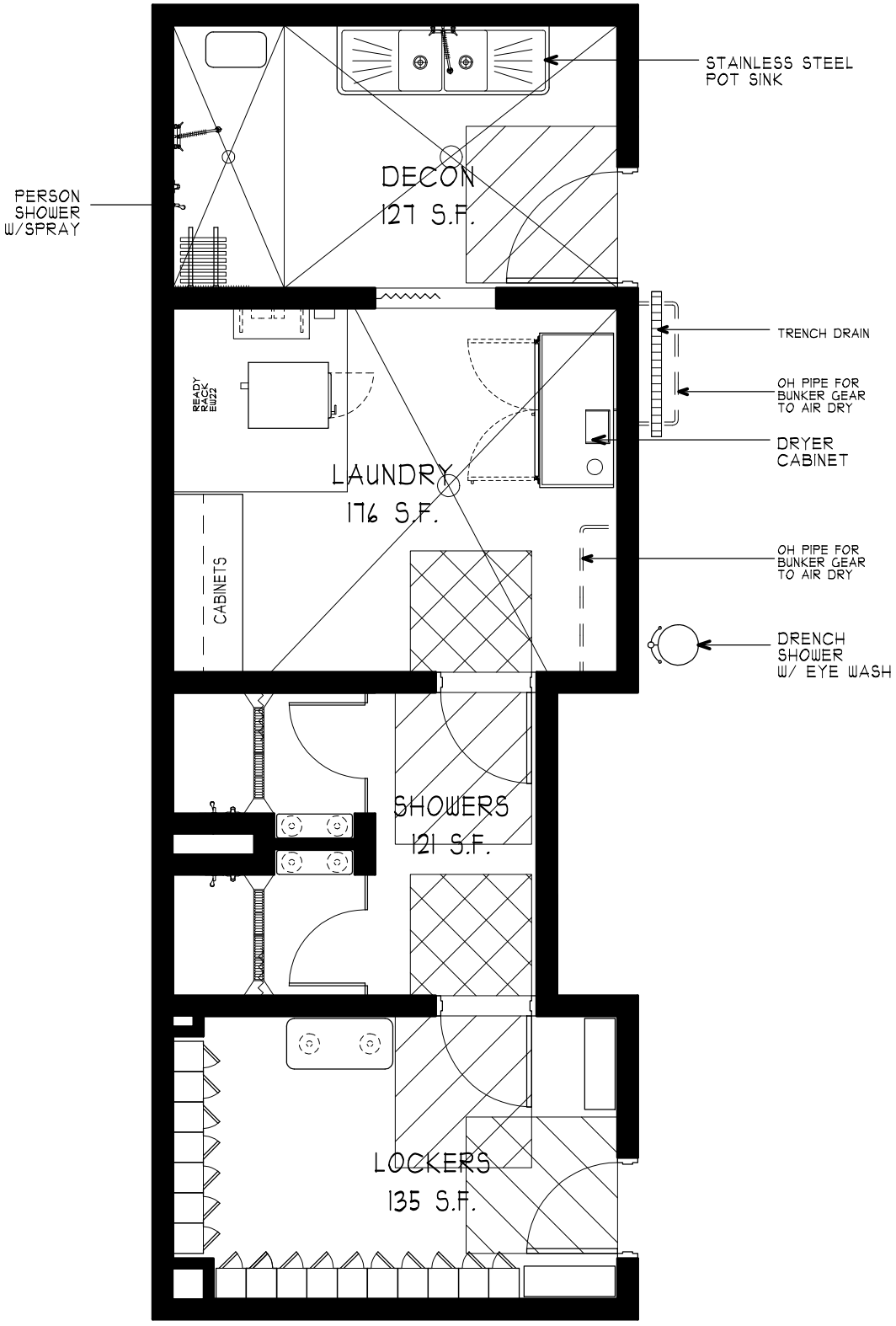
EMS STORAGE

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\09 EMS Storage

09

ROOM #



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DECON/SHOWERS/LOCKERS

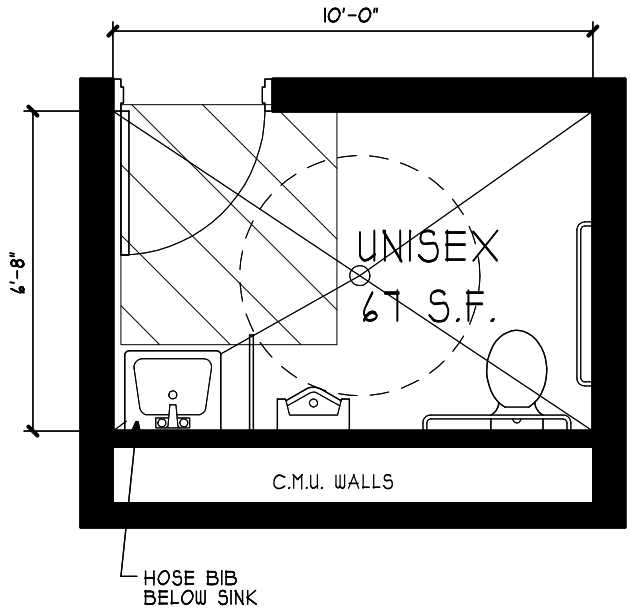
SCALE: 3/16" = 1'-0"

DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\10-11-12 Decon-Showers-Lockers

10-11-12

ROOM #



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ADA UNISEX BATHROOM

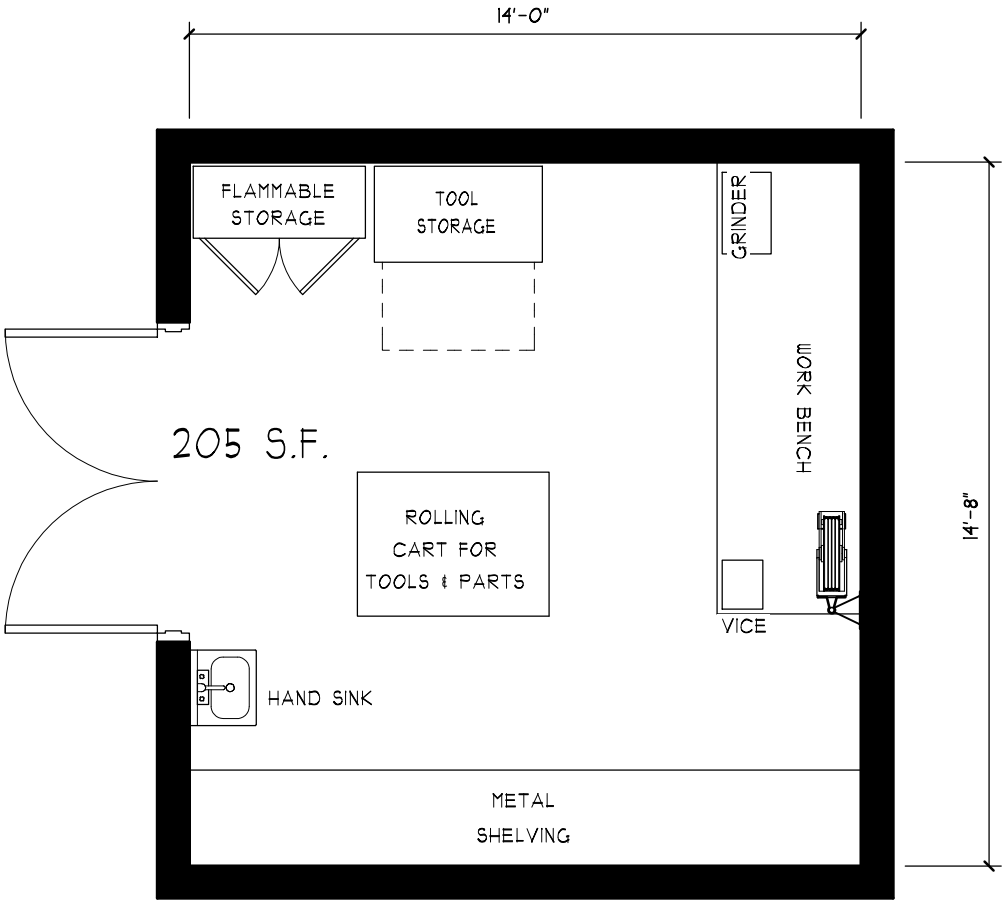
SCALE: 1/4" = 1'-0"

DATE: 6/1/2020

13

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\13 ADA Unisex

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

MECHANICS WORKROOM

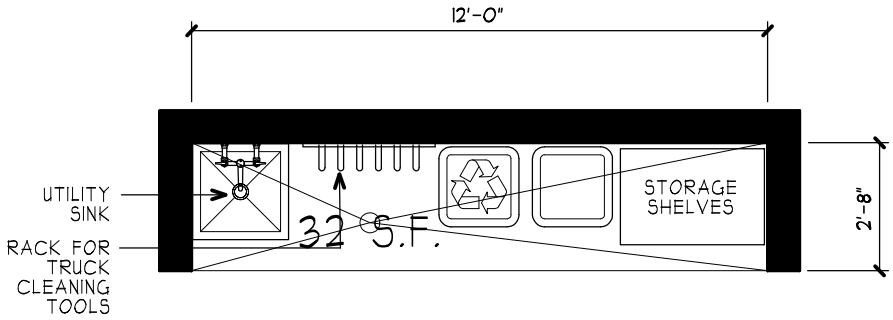
SCALE: 1/4"

DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay & Firematic Support\14 Mechanic Workroom

14

ROOM #



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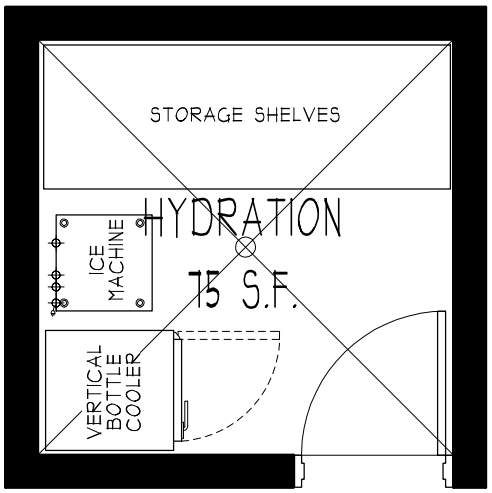
UTILITY RECESS

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\15 Utility Recess

15

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

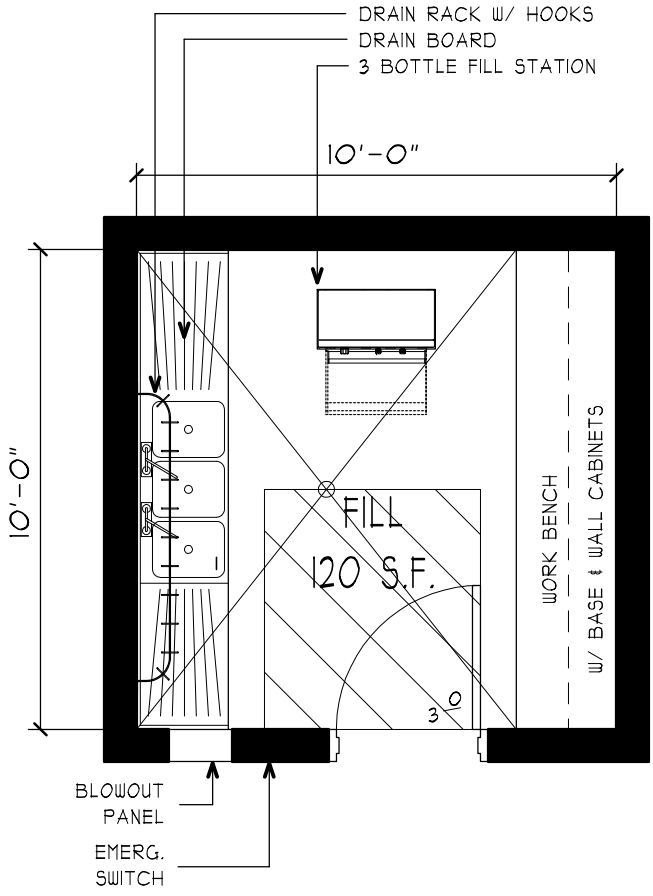
HYDRATION

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\16 Hydration

16

ROOM # 150



MITCHELL ASSOCIATES ARCHITECTS PLLC

SCBA FILL

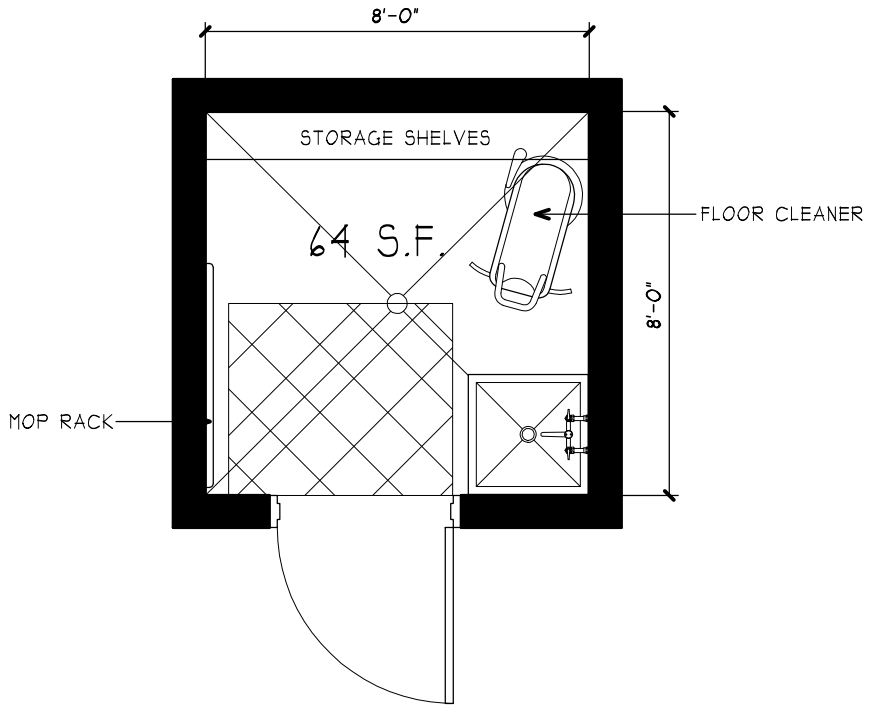
SCALE: 1/4"

DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\18 SCBA Fill

18

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

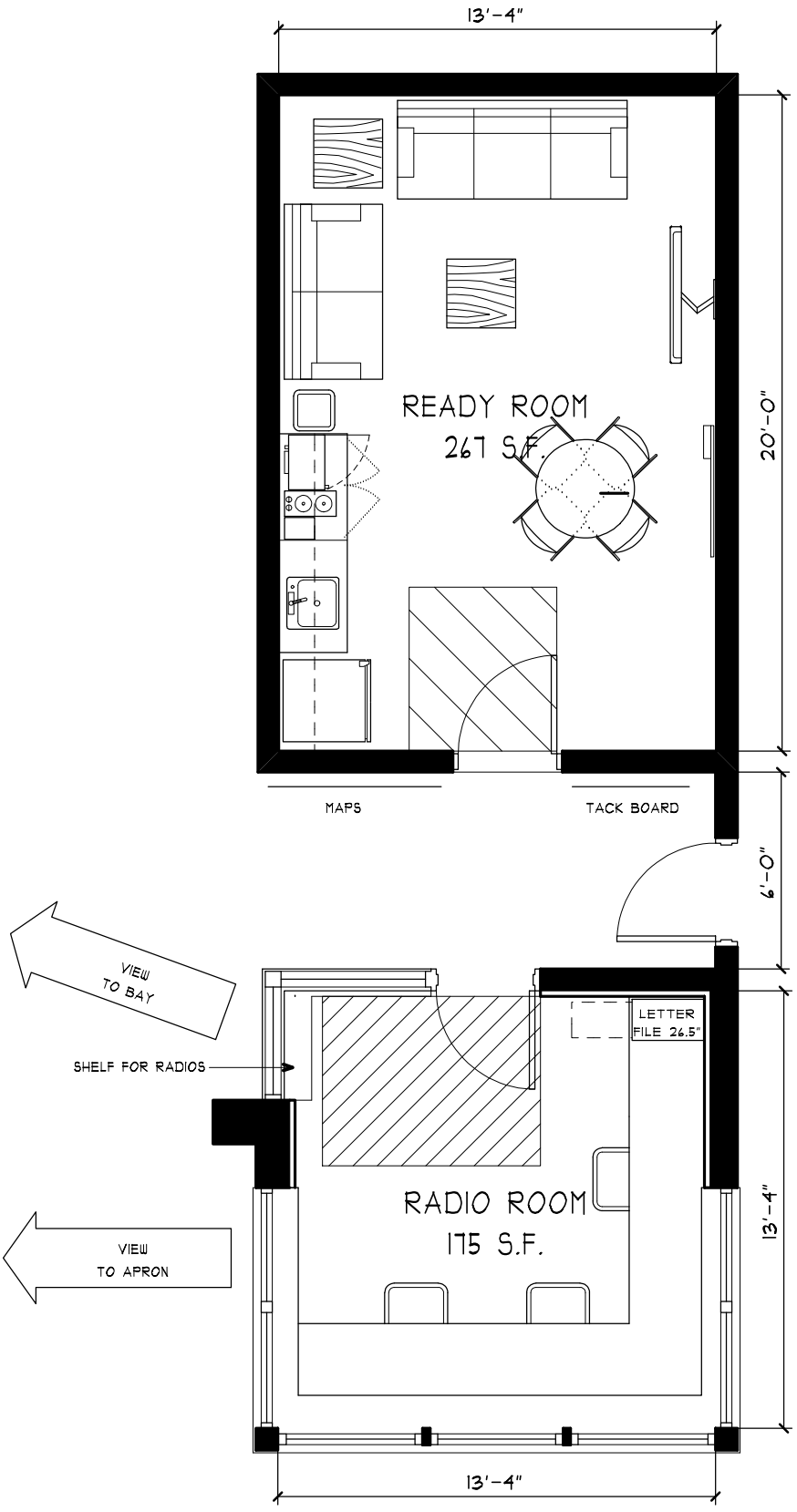
JANITOR'S CLOSET

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\19 Janitor

19

ROOM # 152



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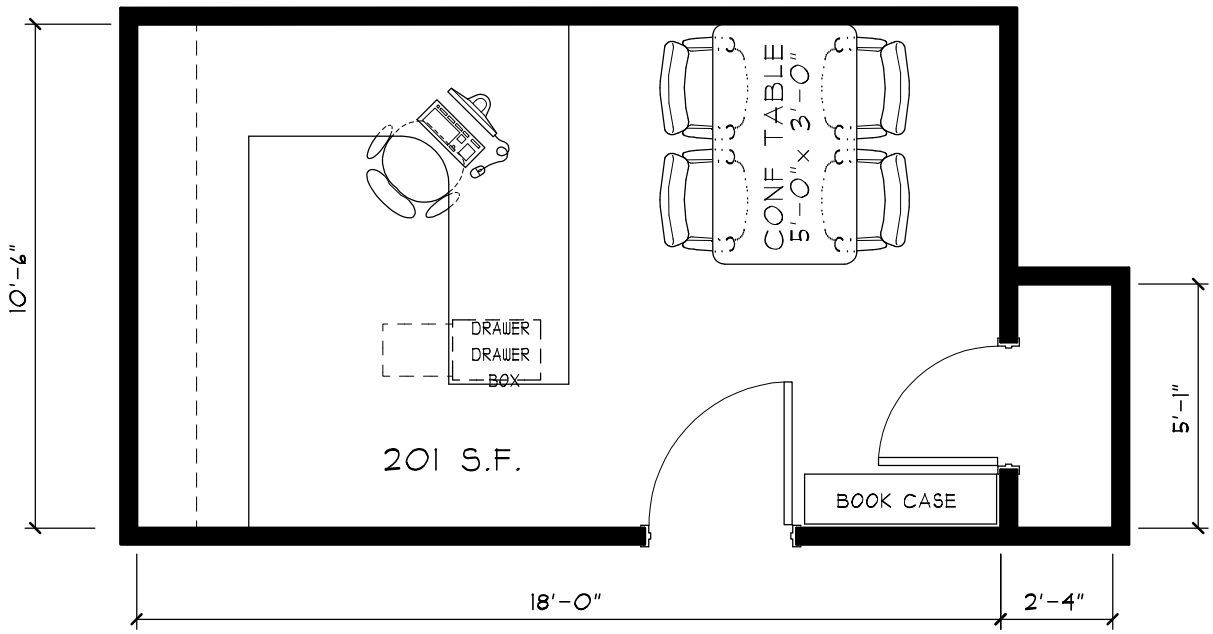
READY ROOM/RADIO ROOM

SCALE: 3/16" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\1- Bay 1 Firematic Support\20 - 21 Ready Room - Radio Room

20-21

ROOM # 153



MITCHELL ASSOCIATES ARCHITECTS PLLC

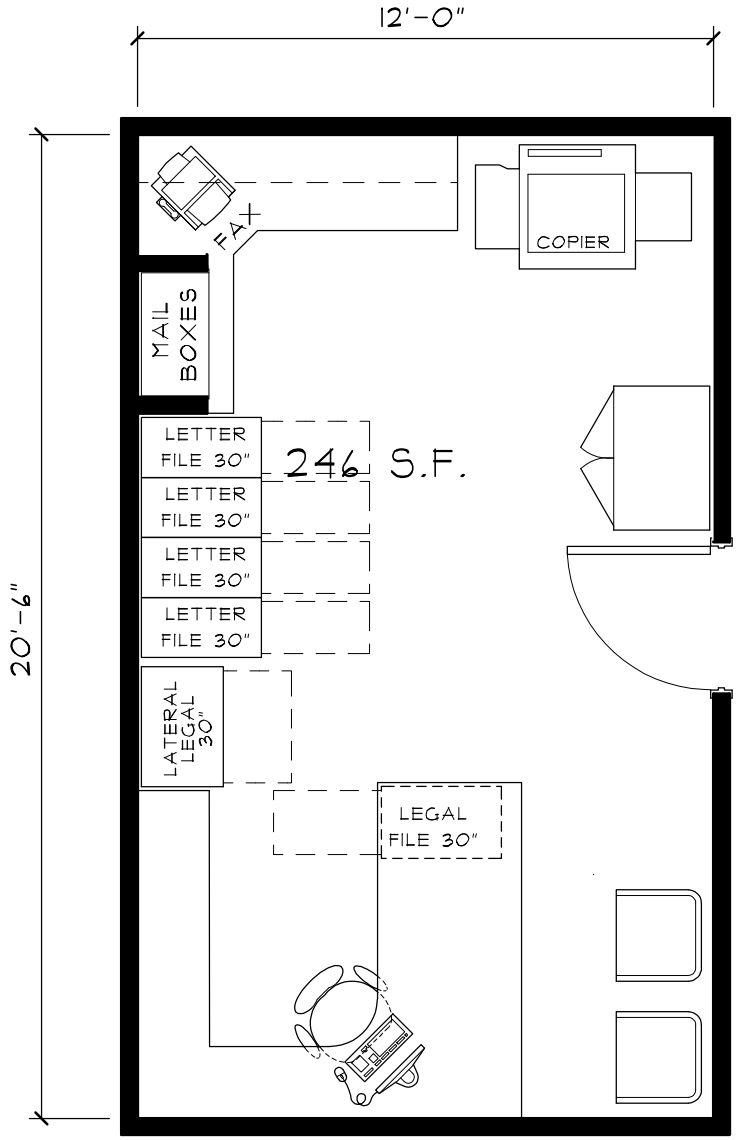
CHIEF

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\2 - Administration\22 Chief

22

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

ADMIN, SUPPORT WORKROOM, FILES

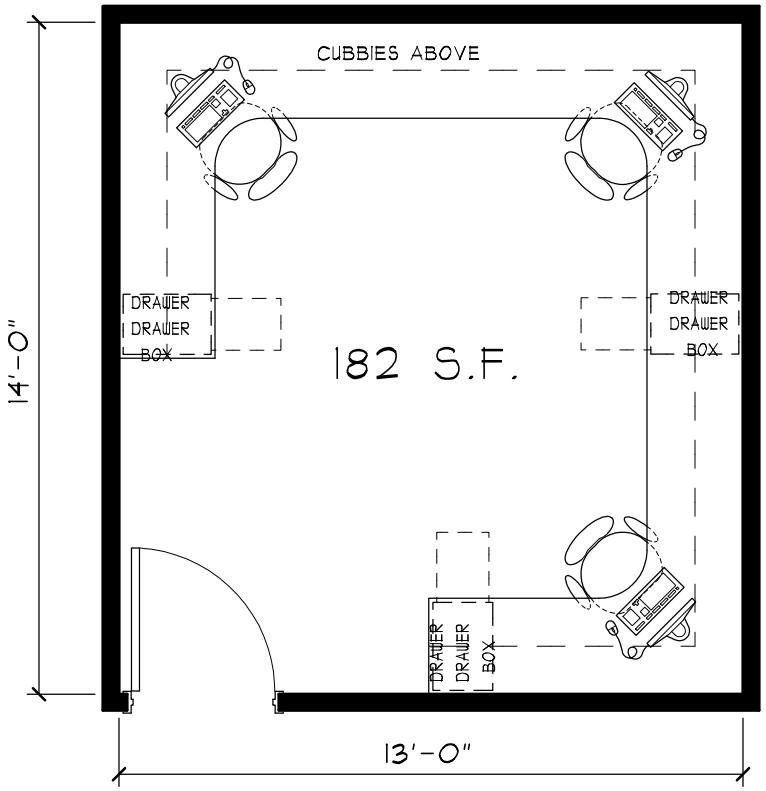
SCALE: 1/4"

DATE: 5/8/2020

S:\J Drive\Hampden MA\Individual Rooms\2 - Administration\23 - 25 - 26 Admin-Work-Files

23 25 26

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

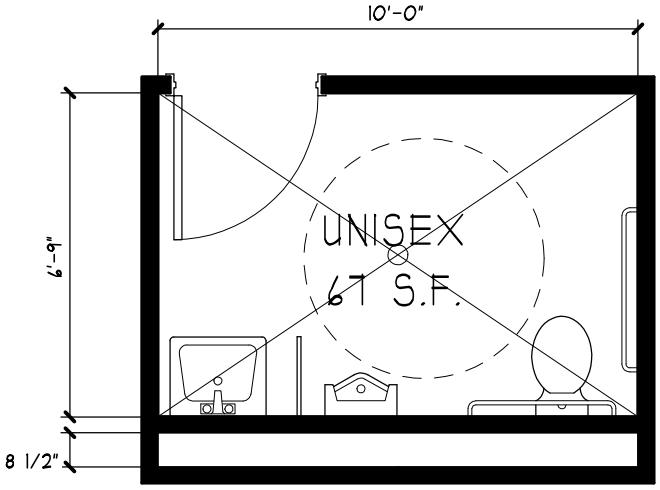
OFFICERS

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\2 - Administration\24 Officers

24

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

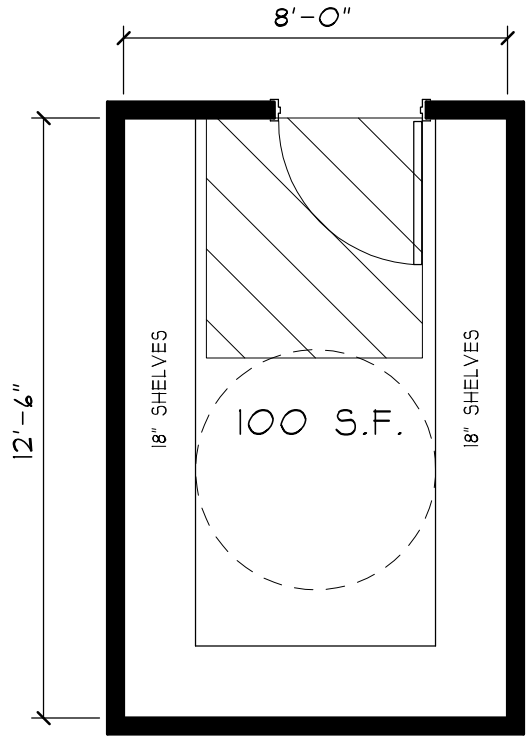
ADA UNISEX TOILET

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\2 - Administration\27 ADA Unisex Toilet

27

ROOM # 157



MITCHELL ASSOCIATES ARCHITECTS PLLC

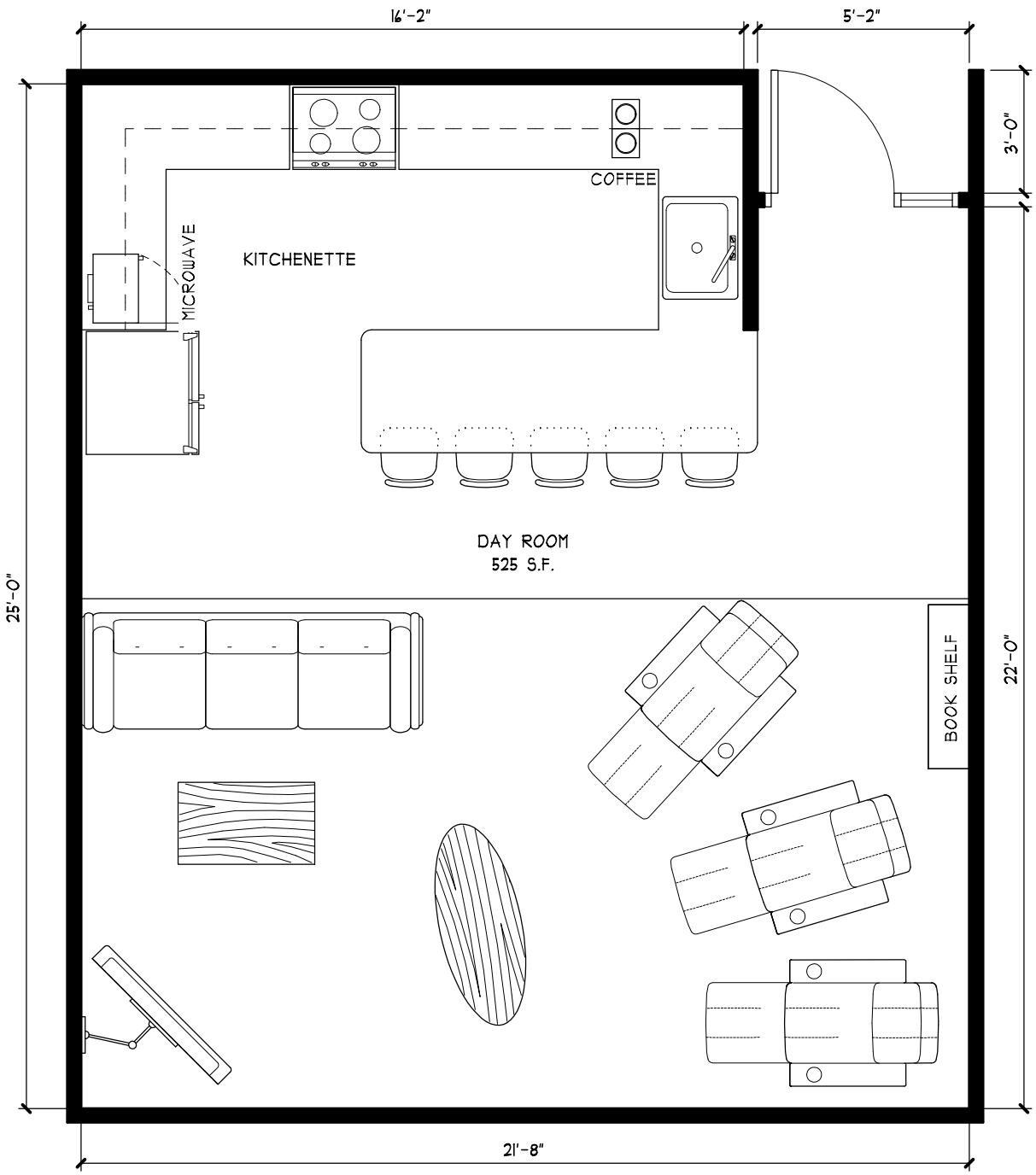
FIRE PREVENTION STORAGE

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\2 - Administration\28 Fire Prevention Storage

28

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

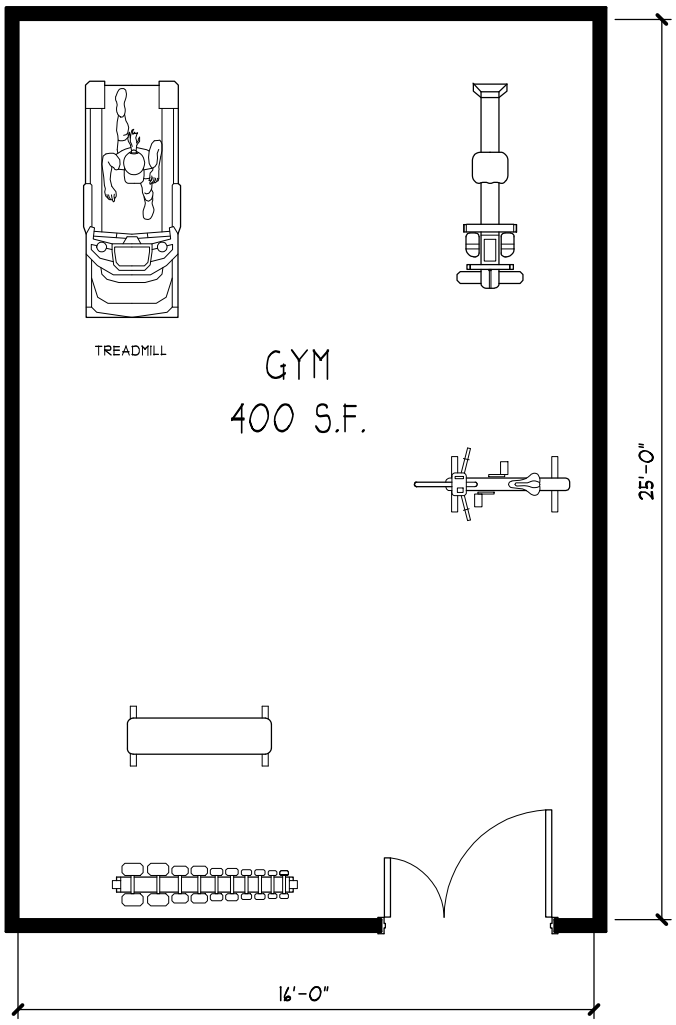
DAY ROOM

SCALE: 1/4" = 1'-0" | DATE: 5/8/2020

S:\J Drive\Hampden MA\Individual Rooms\3 - Firefighters\29 Day Room

29

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

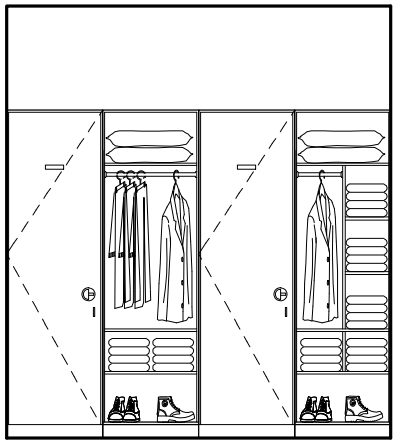
EXERCISE

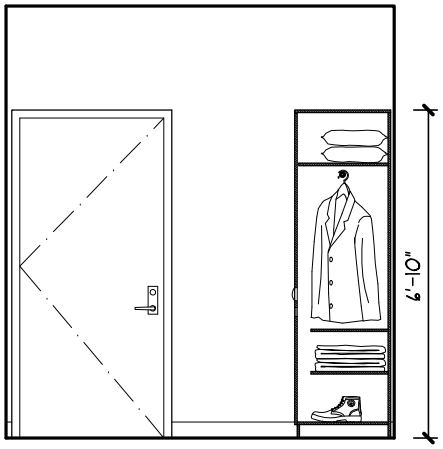
SCALE: 3/16" = 1'-0" | DATE: 5/8/2020

S:\J Drive\Hampdon MA\Individual Rooms\3 - Firefighters\30 Exercise

30

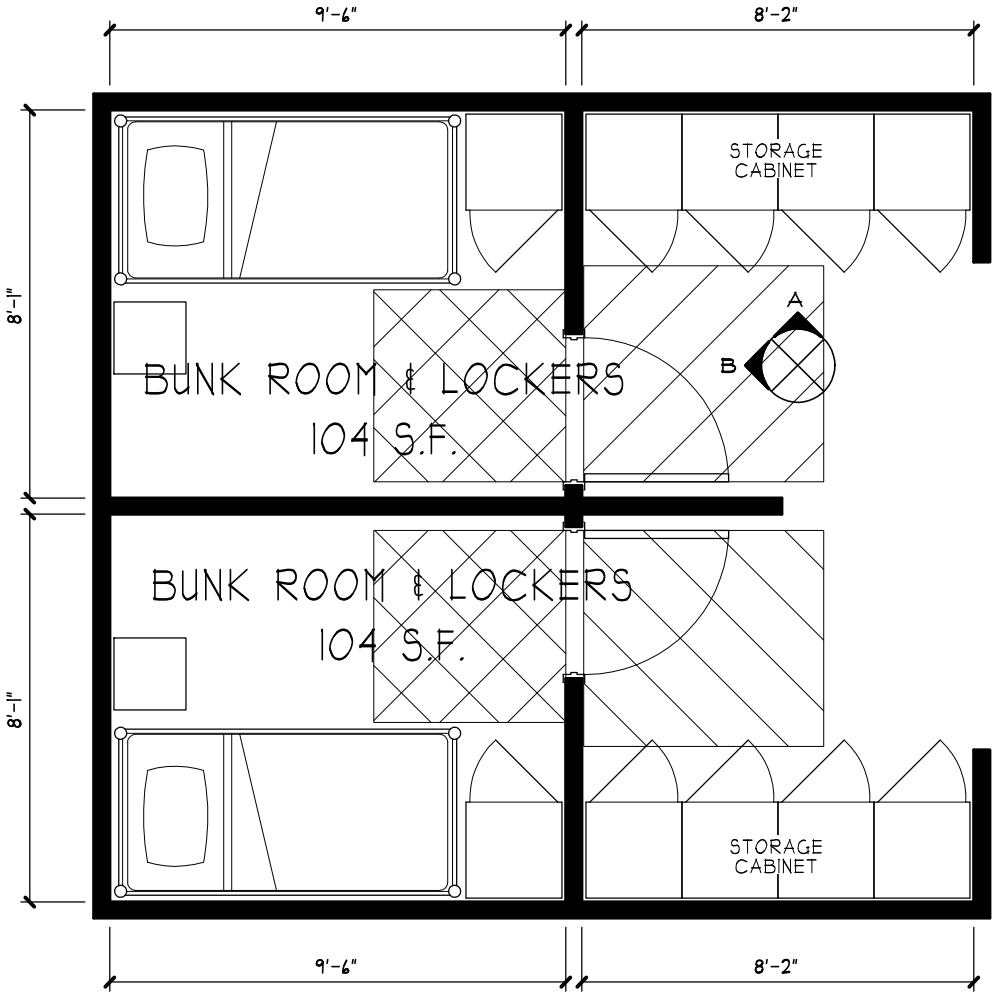
ROOM # 160





A

B



MITCHELL ASSOCIATES ARCHITECTS PLLC

BUNK ROOMS W/ LOCKERS

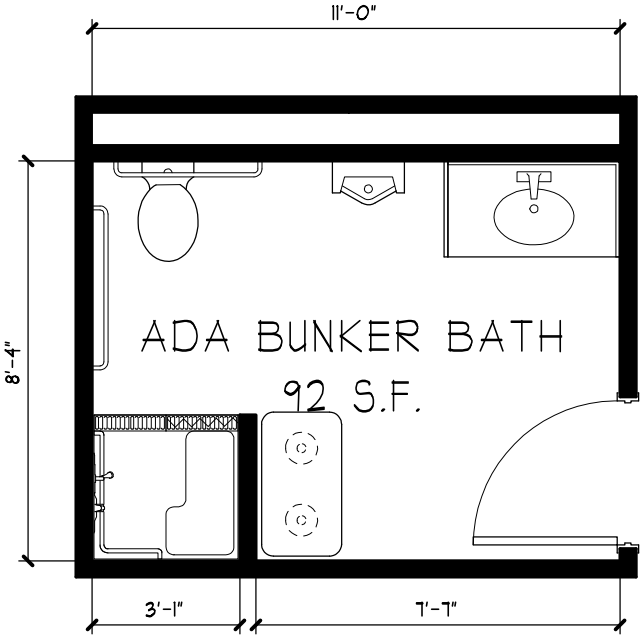
SCALE: 1/4" = 1'-0"

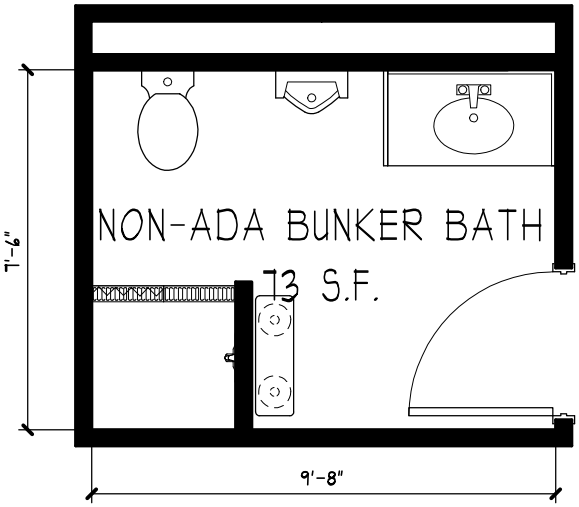
DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\3 - Firefighters\31 Bunk - (4) 24 in Lockers (paired)

31

ROOM #





MITCHELL ASSOCIATES ARCHITECTS PLLC

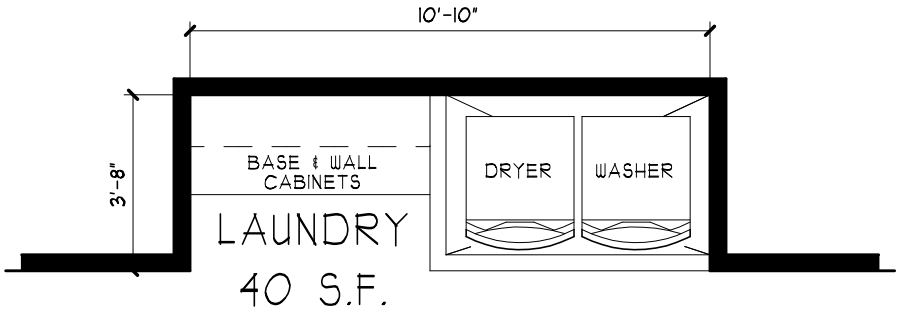
BUNKERS' BATHROOMS

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\3 - Firefighters\32 ADA & non-ADA Unisex bunkers bathroom

32

ROOM # 162



MITCHELL ASSOCIATES ARCHITECTS PLLC

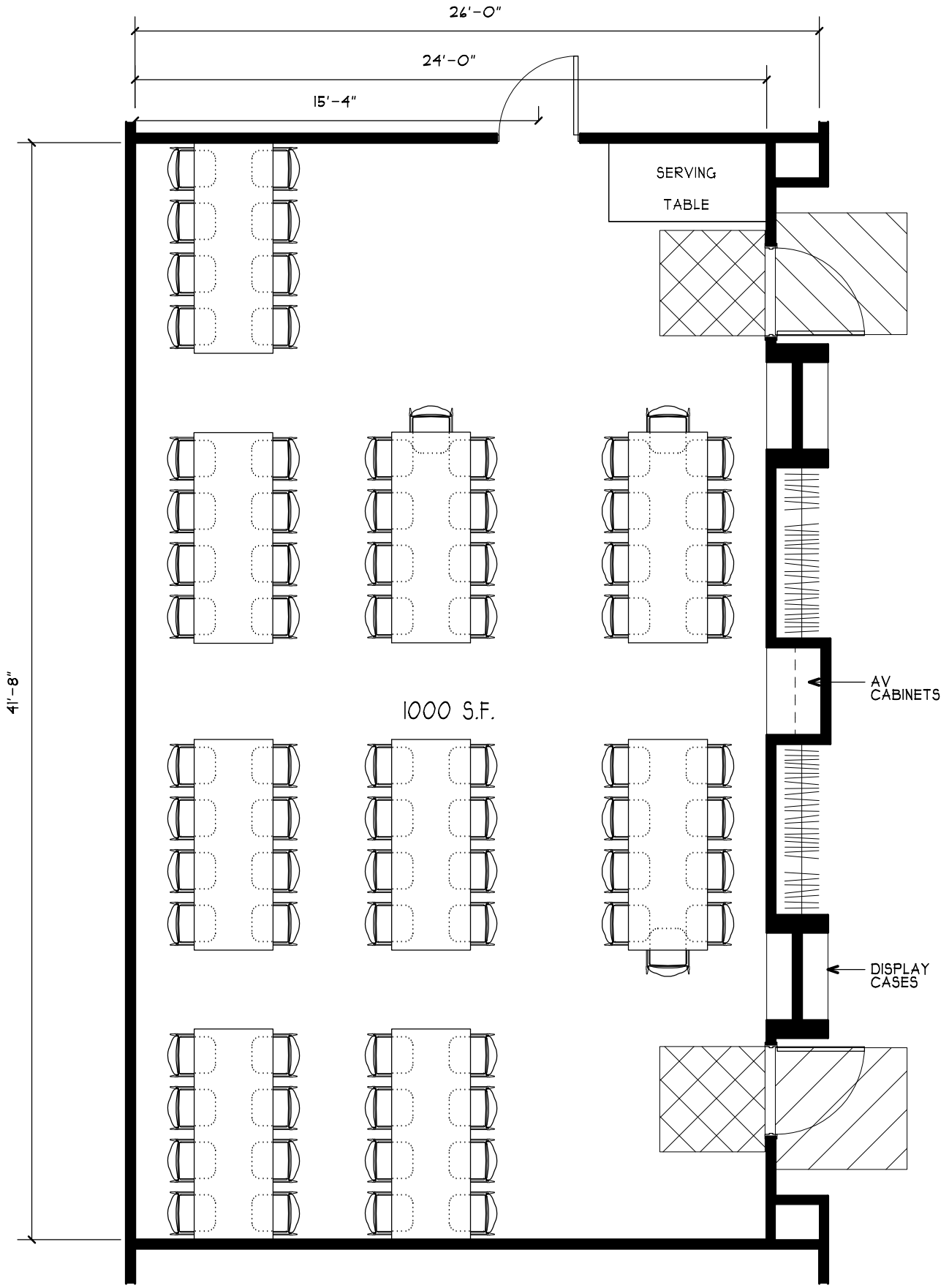
RESIDENTIAL LAUNDRY NOOK

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampden MA\Individual Rooms\3 - Firefighters\37 Residential Laundry Nook

37

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

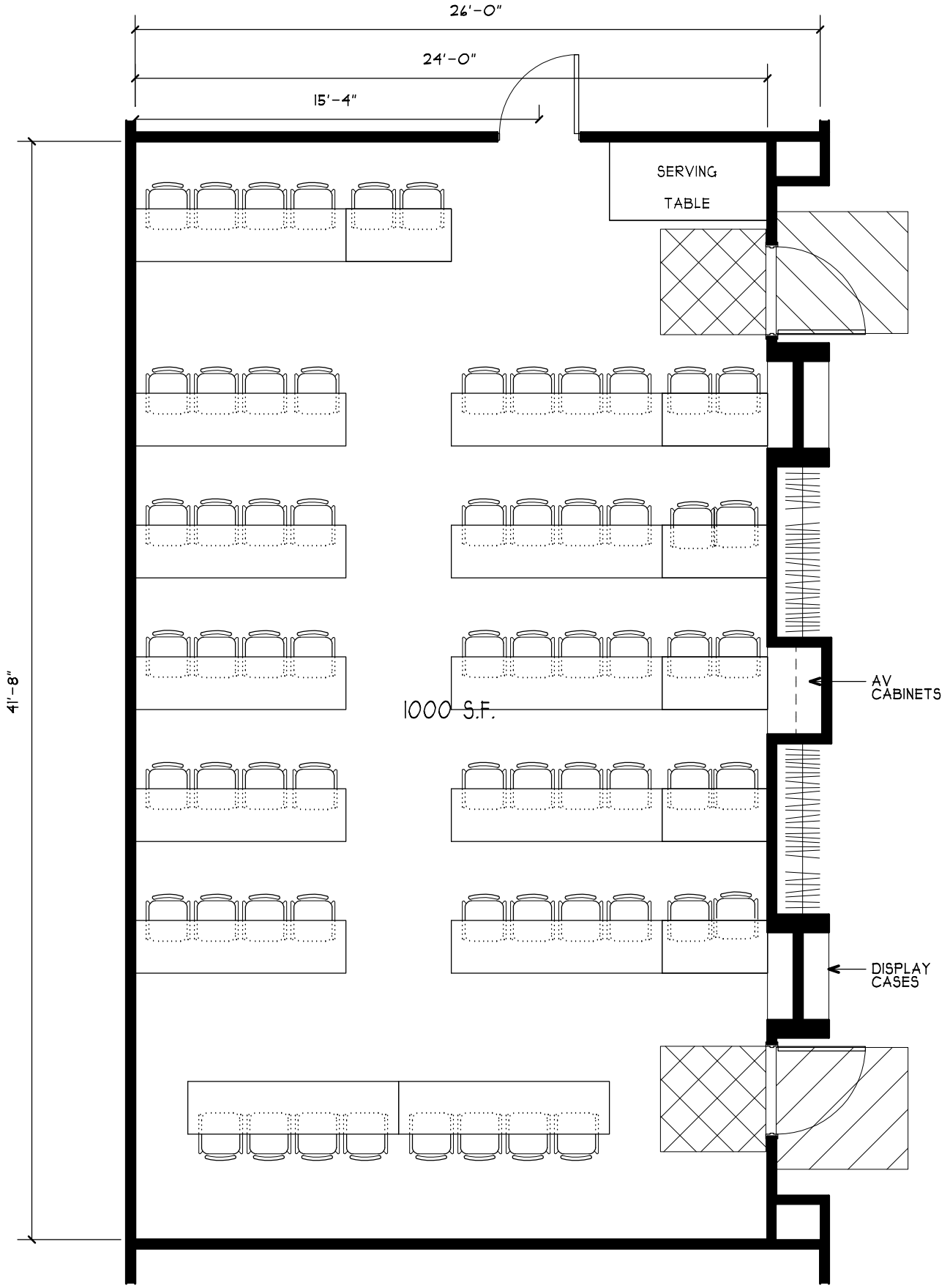
MEETING-TRAINING

SCALE: 3/16" = 1'-0" | DATE: 6/11/2020

S:\J Drive\Hampden MA\Individual Rooms\4 - Public & Training\38 Meeting-Training Room

38

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

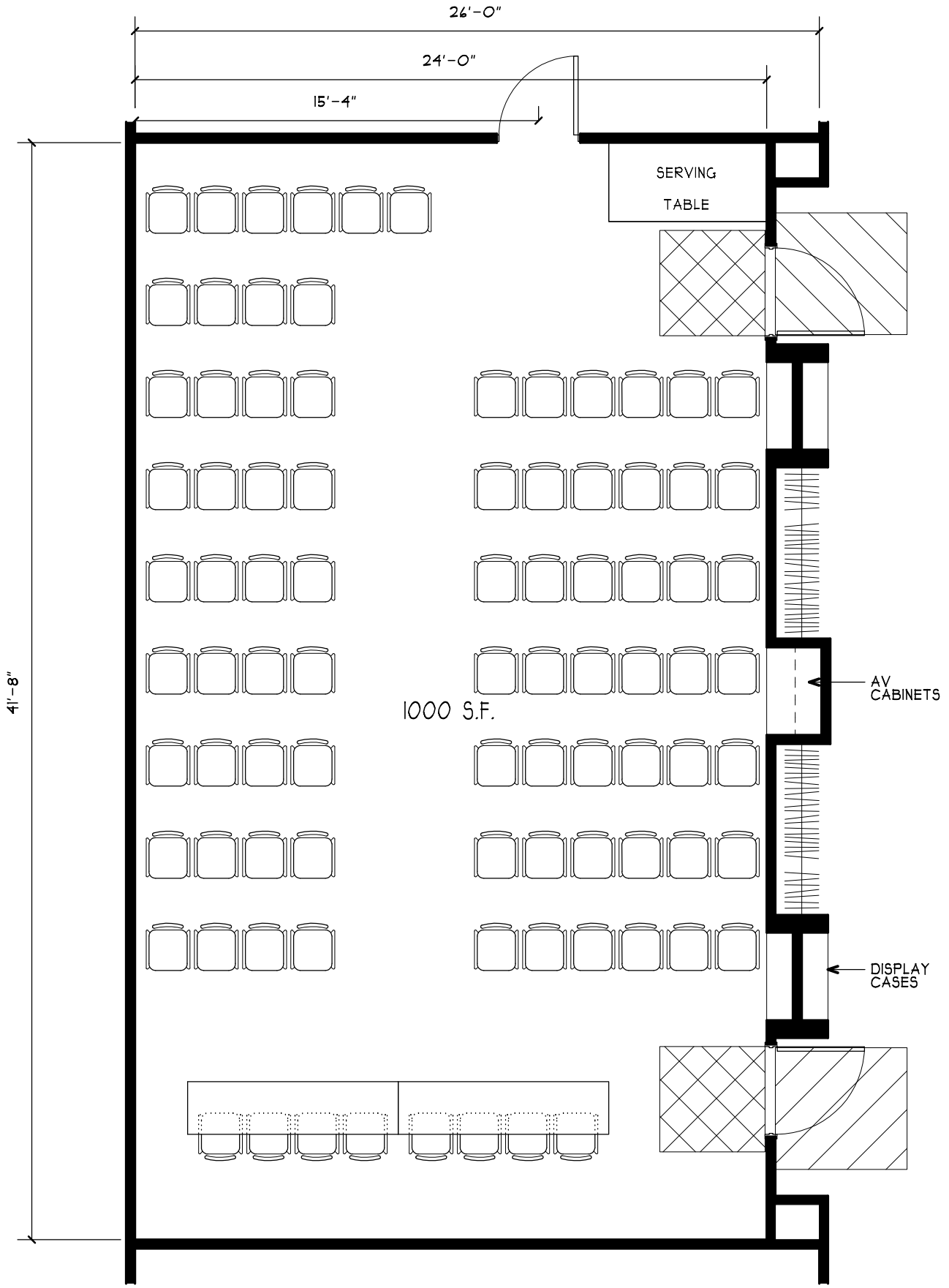
MEETING-TRAINING

SCALE: 3/16" = 1'-0" | DATE: 6/11/2020

S:\J Drive\Hampden MA\Individual Rooms\4 - Public & Training\38 Meeting-Training Room

38

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

MEETING-TRAINING

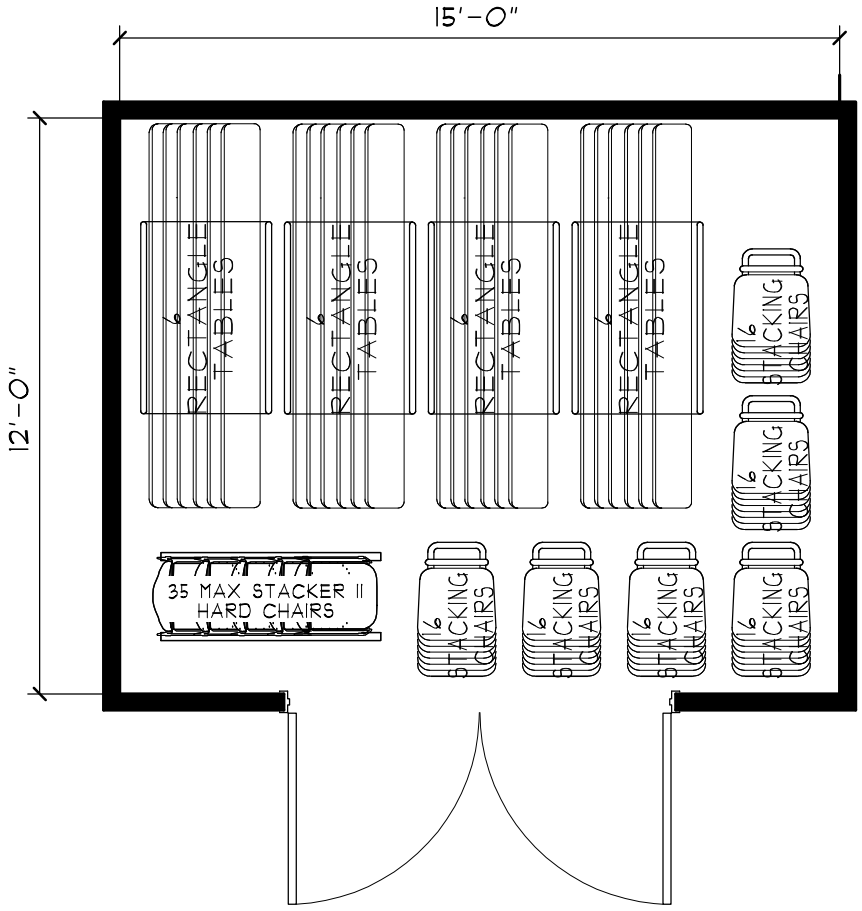
SCALE: 3/16" = 1'-0" | DATE: 6/11/2020

S:\J Drive\Hampden MA\Individual Rooms\4 - Public & Training\38 Meeting-Training Room

38

ROOM #

180 S.F.



MITCHELL ASSOCIATES ARCHITECTS PLLC

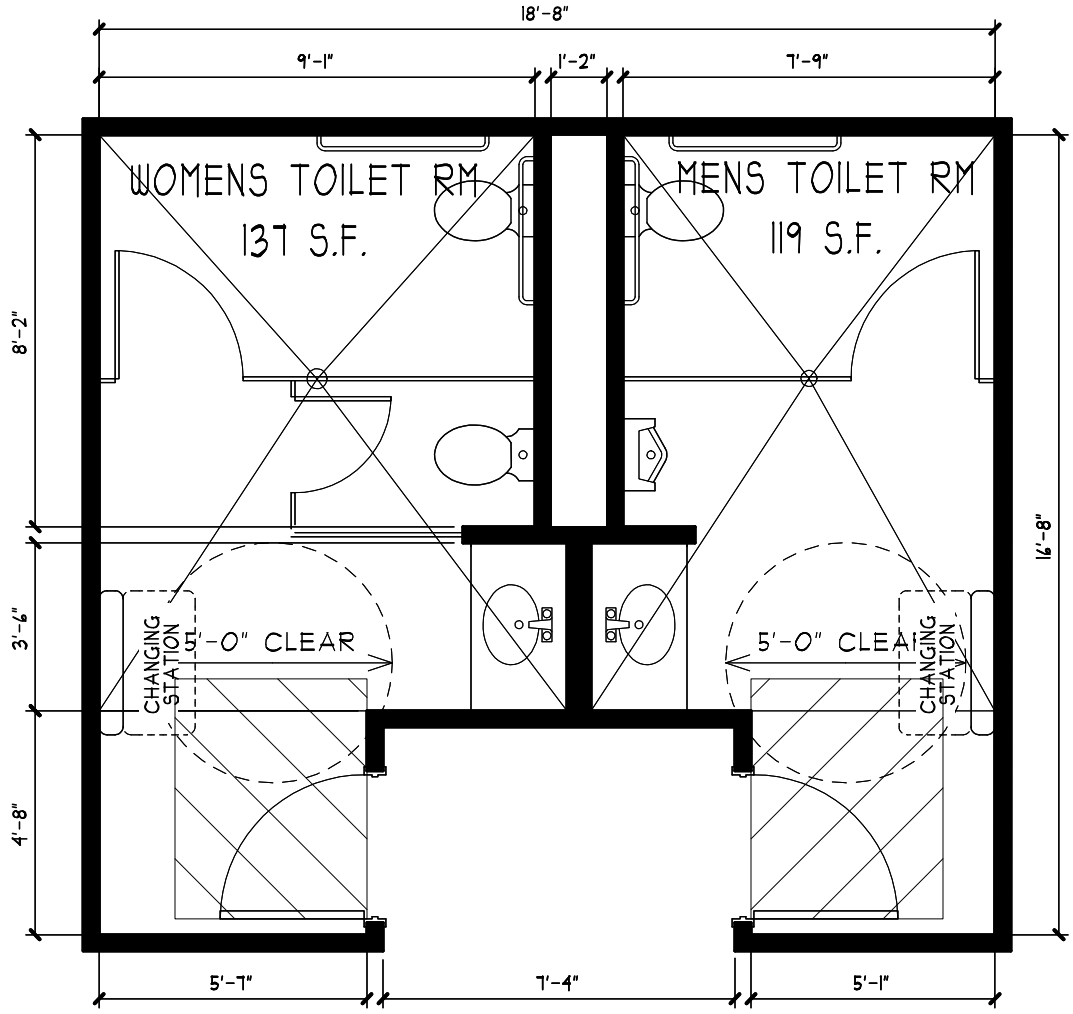
TABLE AND CHAIR STORAGE

SCALE: 1/4" = 1'-0" | DATE: 5/8/2020

S:\J Drive\Hampden MA\Individual Rooms\4 - Public & Training\39 Tables & Chairs

39

ROOM #



MITCHELL ASSOCIATES ARCHITECTS PLLC

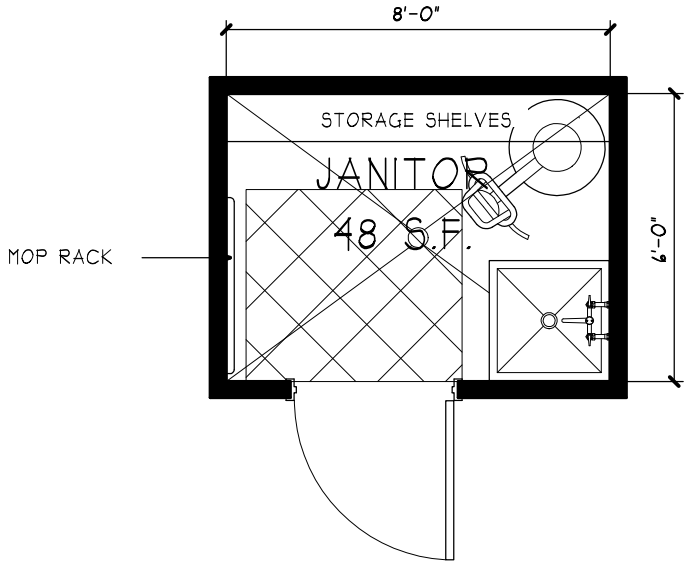
MEN'S/WOMEN'S BATHRMS

SCALE: 1/4" = 1'-0" | DATE: 5/7/2020

S:\J Drive\Hampden MA\Individual Rooms\4 - Public & Training\41 ADA Bathrooms

41

ROOM #



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OFFICE SIDE JANITOR'S CLOSET

SCALE: 1/4" = 1'-0" | DATE: 6/1/2020

S:\J Drive\Hampdon MA\Individual Rooms\5 - Miscellaneous\43 Offic Side Janitor

43

ROOM #

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Hampden Fire Station Space/Usage Analysis

Room Name	1st Floor Area	Mezz	Total Area
Apparatus Bay			
Apparatus Bay	5,822		5,822
Secondary Apparatus Bay	867		867
Subtotal - Apparatus	**6,689**		**6,689**
Firematic Support			
Mezzanine		**779**	**779**
Storage Room #1	112		112
Hose Storage	55		55
Cold Water Rescue Storage Room		142	142
Hazardous Waste	12		12
Turnout Gear Storage	458		458
EMS Storage	100		100
Decon/Laundry	303		303
Hot Side Shower	121		121
Hot Side Clothing Lockers	135		135
Apparatus Floor Bathroom	67		67
Work Room	205		205
Utility Recess	32		32
Hydration	75		75
SCBA Compressor		149	149
SCBA Fill Station	120		120
Janitor's Closet	64		64
Ready Room	267		267
Radio Room	175		175
Subtotal - Firematic Support	**2,301**	**291**	**2,592**
Administration			
Chief	201		201
Admin	246		246
Officers	182		182
Support - in #23 Admin			0
Records Storage - in #23 Admin			0
Admin Bathroom	67		67
Fire Prevention Storage	100		100
Subtotal - Administration	**796**		**796**
Firefighters			
Day Room	525		525
Exercise	400		400
Standard Bunkroom (5 @ 104 sq ft)	520		520
Bunkers' Non-ADA Bathroom	73		73
Bunkers' ADA Bathroom	92		92
Not Used			0
Bunker's Laundry Nook	40		40
Subtotal - Firefighters	**1,650**		**1,650**
Public Spaces			
Meeting/Training Room	1000		1,000
Table & Chair Storage	180		180
A/V - in 38 Meeting/Training Room			0
Public Rest Rooms M & F	256		256
Subtotal - Public Spaces	**1,436**		**1,436**
Miscellaneous Space			
(2) Entry Vestibules	100		100
Non- Bay Janitors Closets (2)	48		48
Mechanical/Electrical	360		360
Sprinkler	70		70
Subtotal - Miscellaneous Spaces	**578**		**578**
Area Subtotals			
Bay	**6,689**		**6,689**
Firematic Support	**2,301**	**291**	**2,592**
Mezzanine		**779**	**779**
Office & Living	**4,460**		**4,460**
Other			**0**
Walls & Circulation			
Apparatus Bay Walls @ 8%	535		535
Firematic Support Walls @ 15%	345	44	389
Firematic Support Circulation @ 15%	345		345
Office Area Walls @ 16%	714		714
Office Area Circulation @ 15%	669		669
Subtotal - Walls & Circulation	**2,608**	**44**	**2,652**
Total >>	**16,058**	**1,114**	**17,172**
Footprint>>	**16,058**		**16,058**

Mitchell Associates Architects 29 Thacher Park Road, Voorheesville, NY 12186 (518) 765-4571 (fax) 765-2950

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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4 Section 4 – Project Option 1.1

Renovate Existing Station – No Addition

Option Overview

Option 1.1 assumes **no building addition** is performed and all renovations and reported building deficiencies are corrected within the footprint of the existing building. All Priority 1, 2 and 3 Categories *are* to be repaired/replaced/corrected under this Option 1.1.

OPTION 1.1 – Renovate the Existing Facility; NO Addition

Building Size Existing	5,011 sf
Building Size Increase	0 sf
Building Size @ Completion	5,011 sf
Program area ***not*** included	12,161 sf

OPTION	OVERALL COST	BUILDING OUTCOME								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 1.1	$2,157,628	NO	NO	5,011	NO	YES	NO	NO	NO	10-12 mos.

Analysis, Determinations & Limitations

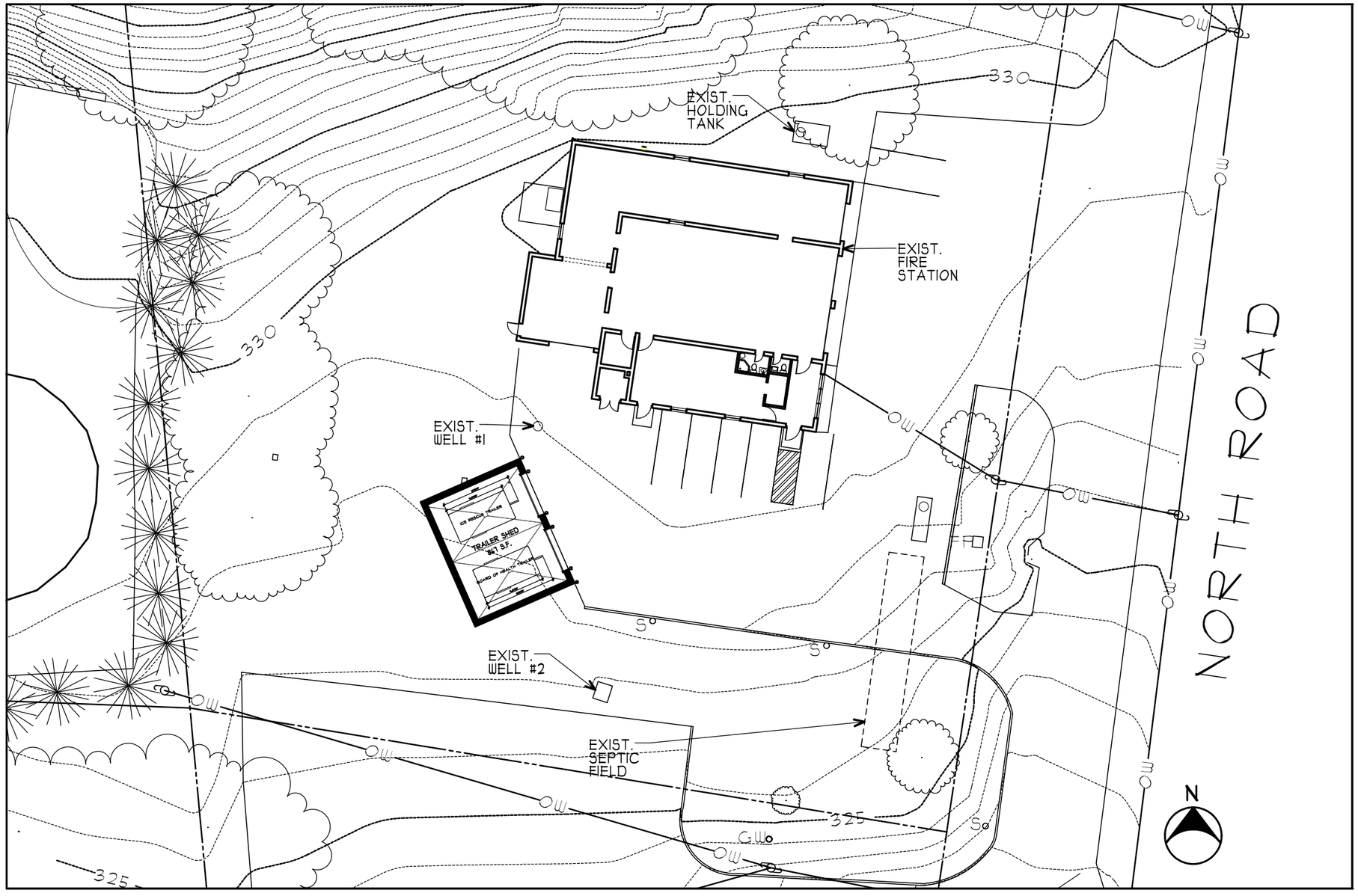
OPTION 1.1 – Program Notes

- Programming **not** addressed for added apparatus, Firematic Storage and Equipment Rooms as well as Firefighter Living/Day spaces as needed per the program.
- Deficiency Repairs needed across **all** Priority 1, 2 & 3 Categories.
- Partial Building Shutdowns required for *Hazardous Abatement*; likely a staged process depending on the extent of determined asbestos-containing materials (ACM's).
- Existing site space for a trailer shed is available to satisfy this programming need and is *included* in this Option.
- Bunk Room needs **not** addressed.
- Fire exiting and first responder egress paths **not** addressed.
- Existing conditions of septic system too close to well **not** addressed.
- Firefighter Hot Zone/Cold Zone containment **not** addressed.

- Constraints of the size of the existing lot **likely prohibits the corrections needed for the existing septic system** location and capacity.
- Existing water from on-site well for the fire station is brown in color and deemed non-potable. This needs further investigation and has **not** been addressed in the provided cost estimates.
- Site parking issues and programming needs **not** satisfied.

OPTION 1.1 – Construction Notes

- Deficiency Repair costs total **$1.95M**
- Hazardous Abatement estimated between **$150K and $195K.**
- New Trailer Shed purchase and minor site work estimated at **$10K**.
- Construction timeline estimated at **10-12 months** for all repairs but **exclusive** of shutdown needs and time frames for Hazardous Abatement.
- Further documentation needed for true abatement assessment for time and money required for this facility. It will be only after an environmental assessment firm walks the building and takes samples for testing and hazardous determinations can a more valid estimate be assembled.
- Overall Project Hard & Soft Costs are estimated to be **$2.16M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.



OPTION 1.1

SITE AREA: 1 ACRE

FRONTAGE: 280 FT

BUILDING AREA: 5,011 SF RENOVATION

PARKING: 6 EMERGENCY RESPONDER'S PARKING SPACES. THE PROGRAM CALLS FOR 25 RESPONDER PARKING SPACES

NO BUILDING ADDITIONS

12,161 SF OF PROGRAM NOT INCLUDED

BECAUSE DRIVE THROUGH IS NOT AN OPTION ON THIS SITE, BACKING INTO THE APPARATUS BAYS IS CHALLENGING

THE TRAILER SHED CAN BE ADDED TO THE WEST EDGE OF THE PARKING LOT

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED PUBLIC PARKING

OPTION 1.1
SITE PLAN

SCALE: 1" = 40'

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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4 Section 4 – Project Option 2.1

Renovate Existing Station + Addition Facing South

Option Overview

Option 2.1 calls for the interior renovation of the existing station utilizing the recommendations of the Facility Conditions Report. Priority 1, 2 & 3 needed repairs are to be performed over 1-2 years. A substantial portion of Priority 1 repairs are deferred due to the *inclusion* of a 5-lane Apparatus Bay Addition. Most of the Priority 1, 2 and 3 Categories, however, *are* to be repaired/replaced/corrected under this Option 2.1.

OPTION 2.1 – Renovate the Existing Facility & Build an Addition Facing South

Building Size Existing	5,011 sf
Building Size Increase	5,822 sf
Building Size @ Completion	10,833 sf
Program area ***not*** included	6,339 sf

OPTION	OVERALL COST	BUILDING OUTCOME								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 2.1	$6,128,890	YES	NO	10,833	NO	YES	PARTIAL	NO	NO	20-22 mos.

Analysis, Determinations & Limitations

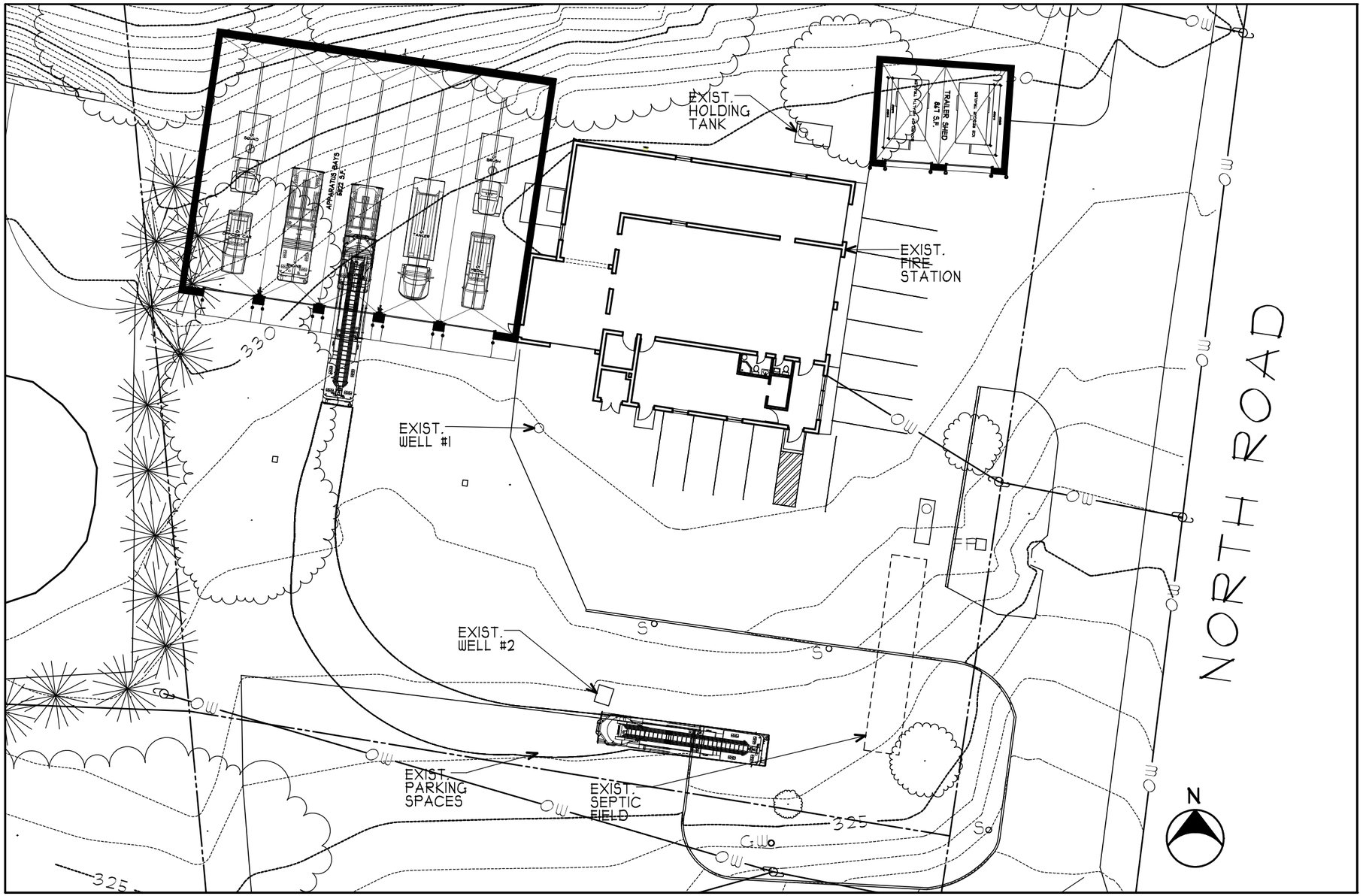
OPTION 2.1 – Program Notes

- While programming is addressed under this Option, the solution does not present a complete satisfaction of all program needs. An Apparatus Bay Addition and interior renovations will occur to **partially** satisfy the program. A resulting shortfall of 6,339 sf of needed space puts this Option 2.1 less than desirable when reviewed against the needs of the program.
- Deficiency Repairs needed across *most (89.5%)* of the Priority 1, 2 & 3 Categories.
- Partial Building Shutdowns required for *Hazardous Abatement*; likely a staged process depending on the extent of determined asbestos-containing materials (ACM's).
- Existing site space for a trailer shed is available to satisfy this programming need and is *included* in this Option.
- Bunk Room needs **not** addressed.
- Fire exiting and first responder egress paths *are* addressed.
- Existing conditions of septic system too close to well **not** addressed.

- Firefighter Hot Zone/Cold Zone containment **partially** addressed.
- Constraints of the size of the existing lot likely prohibits the corrections needed for the existing septic system location and capacity.
- Existing water from on-site well for the fire station is brown in color and deemed non-potable. This needs further investigation and has **not** been addressed in the provided cost estimates.
- Site parking issues and programming needs **not** satisfied.
- This solution will require an approximate 9-foot high retaining wall at the back corner of the property.

OPTION 2.1 – Construction Notes

- Deficiency Repair costs total **$1.74M**
- Hazardous Abatement estimated between **$150K and $195K.**
- New Trailer Shed purchase and minor site work estimated at **$10K**.
- Construction timeline estimated at **20-22 months** for all repairs but **exclusive** of shutdown needs and time frames for Hazardous Abatement.
- Further documentation needed for true abatement assessment for time and money required for this facility. It will be only after an environmental assessment firm walks the building and takes samples for testing and hazardous determinations can a more valid estimate be assembled.
- Overall Project Hard & Soft Costs are estimated to be **$6.128M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.



OPTION 2.1

SITE AREA: 1 ACRE

FRONTAGE: 280 FT

BUILDING AREA:
5,011 SF RENOVATION
5,822 SF 5 BAY ADDITION

PARKING: 11 EMERGENCY RESPONDER'S PARKING SPACES, 14 IF THE TRAILER SHED IS NOT BUILT. THE PROGRAM CALLS FOR 25 RESPONDER PARKING SPACES

APPARATUS EXITING TO NORTH ROAD IS PROBLEMATIC

6,339 SF OF PROGRAM NOT INCLUDED

GENERATOR MUST BE RELOCATED

9 FOOT HIGH RETAINING WALL AT THE BACK CORNER

THE TRAILER SHED CAN BE ADDED TO THE NORTH EDGE OF THE PARKING LOT

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED PUBLIC PARKING

OPTION 2.1
SITE PLAN

SCALE: 1" = 40'

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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4 Section 4 – Project Option 2.2

Renovate Existing Station + Addition Facing East

Option Overview

Option 2.2 calls for the interior renovation of the existing station utilizing the recommendations of the Facility Conditions Report. Priority 1, 2 & 3 needed repairs are to be performed over 1-2 years. A small portion of Priority 1 repairs (10.5%) are deferred due to the *inclusion* of a 5-lane Apparatus Bay Addition. Most of the Priority 1, 2 and 3 Categories, however, *are* to be repaired/replaced/corrected under this Option 2.2.

OPTION 2.2 – Renovate the Existing Facility & Build an Addition Facing East

Building Size Existing	5,011 sf
Building Size Increase	5,822 sf
Building Size @ Completion	10,833 sf
Program area ***not*** included	6,339 sf

OPTION	OVERALL COST	BUILDING OUTCOME								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 2.2	$6,132,791	YES	NO	10,833	NO	YES	PARTIAL	NO	NO	20-22 mos.

NOTE: Option 2.1 and 2.2 are nearly identical in costs except for several thousand dollars of Demolition costs.

Analysis, Determinations & Limitations

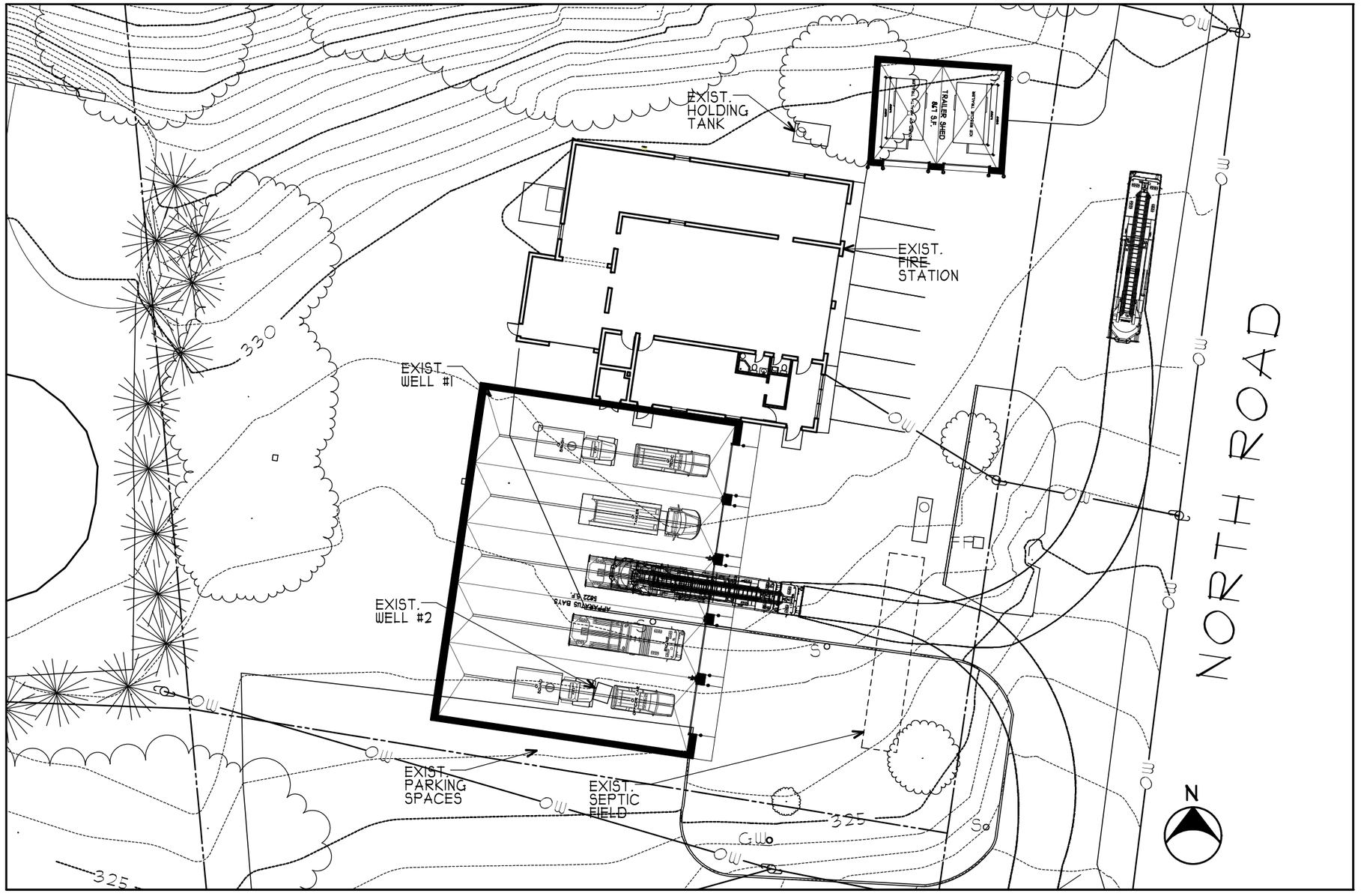
OPTION 2.2 – Program Notes

- While programming is addressed under this Option, the solution does not present a complete satisfaction of all program needs. An Apparatus Bay Addition and interior renovations will occur to **partially** satisfy the program. A resulting shortfall of 6,339 sf of needed space puts this Option 2.2 less than desirable when reviewed against the needs of the program.
- Deficiency Repairs needed across *most (89.5%)* of the Priority 1, 2 & 3 Categories.
- Partial Building Shutdowns required for *Hazardous Abatement*; likely a staged process depending on the extent of determined asbestos-containing materials (ACM's).
- Existing site space for a trailer shed is available to satisfy this programming need and is *included* in this Option.
- Bunk Room needs **not** addressed.

- Fire exiting and first responder egress paths *are* addressed.
- Existing conditions of septic system too close to well **not** addressed.
- Firefighter Hot Zone/Cold Zone containment *partially* addressed.
- Constraints of the size of the existing lot likely prohibits the corrections needed for the existing septic system location and capacity.
- Existing water from on-site well for the fire station is brown in color and deemed non-potable. This needs further investigation and has **not** been addressed in the provided cost estimates.
- Site parking issues and programming needs **not** satisfied.
- This solution will require an approximate 8-foot high retaining wall at the back corner of the property.

OPTION 2.2 – Construction Notes

- Deficiency Repair costs total **$1.74M**
- Hazardous Abatement estimated between **$150K and $195K.**
- New Trailer Shed purchase and minor site work estimated at **$10K**.
- Construction timeline estimated at **20-22 months** for all repairs but **exclusive** of shutdown needs and time frames for Hazardous Abatement.
- Further documentation needed for true abatement assessment for time and money required for this facility. It will be only after an environmental assessment firm walks the building and takes samples for testing and hazardous determinations can a more valid estimate be assembled.
- Overall Project Hard & Soft Costs are estimated to be **$6.132M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.



OPTION 2.2

SITE AREA: 1 ACRE

FRONTAGE: 280 FT

BUILDING AREA:
5,011 SF RENOVATION
5,822 SF 5 BAY ADDITION

PARKING:7 EMERGENCY RESPONDER'S PARKING SPACES, 9 IF THE TRAILER SHED IS NOT BUILT. THE PROGRAM CALLS FOR 25 RESPONDER PARKING SPACES

APPARATUS IS EXITING ON A CROSS SLOPE & NEW CURB CUTS WILL HAVE TO BE PROVIDED

BECAUSE DRIVE THROUGH IS NOT AN OPTION ON THIS SITE, BACKING INTO THE APPARATUS BAYS IS CHALLENGING

4,339 SF OF PROGRAM NOT INCLUDED

THE ADDITION INTERFERES WITH AN EXISTING WELL THE SEPTIC FIELD AND THE EXISTING PARTAKING LOT OF TOWN HALL

THE TRAILER SHED CAN BE ADDED TO THENORTH EDGE OF THE PARKING LOT

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED PUBLIC PARKING

OPTION 2.2
SITE PLAN

SCALE: 1" = 40'

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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4 Section 4 – Project Option 3.1

Full Demo + New Station w/Bunks as Phased Construction

Option Overview

Option 3.1 calls for a significant decrease in the amount of deficiency repairs under Priorities 1 & 2 when compared to Options 2.1 and 2.2. The Option 3.1 repairs within the existing station are related to Health & Life Safety needs only. The HFD fire response operations will continue to be deployed out of the existing bays while the new 5-lane Apparatus Bay is being constructed on the south side of the existing station. A substantial portion of Priority 1 & 2 repairs are eliminated due to the *inclusion* of a 5-lane Apparatus Bay Addition. Once the new bays are constructed and operational, HFD Operations will move to the new Apparatus Bay and the complete demolition of the existing station will occur.

OPTION 3.1 – Renovate Existing Facility, Build a New Apparatus Bay Facing East and Demo Existing Station

Building Size Existing	5,011 sf
New Building Size	17,172 sf
Program area ***not*** included	0 sf

OPTIONS	OVERALL COST	BUILDING OUTCOMES								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 3.1	$13,017,390	N/A	YES	17,172	YES	YES	FULL	NO	NO	18-20 mos.

Analysis, Determinations & Limitations

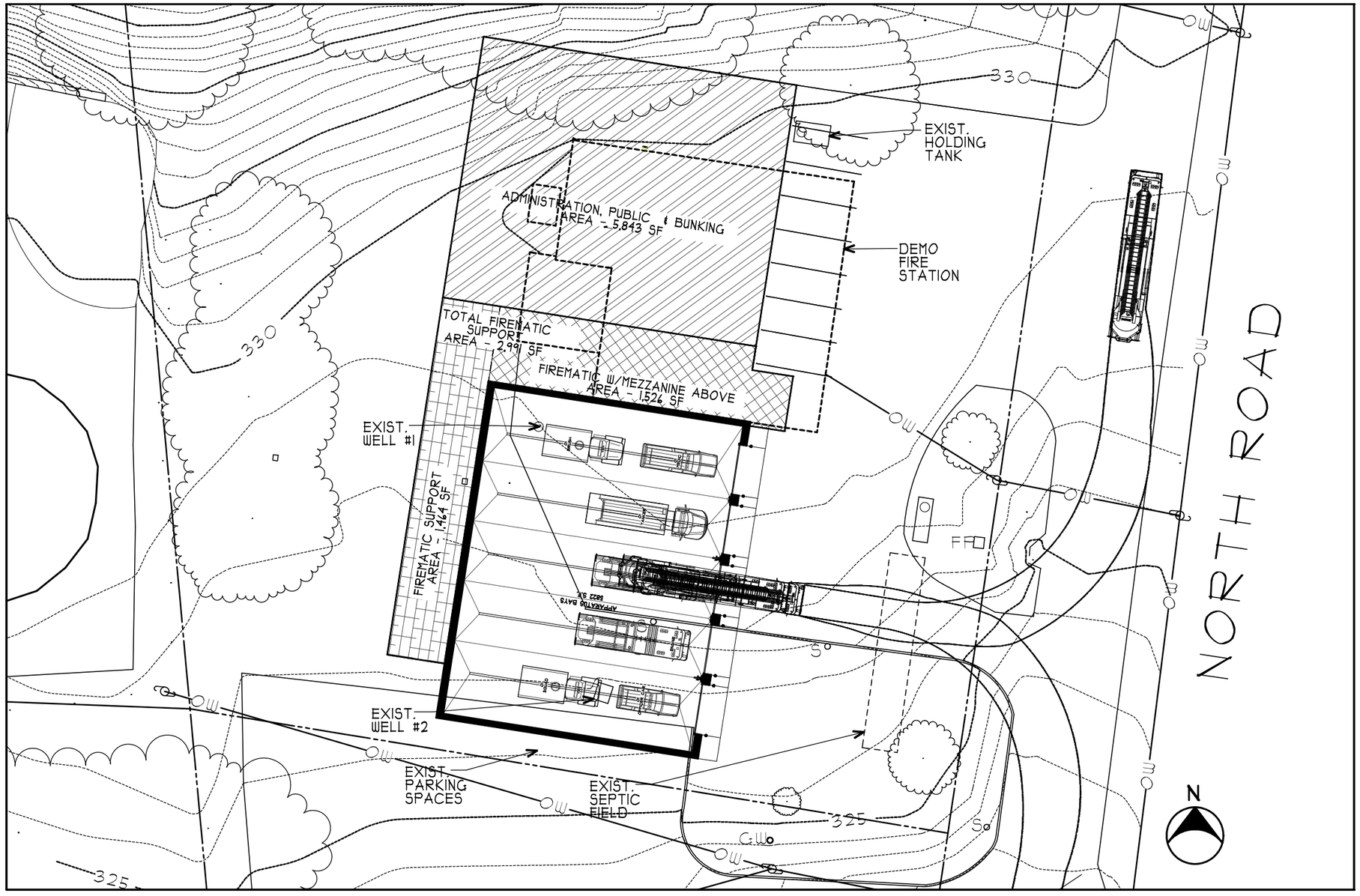
OPTION 3.1 – Program Notes

- While all *building* programming is addressed under this Option, the **full parking needs determined from programming fall short** due to the limits and constraints of the existing site.
- Deficiency Repairs significantly reduced under this Option 3.1 as compared to Options 2.1 and 2.2.
- Partial Building Shutdowns required for *Hazardous Abatement*; likely a staged process depending on the extent of determined asbestos-containing materials (ACM's).
- Site space for a trailer shed is **not** available to satisfy this programming need and is therefore **not** included in this Option.
- Bunk Rooms, fire exiting and first responder egress paths needs *are* addressed in this solution.
- Existing conditions of septic system too close to site well **not** addressed.

- Firefighter Hot Zone/Cold Zone containment *fully* addressed.
- Constraints of the size of the existing lot **likely prohibits the corrections needed for the existing septic system** location and capacity.
- Existing water from on-site well for the fire station is brown in color and deemed non-potable. This needs further investigation and has **not** been addressed in the provided cost estimates.
- This solution will require an approximate 8-foot high retaining wall at the back corner of the property.

OPTION 3.1 – Construction Notes

- Deficiency Repair costs total **$38K**
- Hazardous Abatement and full building demolition estimated between **$100K and $150K.**
- Phased construction required under this Option 3.1. Construction timeline estimated at **18-20 months** for all repairs and construction but **exclusive** of shutdown needs and time frames for Hazardous Abatement.
- Further documentation needed for true abatement assessment for time and money required for this facility. It will be only after an environmental assessment firm walks the building and takes samples for testing and hazardous determinations can a more valid estimate be assembled.
- Overall Project Hard & Soft Costs are estimated to be **$13.02M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.



OPTION 3.1
SITE PLAN

SCALE: 1" = 40'

OPTION 3.1

SITE AREA: 1 ACRE

FRONTAGE: 280 FT

BUILDING AREA:
- 1ST FLOOR: 16,058 SF
- MEZZ: 1,114 SF
- TOTAL: 17,172 SF

PHASED CONSTRUCTION REQUIRED

PARKING: 8 EMERGENCY RESPONDER'S PARKING SPACES. THE PROGRAM CALLS FOR 25 RESPONDER PARKING SPACES

APPARATUS IS EXITING ON A CROSS SLOPE & NEW CURB CUTS WILL HAVE TO BE PROVIDED

BECAUSE DRIVE THROUGH IS NOT AN OPTION ON THIS SITE, BACKING INTO THE APPARATUS BAYS IS CHALLENGING

ALL PROGRAM AREAS ARE INCLUDED

THE ADDITION INTERFERES WITH 2 EXISTING WELLS THE SEPTIC FIELD AND THE EXISTING PARTAKING LOT OF TOWN HALL

8 FOOT HIGH RETAINING WALL AT THE BACK CORNER

THERE IS NO SPACE FOR THE TRAILER SHED ON THE SITE

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED PUBLIC PARKING

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED BUNKER PARKING

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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4 Section 4 – Project Option 3.2

Full Demo + New Station w/o Bunks as Phased Construction

Option Overview

Option 3.2 calls for a significant decrease in the amount of deficiency repairs under Priorities 1 & 2 when compared to Options 2.1 and 2.2. The Option 3.2 repairs within the existing station are related to Health & Life Safety needs only. The HFD fire response operations will continue to be deployed out of the existing bays while the new 5-lane Apparatus Bay is being constructed on the south side of the existing station. A substantial portion of Priority 1 & 2 repairs are eliminated due to the *inclusion* of a 5-lane Apparatus Bay Addition. Once the new bays are constructed and operational, HFD Operations will move to the new Apparatus Bay and the complete demolition of the existing station will occur.

OPTION 3.2 – Renovate Existing Facility, Build a New Apparatus Bay Facing East and Demo Existing Station

Building Size Existing	5,011 sf
New Building Size	15,522 sf
Program area ***not*** included	1,650 sf

OPTIONS	OVERALL COST	BUILDING OUTCOMES								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 3.2	$11,795,360	N/A	YES	15,522	YES	YES	FULL	NO	NO	17-19 mos.

Analysis, Determinations & Limitations

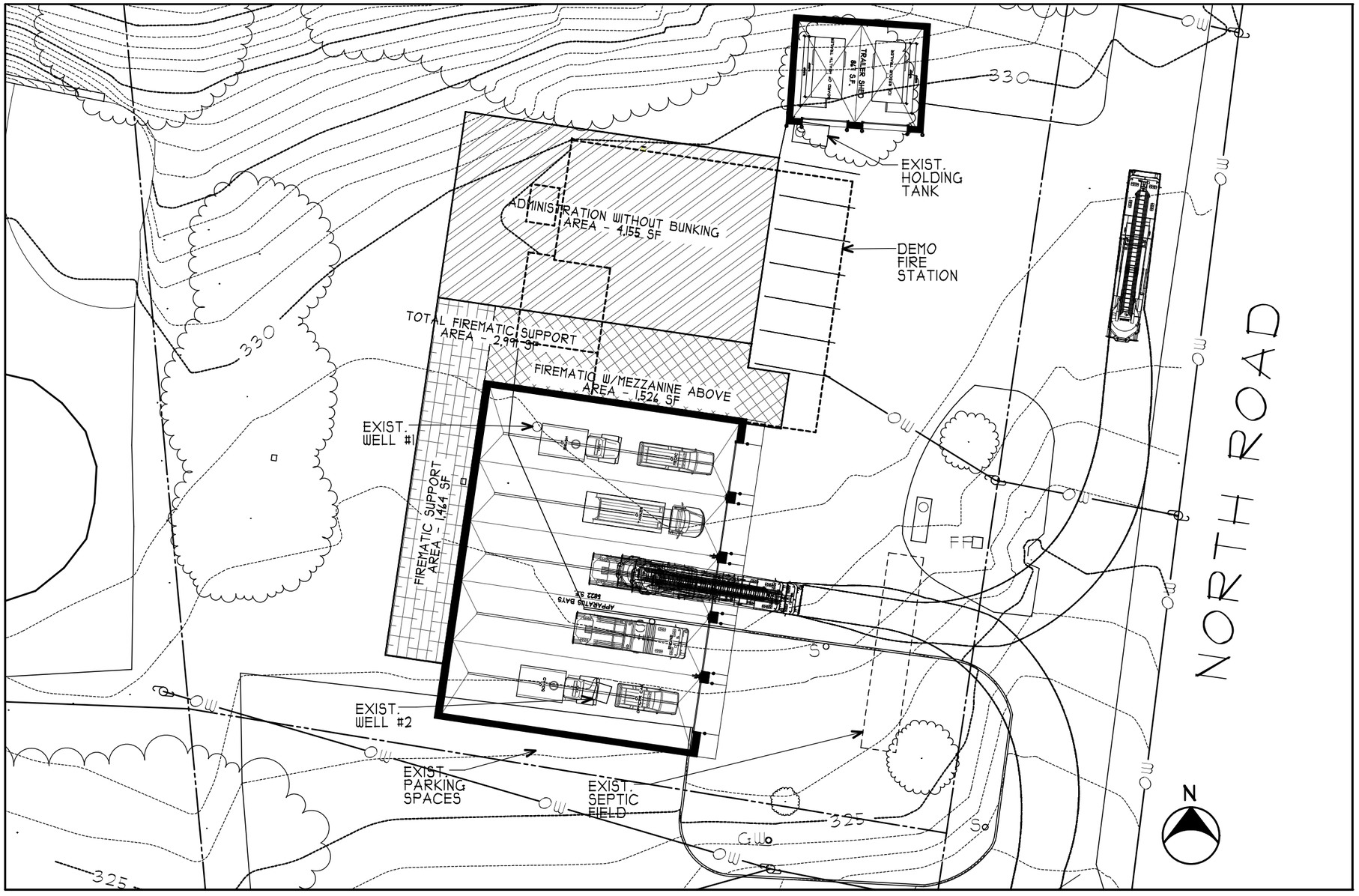
OPTION 3.2 – Program Notes

- While all building programming is addressed under this Option, with the exception of the bunkrooms, **the full parking needs determined from programming fall short** due to the limits and constraints of the existing site.
- Deficiency Repairs significantly reduced under this Option 3.2 as compared to Options 2.1 and 2.2.
- Partial Building Shutdowns required for *Hazardous Abatement*; likely a staged process depending on the extent of determined asbestos-containing materials (ACM's).
- Site space for a trailer shed is **not** available to satisfy this programming need and is therefore **not** included in this Option.
- Bunk Room needs are **not** addressed in this solution.

- Fire exiting and first responder egress paths needs *are* addressed in this solution.
- Existing conditions of septic system too close to site well **not** addressed.
- Firefighter Hot Zone/Cold Zone containment *fully* addressed.
- Constraints of the size of the existing lot **likely prohibits the corrections needed for the existing septic system** location and capacity.
- Existing water from on-site well for the fire station is brown in color and deemed non-potable. This needs further investigation and has **not** been addressed in the provided cost estimates.
- This solution will require an approximate 8-foot high retaining wall at the back corner of the property.

OPTION 3.2 – Construction Notes

- Deficiency Repair costs total **$38K**
- Hazardous Abatement and full building demolition estimated between **$100K and $150K.**
- Phased construction required under this Option 3.2. Construction timeline estimated at **17-19 months** for all repairs and construction but **exclusive** of shutdown needs and time frames for Hazardous Abatement.
- Further documentation needed for true abatement assessment for time and money required for this facility. It will be only after an environmental assessment firm walks the building and takes samples for testing and hazardous determinations can a more valid estimate be assembled.
- Overall Project Hard & Soft Costs are estimated to be **$11.79M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.



OPTION 3.2
SITE PLAN

SCALE: 1" = 40'

OPTION 3.2

SITE AREA: 1 ACRE

FRONTAGE: 280 FT

BUILDING AREA:
1ST FLOOR: 14,408 SF
MEZZ: 1,114 SF
TOTAL: 15,522 SF

PHASED CONSTRUCTION REQUIRED

PARKING:6 EMERGENCY RESPONDER'S PARKING SPACES, 8 IF THE TRAILER SHED IS NOT BUILT. THE PROGRAM CALLS FOR 25 RESPONDER PARKING SPACES

APPARATUS IS EXITING ON A CROSS SLOPE & NEW CURB CUTS WILL HAVE TO BE PROVIDED

BECAUSE DRIVE THROUGH IS NOT AN OPTION ON THIS SITE, BACKING INTO THE APPARATUS BAYS IS CHALLENGING

1,650 SF OF PROGRAM NOT INCLUDED (BUNKING)

THE ADDITION INTERFERES WITH 2 EXISTING WELLS THE SEPTIC FIELD AND THE EXISTING PARTAKING LOT OF TOWN HALL

8 FOOT HIGH RETAINING WALL AT THE BACK CORNER

THE TRAILER SHED CAN BE ADDED TO THE NORTH EDGE OF THE PARKING LOT

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED PUBLIC PARKING

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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Section 4 – Project Option 4.1

Move Operations + Full Demo + New Station w/Bunks

Option Overview

Option 4.1 calls for a significant decrease in the amount of deficiency repairs under Priorities 1 & 2 when compared to Options 2.1 and 2.2. The Option 4.1 repairs will keep the existing facility operational while the new station is designed. Repairs are related to Health & Life Safety needs only. When the project is ready for public bidding, the HFD fire response operations will temporarily relocate to the DPW facility. Reduced scope abatement of hazardous materials in the existing station will occur as permitted by Federal and State guidelines which will be followed by full building demolition. Then, construction will begin for the New Station. A substantial portion of Priority 1 & 2 repairs are eliminated due to the construction of a completely new facility. Once the new bays are constructed and operational, HFD Operations will move to the new Apparatus Bay as the remainder of construction will occur.

OPTION 4.1 – Move Operations to DPW, Demo Existing Facility, Build a New Facility w/Bunkrooms

Building Size Existing	5,011 sf
New Building Size	17,172 sf
Program area ***not*** included	0 sf

OPTIONS	OVERALL COST	BUILDING OUTCOMES								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 4.1	$11,869,078	N/A	YES	17,172	YES	YES	FULL	YES	NO	14-16 mos.

Analysis, Determinations & Limitations

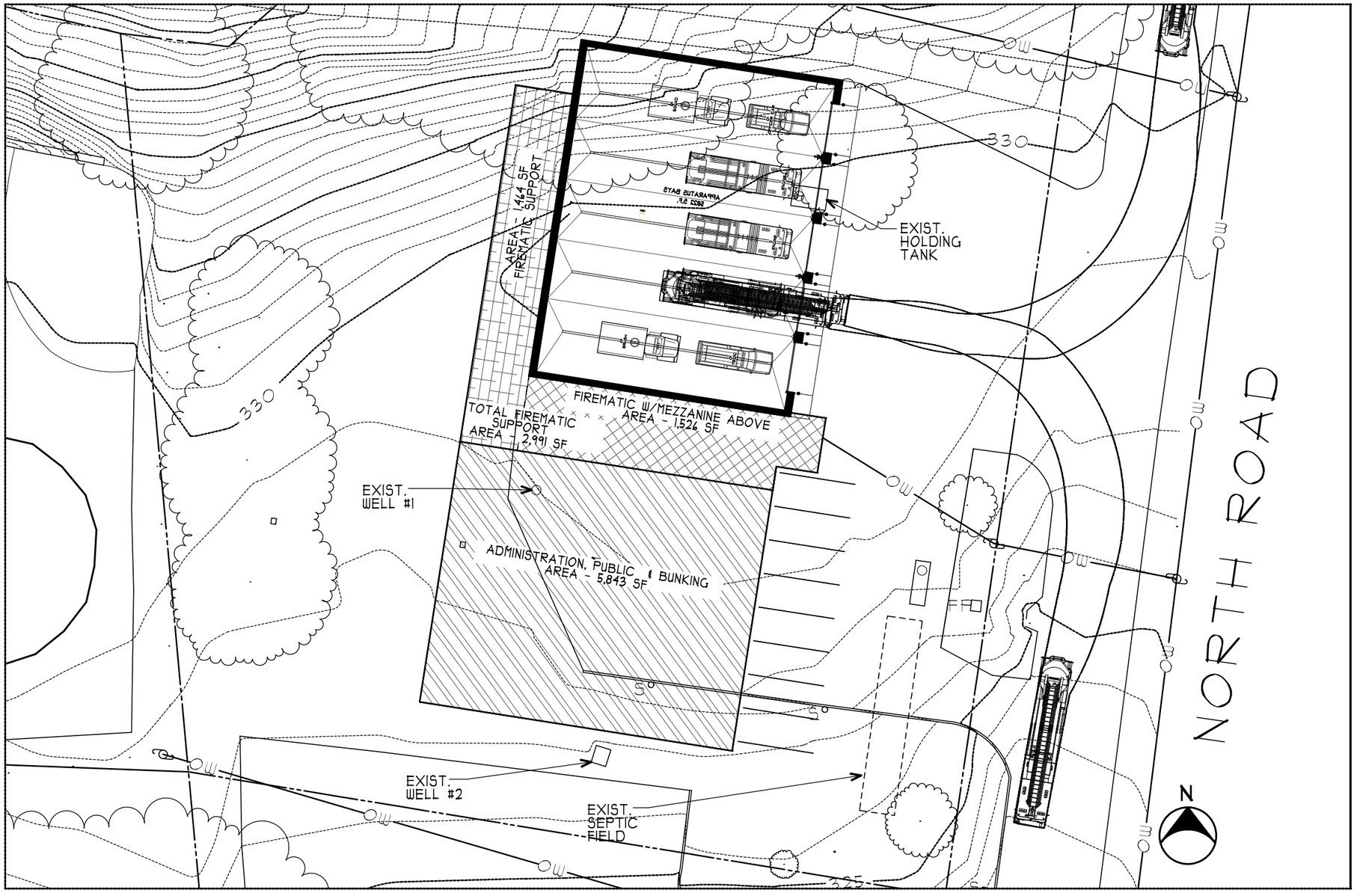
OPTION 4.1 – Program Notes

- While all *building* programming is addressed under this Option, the **full parking needs determined from programming fall short** due to the limits and constraints of the existing site.
- Deficiency Repairs significantly reduced under this Option 4.1 as compared to Options 2.1 and 2.2.
- *No* Building Shutdowns will be required for *Hazardous Abatement* due to operational and personnel activities moving to DPW yard for the period of demolition and construction.
- Site space for a trailer shed is **not** available to satisfy this programming need and is therefore **not** included in this Option.
- Bunk Rooms, fire exiting and first responder egress paths needs *are* addressed in this solution.

- Existing conditions of septic system too close to site well **not** addressed.
- Firefighter Hot Zone/Cold Zone containment *fully* addressed.
- Constraints of the size of the existing lot **likely prohibits the corrections needed for the existing septic system** location and capacity.
- Existing water from on-site well for the fire station is brown in color and deemed non-potable. This needs further investigation and has **not** been addressed in the provided cost estimates.
- This solution will require an approximate 11-foot high retaining wall at the north side of the property.

OPTION 4.1 – Construction Notes

- Deficiency Repair costs total **$26K**
- Hazardous Abatement and full building demolition estimated between **$100K and $150K.**
- Construction timeline estimated at **14-16 months** for all repairs and construction but **exclusive** of shutdown needs and time frames for Hazardous Abatement.
- Further documentation needed for true abatement assessment for time and money required for this facility. It will be only after an environmental assessment firm walks the building and takes samples for testing and hazardous determinations can a more valid estimate be assembled.
- Overall Project Hard & Soft Costs are estimated to be **$11.87M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.



OPTION 4.1

SITE AREA: 1 ACRE

FRONTAGE: 280 FT

BUILDING AREA:
- 1ST FLOOR: 16,058 SF
- MEZZ: 1,114 SF
- TOTAL: 17,172 SF

PARKING: 8 EMERGENCY RESPONDER'S PARKING SPACES. THE PROGRAM CALLS FOR 25 RESPONDER PARKING SPACES

BECAUSE DRIVE THROUGH IS NOT AN OPTION ON THIS SITE, BACKING INTO THE APPARATUS BAYS IS CHALLENGING

THE EXISTING CURB CUT CAN BE UTILIZED WITH LITTLE MODIFICATIONS

ALL PROGRAM AREAS ARE INCLUDED

THE ADDITION INTERFERS WITH 2 EXISTING WELLS

11 FOOT HIGH RETAINING WALL AT THE BACK CORNER

THIS OPTION MAY INTERFERE WITH THE NEIGHBOR'S DRIVEWAY TO THE NORTH

THERE IS NO SPACE FOR THE TRAILER SHED ON THE SITE

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED PUBLIC PARKING

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED BUNKER PARKING

OPTION 4.1
SITE PLAN

SCALE: 1" = 40'

Mitchell Associates Architects PLLC

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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4 Section 4 – Project Option 4.2

Move Operations + Full Demo + New Station w/o Bunks

Option Overview

Option 4.2 calls for a significant decrease in the amount of deficiency repairs under Priorities 1 & 2 when compared to Options 2.1 and 2.2. The Option 4.2 repairs will keep the existing facility operational while the new station is designed. Repairs are related to Health & Life Safety needs only. When the project is ready for public bidding, the HFD fire response operations will temporarily relocate to the DPW facility. Reduced scope abatement of hazardous materials in the existing station will occur as permitted by Federal and State guidelines which will be followed by full building demolition. Then, construction will begin for the New Station. A substantial portion of Priority 1 & 2 repairs are eliminated due to the construction of a completely new facility. Once the new bays are constructed and operational, HFD Operations will move to the new Apparatus Bay as the remainder of construction will occur.

OPTION 4.2 – Move Operations to DPW, Demo Existing Facility, Build a New Facility w/o Bunkrooms

Building Size Existing	5,011 sf
New Building Size	15,522 sf
Program area ***not*** included	1,650 sf

OPTIONS	OVERALL COST	BUILDING OUTCOMES								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 4.2	$10,746,649	N/A	YES	15,522	YES	YES	FULL	YES	NO	13-15 mos.

Analysis, Determinations & Limitations

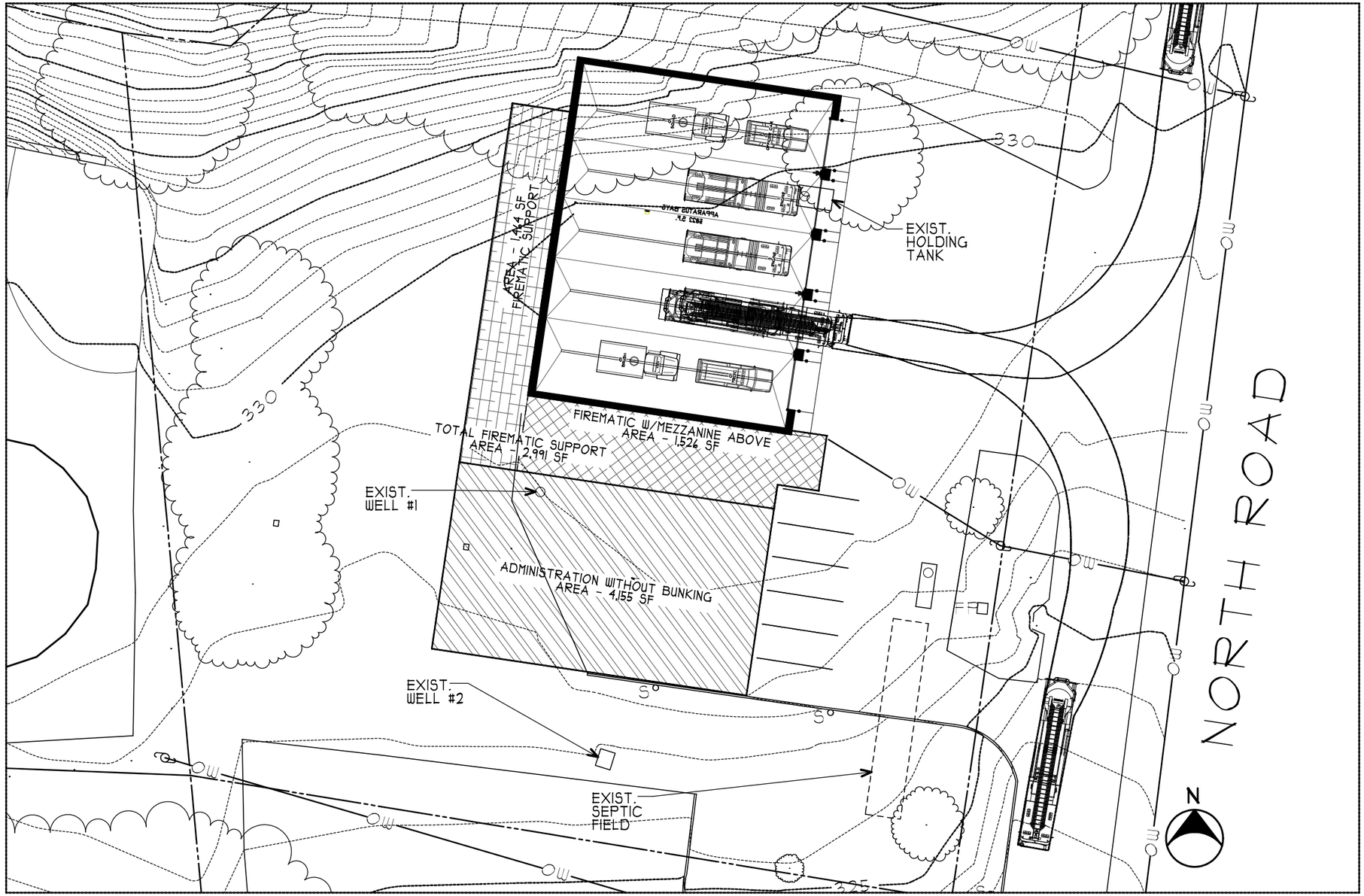
OPTION 4.2 – Program Notes

- While all building programming is addressed under this Option, with the exception of the bunkrooms, **the full parking needs determined from programming fall short** due to the limits and constraints of the existing site.
- Deficiency Repairs significantly reduced under this Option 4.2 as compared to Options 2.1 and 2.2.
- *No* Building Shutdowns will be required for *Hazardous Abatement* due to operational and personnel activities moving to DPW yard for the period of demolition and construction.
- Site space for a trailer shed is **not** available to satisfy this programming need and is therefore **not** included in this Option.

- Bunk Room needs are **not** addressed in this solution.
- Fire exiting and first responder egress paths needs *are* addressed in this solution.
- Existing conditions of septic system too close to site well **not** addressed.
- Firefighter Hot Zone/Cold Zone containment *fully* addressed.
- Constraints of the size of the existing lot **likely prohibits the corrections needed for the existing septic system** location and capacity.
- Existing water from on-site well for the fire station is brown in color and deemed non-potable. This needs further investigation and has **not** been addressed in the provided cost estimates.
- This solution will require an approximate 11-foot high retaining wall at the north side of the property.

OPTION 4.2 – Construction Notes

- Deficiency Repair costs total **$26K**
- Hazardous Abatement and full building demolition estimated between **$100K and $150K.**
- Construction timeline estimated at **13-15 months** for all repairs and construction but **exclusive** of shutdown needs and time frames for Hazardous Abatement.
- Further documentation needed for true abatement assessment for time and money required for this facility. It will be only after an environmental assessment firm walks the building and takes samples for testing and hazardous determinations can a more valid estimate be assembled.
- Overall Project Hard & Soft Costs are estimated to be **$10.75M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.



OPTION 4.2

SITE AREA: 1 ACRE

FRONTAGE: 280 FT

BUILDING AREA:
1ST FLOOR: 14,408 SF
MEZZ: 1,114 SF
TOTAL: 15,522 SF

PARKING:6 EMERGENCY RESPONDER'S PARKING SPACES. THE PROGRAM CALLS FOR 25 RESPONDER PARKING SPACES

BECAUSE DRIVE THROUGH IS NOT AN OPTION ON THIS SITE, BACKING INTO THE APPARATUS BAYS IS CHALLENGING

THE EXISTING CURB CUT CAN BE UTILIZED WITH LITTLE MODIFICATIONS

1,650 SF OF PROGRAM NOT INCLUDED (BUNKING)

THE ADDITION INTERFERS WITH 1 OF THE EXISTING WELLS

11 FOOT HIGH RETAINING WALL AT THE BACK CORNER

THIS OPTION MAY INTERFERE WITH THE NEIGHBOR'S DRIVEWAY TO THE NORTH

THERE IS NO SPACE FOR THE TRAILER SHED ON THE SITE

THERE IS NO SPACE ON THE SITE FOR THE REQUIRED PUBLIC PARKING

OPTION 4.2
SITE PLAN

SCALE: 1" = 40'

Mitchell Associates Architects PLLC

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

4.0 PROJECT OPTIONS

OPTION 1.1 – RENOVATE EXISTING STATION / NO ADDITION
OPTION 2.1 – RENOVATE + ADDITION FACING SOUTH
OPTION 2.2 – RENOVATE + ADDITION FACING EAST
OPTION 3.1 – FULL DEMO + NEW STATION W/BUNKS (PHASED CONSTRUCTION)
OPTION 3.2 – FULL DEMO + NEW STATION W/O BUNKS (PHASED CONSTRUCTION)
OPTION 4.1 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/BUNKS
OPTION 4.2 – MOVE OPERATIONS + FULL DEMO + NEW STATION W/O BUNKS
OPTION 5.1 – NEW FACILITY W/BUNKS ON NEW SITE

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4 Section 4 – Project Option 5.1

New Facility w/Bunks on New Site

Option Overview

Option 5.1 calls for a significant decrease in the amount of deficiency repairs under Priorities 1 & 2 when compared to Options 2.1 and 2.2. The Option 5.1 repairs will keep the existing facility operational while the new station is designed and constructed on a new site to-be-determined. Repairs are related to Health & Life Safety needs only. By considering the sale of the existing building and property in as-is condition, this Option 5.1 presents the elimination of abatement scope of hazardous materials in the existing station and will offer savings in time and money to the Town. A substantial portion of Priority 1 & 2 repairs are eliminated due to the construction of a completely new facility.

OPTION 5.1 – New Facility w/Bunkrooms on New Site, Use Existing Station until New is Complete

Building Size Existing	5,011 sf
New Building Size	17,172 sf
Program area ***not*** included	0 sf

OPTIONS	OVERALL COST	BUILDING OUTCOMES								
	$$	Addition?	Entire New Building?	Final SQ. FT.	Hot/Cold Zone Containment?	Abatement Required?	Demolition Required?	Temp OPS Required?	FULL Program Satisfied?	Construction Timeline
Option 5.1	$11,998,122	N/A	YES	17,172	YES	NO	NO	NO	YES	12-13 mos.

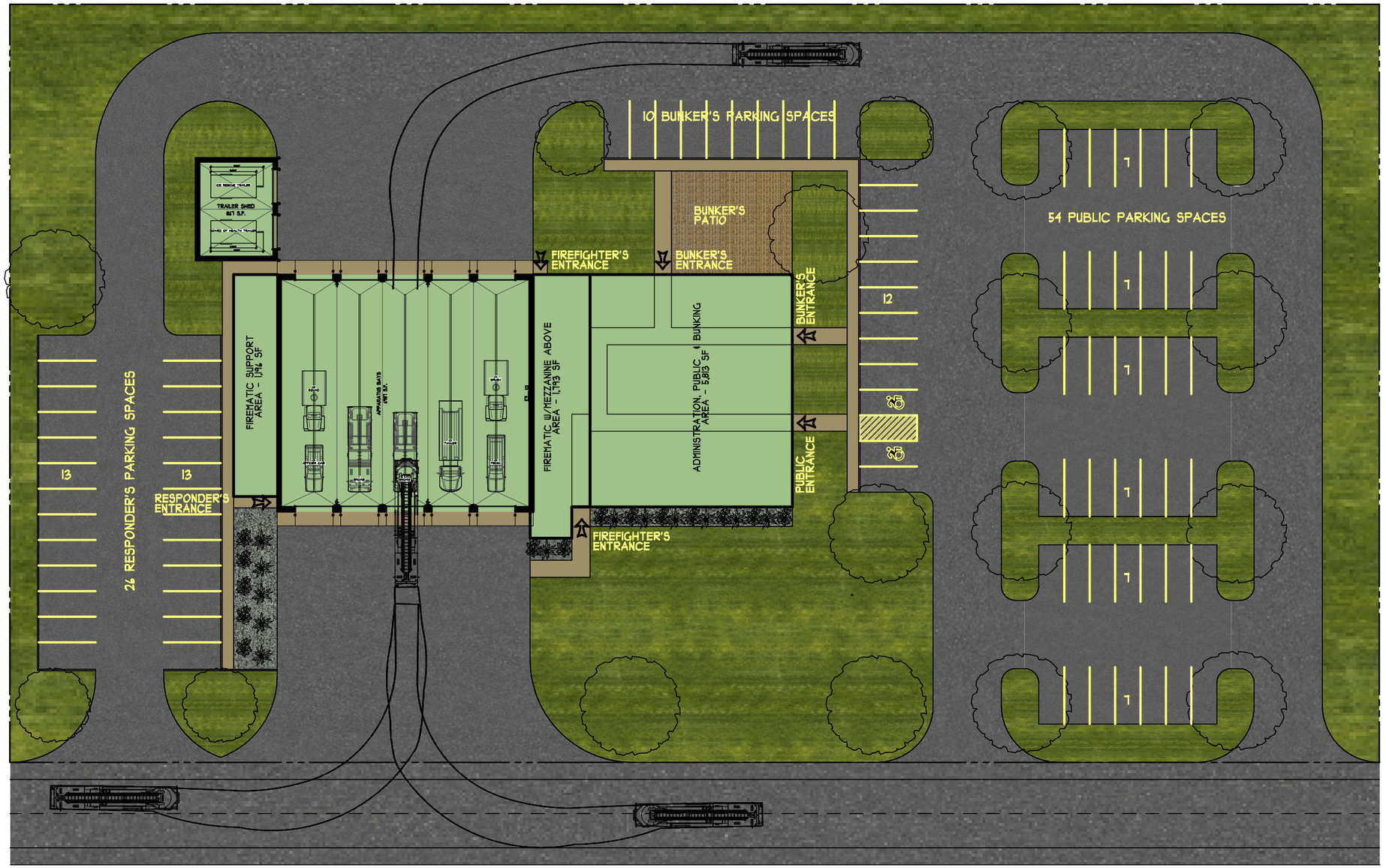
Analysis, Determinations & Limitations

OPTION 5.1 – Program Notes

- **ALL Building and Site Parking programming are addressed under this Option.**
- Deficiency Repairs significantly **reduced** as compared to Options 2.1 and 2.2.
- **No** Hazardous Abatement or demolition required under this Option 5.1.
- Site space for a trailer shed **will be available** to satisfy this programming need.
- Bunk Room needs **are addressed** in this solution.
- Fire exiting and first responder egress paths needs **are addressed** in this solution.
- Firefighter Hot Zone/Cold Zone containment **fully addressed**.

OPTION 5.1 – Construction Notes

- Deficiency Repair costs total **$38K**
- Hazardous Abatement and full building demolition *not required* under this Option 5.1 for a *project savings* estimated between **$100K and $150K.**
- Construction timeline estimated at **12-13 months** for new construction on an assumed, relatively flat site.
- **No** existing facility demolition required.
- Overall Project Hard & Soft Costs are estimated to be **$11.99M** for a construction start in Fall 2022 and assuming an escalation rate of 4% per year calculated to midpoint of construction with all project contingencies included.
- For a new facility on a new site, **the design, bidding and construction process could occur 4-6 months faster** than a renovation/addition set of construction documents or Phased Construction set of documents. Calculating a 6-month (0.5 year) reduction in time would result in a **reduction of escalation by half a year.** That would **reduce** the $11.99M estimate **by approximately $250K** and deliver the completed project earlier as well with **potential Occupancy by the Spring of 2022**.



OPTION 5

SITE AREA: 3 ACRES

FRONTAGE: 482 FT

BUILDING AREA:
IST FLOOR: 16,058 SF
MEZZ: 1,114 SF
TOTAL: 17,172 SF

PARKING: 26 EMERGENCY RESPONDER'S PARKING SPACES, 10 BUNKER'S PARKING SPACES, 54 PUBLIC PARKING SPACES

THIS SITE ALLOWS DRIVE THROUGH BAYS

ALL PROGRAM AREAS ARE INCLUDED

THIS SITE ACCOMMODATES THE TRAILER SHED

OPTION 5.1
SITE PLAN

SCALE: 1" = 40'

NOTE: THIS OPTION REQUIRES A NEW SITE.

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Town of Hampden Assessment Conditions and Expansion Options Report – Phase 1

5.0 RECOMMENDATIONS

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5 Section 5 Recommendations

5.1 Project Goals

Overview

Phase 1 scope for this project was three-fold:

1. Perform a complete **Existing Conditions Assessment** of the existing Hampden Fire Station.
2. Perform thorough and detailed **Programming** sessions with HFD personnel to evaluate the operational and spatial needs of the Fire Department for a potential building expansion.
3. Provide **Recommendations** by comparing the costs of repairing and maintaining the existing station with potential building expansion configurations versus the cost for a complete building replacement.

Phase 2, *which is subject to a Notice to Proceed by the Town*, encompasses completing Schematic Design, Design Development, and Construction Documentation, as well as a ***hard and soft cost budget analysis*** to show the total anticipated costs involved in this project. Soft costs can include professional fees, survey, geotechnical report, fixtures, furnishings, and equipment (FF&E), firematic equipment, security, communications, etc.

DESCRIPTION	QUANT.	UNIT	PRICE	AMOUNT
3.00 CONCRETE				
Cont. Conc. Footings	85	CY	$ 350	$ 29,750
Conc. Spread Footings	11	CY	$ 375	$ 4,125
Conc. Piers	8	CY	$ 750	$ 6,000
Conc. Retaining Walls (Foundation Wall)	349	CY	$ 1,200	$ 418,800
Conc. Frost Walls	36	CY	$ 500	$ 18,000
Conc. Elevator Slab	4	CY	$ 350	$ 1,400
Conc. Elevator Pit Walls	5	CY	$ 500	$ 2,500
Grade Beam @ Apparatus Bay Aproach Slab	10	CY	$ 500	$ 5,000
Bollard Footings	10	EA	$ 200	$ 2,000
7" Conc. Slab On Grade W/ Gravel Fill @ Bay	6476	SF	$ 9	$ 58,284
4" Conc. Slab On Grade W/ Gravel Fill @ Other	6765	SF	$ 7	$ 43,973
7" Conc. Aproach Slab W/ Gravel Fill @ Bay	655	SF	$ 9	$ 5,895
Conc. (On Mtl. Deck)	13906	SF	$ 5	$ 69,530
Conc. Fill (On Mtl. Pan Stairs)	233	RFT	$ 10	$ 2,330
Conc. Fill (On Mtl. Pan Stair Landings)	112	SF	$ 10	$ 1,120
Conc. Locker Bases	22	SF	$ 10	$ 220

	MISCELLANEOUS COSTS	
13	INSURANCE	$ 9,000.00
14	MISC. ADMINISTRATIVE COSTS (Bid Advertising, Bid Set Printing, etc.)	$ 2,500.00
15	TEMPORARY FACILITIES	$ 20,000.00
16	MOVING COSTS	$ 5,000.00
	Subtotal - Miscellaneous	**$ 36,500.00**
	BOND COSTS	
17	BOND COUNSEL	$ 7,500.00
18	FISCAL ADVISORS	$ 6,500.00
19	RATING AGENCY	$ 6,500.00
20	PUBLICATION & MISC COSTS	$ 2,000.00
	Subtotal - Bond Costs	**$ 22,500.00**

Portions of Hard (left) and Soft (right) Cost Examples

Upon determination by the Town of Hampden of the preferred design solution and when given the *Notice to Proceed*, the Mitchell Team is prepared to start Phase 2.

Phase 3, *subject to additional funding per the RFQ*, requires the preparation of Bid-Ready Plans and Specifications for the preferred design solution resulting from Phases 1 & 2.

5.2 Existing Conditions

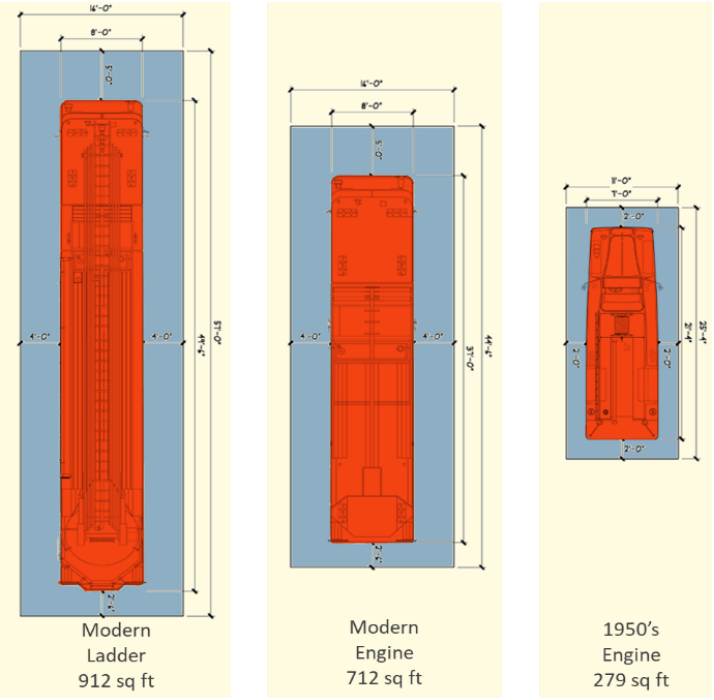
Site

The existing 1.0-acre site has a multitude of limitations that prohibit a proper renovation project to occur. The locations of the Fire Station and Town Hall wells and the site septic are illustrated on the Option Plans and is/are **directly located in the path of the responding and returning apparatus** under all expansion/replacement options on the existing site. It is unlikely that a revised septic system can be relocated on the existing parcel while also allowing for the expansion or full replacement Plan Options to be built.

Parking needs on all Plan Options on the existing site are **not** met, again due to the limited parcel size. *Only Option 5.1 would satisfy the Program* for the station, site utilities, and parking needs.

Building

The existing station is nearly 60 years old and was designed and built based on late 1950's and early 1960's fire apparatus, firefighting gear, and equipment. While likely adequate at the time of construction, apparatus sizes have significantly increased over the last several decades as illustrated in the illustration below.



The significant increase in the past 70 years in the size of fire apparatus and the expected safe clearance around vehicles.

The overall condition of the station is fair to poor as described in detail throughout *Section 2.0 Facility Conditions Report*. The station does not meet current seismic code requirements and structural loading capacities for an *essential facility*. The exterior masonry building envelope does not meet current energy conservation code requirements and shows signs throughout of interior water intrusion causing a slow,

methodical deterioration of the brick façade units. All bay widths are too narrow for safe working conditions as well as fire egress path code requirements. Large, bulky firematic equipment and firefighting tools litter the station bays throughout, with no other storage options available in the 5,000 sf existing station. A conditions summary of firefighter health & safety issues is listed below:

Firefighter health

1. The existing station is a collection of spaces that were never laid out with the thought of separating hot and cold zones. Even if one could conceive of a strategy to organize the spaces into hot and cold zones, the building materials, and the myriad roof/wall connections would make it difficult in the extreme to create particle, vapor, and gas proof boundaries.
2. The apparatus bay currently does not have a tailpipe exhaust capture system. This is not compliant with either NFPA, NIOSH or FEMA recommendations, or the OSHA consensus standards.
3. Turnout gear is stored directly exposed to the tailpipe exhaust.
4. There is inadequate space around the vehicles to safely don and doff PPE.
5. There is inadequate clearance between the vehicles and side walls to allow passage when vehicle doors are open.
6. There is limited headroom above the trucks to perform maintenance in the station.
7. There is inadequate storage space resulting in clutter and trip hazards throughout the bay. There should be nothing on the floor except tires and feet.
8. The SCBA compressor is installed in the bay with no noise containment. Hearing injuries are common in the fire service.
9. There is no proper decon/laundry equipment or spatial containment for the returning gear potentially contaminated with carcinogens and particulates from firefighting activities.

Deficiency Corrections

Section 2.0 – Facility Conditions Report prioritizes the building deficiencies into Priorities 1 through Priority 5, with Priority 1 describing deficiencies which should be corrected immediately due to the severity of the condition and the classification as a life safety issue, and Priority 5 describing aesthetic, as-needed, as-able types of correction. For a full list of all priority definitions, see Condition Summary Report, Section a.5.

The tasks identified in this report are our recommendations to the Town to keep the existing station viable for continued use until later phases of this study are completed. The tasks are limited to those that need to be performed either immediately (Priority 1), or in the coming 1-2 years (Priority 2). Priority 1 & 2 deficiency corrections focus on protecting life and property. All life safety items should be corrected immediately.

Priority Corrections / Abatement / Demolition Costs

This list contains the preliminary, estimated totals of the existing station's **Priority 1, 2 & 3** deficiency corrections along with abatement and demolition costs. Determination by the Town on the approved Project Option for Phase 2 & Phase 3 of the remaining project scope can be assessed from the list below:

Option	Priority 1	Priority 2	Priority 3	Abatement	Demo	Total
Option 1.1	$175,600	$174,700	$1,022,200	$150,000	$ 0	**$1,522,500**
Option 2.1	$ 30,600	$174,700	$1,022,200	$150,000	$ 5,000	**$1,382,500**
Option 2.2	$ 30,600	$174,700	$1,022,200	$150,000	$ 8,000	**$1,385,500**
Option 3.1	$ 18,100	$ 8,500	$ 0	$ 50,000	$50,000	**$ 126,600**
Option 3.2	$ 18,100	$ 8,500	$ 0	$ 50,000	$50,000	**$ 126,600**
Option 4.1	$ 18,100	$ 0	$ 0	$ 50,000	$50,000	**$ 118,100**
Option 4.2	$ 18,100	$ 0	$ 0	$ 50,000	$50,000	**$ 118,100**
Option 5.1	$ 18,100	$ 8,500	$ 0	$ 0	$ 0	**$ 26,600**

5.3 Program Results

Space Requirements Going Forward

The existing station has a gross area of approximately 5,013 sf. The results of our detailed programming confirms a required size 17,172 sf for a state-of-the-art station based on our experience involved in the design and/or evaluation of 168 projects addressing more than 290 public safety facilities. The results assume proper spaces for apparatus, decon/laundry, storage, and maintenance. The results also include bunking spaces as shown on Options 3.1, 4.1 and 5.1; refer to *Section 1.0 – Executive Summary* for the detailed presentation of all Project Plan Options.

Given **existing site constraints, only Option 5.1 can effectively deliver the desired solution** for all HFD needs and site requirements. See *Section 3.0 – Programming* for a complete documentation of the programming process.

5.4 Recommendations

Through detailed review and assessment, the MA Team has assembled a list of all observable repairs, corrections, and upgrades needed for this existing *essential facility*. The generated list in **Sections 2.1.d and 2.1.f** of the *Facility Conditions Report* provides prioritized deficiency correction needs which can be adapted to any of the presented plan options in this Phase 1 Report.

After a thorough review of the programming requirements and assessment of the limitations of the existing site & building, Mitchell Architects has concluded that **only Option 5.1 can provide the results required by**

the Program. Further, Option 5.1 will allow fire service operations to continue at minimal deficiency correction costs to the Town within its existing station as presented in Section 5.2 above. Estimated savings for this effort would be in the range of $1.39M to $1.52M, when reviewed against Options 1.1, 2.1 and 2.2. Similar estimated savings of $118K to $126K would be realized when reviewed against Options 3.1, 3.2, 4.1 and 4.2.

Building a new station on a to-be-determined site (Option 5.1) will avoid the need for expensive hazardous material abatement and demolition, for an estimated savings of $100,00 to $150,000. Option 5.1 is the only Plan Option that avoids these costly and time-consuming activities.

As our Mitchell Team moves through the outcomes and recommendations of this Report with the Town and HFD, cost-deferring concepts can be explored to "phase" the new station into immediate and future construction phases if estimated project costs exceed the ability or desire of the Town. Our Firm has successfully designed and executed this concept on numerous new Fire Stations and Public Safety Buildings in our long history of Essential Facility Design.

We recommend that it is in the best interest of the Town and Hampden Fire Department to move forward with Option 5.1. We will, under a Notice to Proceed with the Phase 2 scope:

- Develop the immediate needs correction list for local contractor repairs as derived from our Facility Conditions Report. These repairs will satisfy the current needs of the station and HFD.
- Assist the Town and HFD in reviewing new potential sites by providing conceptual layouts to determine program compliance.
- Proceed with schematic design document assembly for a new fire station.
- Assemble a professional cost estimate in CSI format, including hard and soft costs, for initial review and approval by the Town and HFD prior to proceeding to design development documents.
- Determine tax increase cost implications based on Town-provided data on all Town properties.
- Review taxpayer increases and bonding needs with the Town and HFD to determine if new fire station construction will be a single phase or two-phase approach to defer some costs for the future.
- Continue forward based on all above outcomes and provided direction to complete construction plans and specifications for an updated cost estimate. As described above, updates to all required hard and soft estimated costs will be provided.
- Upon completion of Phase 2 scope, the Mitchell Team will await further direction to proceed with authorization to move to bid document assembly and prepare this project for public bid under Phase 3.

5.5 Next Steps

Immediate Actions

1. Review the report and initiate discussions between the Mitchell Team and the Town and Fire Department project stakeholders.
2. Review and agree upon all priority corrections, with emphasis on life safety issues for assembly into a scope document for immediate contractor repairs.

3. A **final determination** should be made by the Town/HFD based on the presented conceptual options. Costs for Priority 1, 2 and 3 deficiencies, and hazardous abatement and demolition needs should all be factored into a decision to move forward.
4. **Move forward with Phase 2** of this Project based on the approved Plan Option.

Subsequent Actions

1. Discuss and **finalize scope requirements for Phase 2** and issue Mitchell Architects a *Notice to Proceed*.
2. The Town will **review potential sites** for conceptual layout reviews by the MA Team.
3. The Town will **establish a budget** for the project to allow early design revisions to be provided as needed.
4. **Begin schematic design** process described above in Section 5.4.
5. Proceed to the **completion of Phase 2 scope.**
6. Await for determination of **Phase 3 start**.

Mitchell Associates Architects PLLC

www.mitchell-architects.com