



# 6513 MAIN STREET

## DRAWINGS

- T-000.00 Title Sheet
- G-001.00 General Notes + Site Plan
- G-002.00 Code Analysis + Egress Plan
- A-100.00 Existing Cellar Plan
- A-110.00 Demo + Prop Floor 1 Plans
- A-120.00 Demo + Prop Floor 2 Plans
- A-130.00 Existing Roof Plan
- A-200.00 Existing East Elevation
- A-210.00 Existing North Elevation
- A-220.00 Existing West Elevation
- A-230.00 Existing South Elevation
- A-400.00 Proposed Kitchen + Bath Elevations
- A-550.00 Interior Details
- A-590.00 Partition Types
- A-600.00 Schedules
- A-710.00 Proposed Floor 1 + 2 RCPs
- A-820.00 Floor 2 Furniture Plan

- P-001.00 Plumbing Riser Diagram + Notes
- P-120.00 Floor 2 Plumbing Plan

## ALTERNATES

**F.1: INTERIOR (BASE BID)**  
See A-110, A-120, A-400, A-550, A-590, A-600, A-710, mech dwgs

**F.2: FURNITURE**  
See A-820.

## FIREHOUSE

**CLIENT**  
Essex County  
7551 Court Street P.O. Box 217  
Elizabethtown, NY 12932  
518.873.3895

**ARCHITECT**  
david cunningham architecture planning pllc  
543 Union Street Suite 1C  
Brooklyn NY 11215  
718.208.0815

**ASSOCIATE ARCHITECT**  
Civic Architecture Workshop PLLC  
543 Union Street Suite 1C  
Brooklyn NY 11215  
917.501.7337

**ENGINEER: STRUCTURAL**  
Old Structures Engineering  
90 Broad Street Suite 1501  
New York NY 10004  
212.244.4546

**ENGINEER: MEP**  
EP Engineering LLC  
110 William Street 32nd Floor  
New York NY 10038  
212.257.6190

## ISSUES:

01 | 03.20.23 | BID 01

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## ESSEX FARM WORKER HOUSING

Firehouse  
6513 Main St.  
Westport NY 12993

T-000.00

Title Sheet

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## GENERAL NOTES

1) The construction manager / general contractor shall verify all existing conditions in the field prior to commencing work and shall report any discrepancies between the drawings and existing conditions to the architect.

2) Minor details not usually shown or specified but necessary for proper construction of any part of the work shall be included as if they were indicated in the drawings except for compromise to base building systems and finishes.

3) The construction manager / general contractor shall coordinate all work with requirements of local authorities.

4) The construction manager / general contractor shall verify all load-bearing walls, posts, beams, etc and notify architect immediately of any discrepancies or conflicts with new work.

5) All dimensions are from finished walls and partitions unless otherwise indicated. Walls shown to 'align' shall be finished flush and smooth with existing work. After the floor channels for the partition walls have been laid the architect is to be notified so that work may be inspected and approved for conformance with design before proceeding with additional construction.

6) The construction manager / general contractor is responsible for coordination of all subcontractors, suppliers, and vendors as well as deliveries, off-loading, and handling of all materials and equipment unless otherwise noted. Any substitute in specifications must be submitted to the architect for omissions, ambiguities, or conflicts in any of the construction drawings, or be in doubt as to their meaning, he must bring the question to the attention of the architect prior to the start of construction. The architect shall review the question and where the information sought is not clearly indicated or specified, will issue a clarifying addendum. Neither the owner nor the architect will be responsible for verbal instructions.

7) These drawings are supplemented by separate standard specifications in the project manual which establish the minimum standard of materials and workmanship. If there is any conflict between the drawings and specifications, the most stringent requirement shall apply.

8) Written requests must be submitted for any proposed changes in the scope of work by the construction manager / general contractor to the owner and architect before any work is started. Such requests shall indicate scope of work, cost, and possible delays to the project.

9) The construction manager / general contractor shall be responsible for the protection of all conditions and materials within the proposed construction area. The construction manager / general contractor shall have sole responsibility for any damage or injuries caused by or during the execution of the work.

A) Where demolition is indicated, remove all objects except those specifically designated to remain.

B) The drawings may not show all items or objects existing at the site. The construction manager / general contractor must verify at the site all objects to be preserved and report to the architect any discrepancies or questionable items.

C) Use all means necessary to protect existing objects designated to remain, and in the event of damage, immediately make all repairs and replacements necessary to the approval of the architect at no additional expense to the owner.

D) Prior to commencement, carefully locate and inspect the entire site and all objects designated to be removed and to be preserved, as well as all existing utilities and determine all requirements for disconnecting, capping, or protecting all such work in accordance with the requirements of the utility company, building management, or agency involved.

E) The construction manager / general contractor shall remove, reroute, and / or cap all unused utilities after checking with the architect. The items shall be capped off within existing walls or slabs.

10) Partitions:

A) All outside corners at masonry and drywall partitions shall have metal corner beads. Tape and spackle smooth where required. Three coat spackle finish minimum.

B) All defective plaster and / or drywall on adjacent existing walls shall be chopped out and / or patched free of irregularities and shall match adjacent walls in finish and thickness.

C) Alignment of new wall construction to existing walls and columns shall be done in a manner so as to visible eliminate the point of contact or joint of new and existing materials.

D) Where demolition has occurred, contractor shall fill all holes, patch smooth, and level all remaining surfaces including walls, floors and ceilings. Square all corners and properly prepare all surface to receive finishes.

E) For the removal of all unwanted equipment and debris at the completion of construction, debris storage will only be permitted in the owner's space until contractor's debris removal trucks arrive on site. At that time, as coordinated with building management, it will be permitted to bring the debris down through the building. All removal cost will be born by the contractor.

F) Clean fixtures, equipment, finish hardware, and painted and decorated surfaces and remove marks, stains, paint, dirt, and other soiling resulting from the work of this contract.

11) Temporary power and lighting to be taken from the owner's meter panel. Contractor to coordinate with owner.

12) The owner is responsible for land surveys, topographic surveys, boundary and property surveys.

13) The contractor is responsible for Building and Planning Department inspections and any inspections required for the project by the authorities having jurisdiction.

14) General contractor to relinquish any construction materials, equipment, and fixtures requested by owner.

15) Maintain structure in weather-tight condition at all times.

16) All materials and products shall be installed strictly in accordance with the manufacturer's instructions.

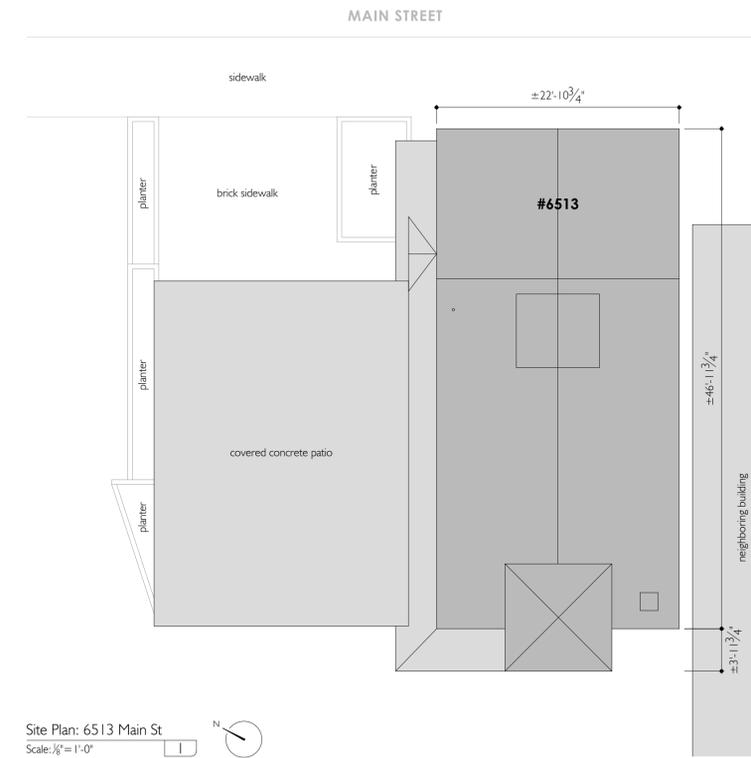
## ASBESTOS AND LEAD PAINT REMOVAL NOTES

1) The owner is responsible for the discovery and disclosure of hazardous construction materials / finishes at the site. All work areas must be tested for asbestos and lead paint contamination by a certified inspector before commencing work.

2) New York State laws and regulations (NYS Dept of Labor Code Rule 56) require the owner of a building to have an asbestos survey completed prior to renovations. The building owner shall engage a certified asbestos inspector to sample and test all building construction materials (interior and exterior) that will be disturbed (cut, drilled, removed, or demolished) for renovations. The asbestos inspector will provide a report of the asbestos containing building materials located in the subject building. Then the owner shall have an abatement design (drawings and specifications) prepared by a certified asbestos designer. All asbestos containing building materials shall be abated or enclosed by a NYS licensed asbestos abatement contractor in accordance with all state and federal regulations. The asbestos survey and abatement costs are the responsibility of the owner.

3) The contractor is responsible for the proper protection or removal of hazardous construction materials / finishes during construction, in compliance with all state and federal regulations. Contractor must adhere to EPA standards for lead paint removal. Removal of lead and asbestos may only be undertaken by certified professionals.

4) If lead is present, contractor must be EPA certified to remove lead paint and all employees on site must be trained in lead-safe work practices. Contractor shall provide proof of training and certification.



## FIREHOUSE

### ISSUES:

01 03.20.23 BID 01

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### ESSEX FARM WORKER HOUSING

Firehouse  
6513 Main St.  
Westport NY 12993

G-001.00

General Notes + Site Plan

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**CODE SUMMARY**

**FIREHOUSE**

**General Summary**

<b>Project Description</b>	Renovation of existing 2-story 2,702 gross sf (including cellar) migrant farm worker housing for a total of 5 occupants. The building includes a restaurant on the 1st floor and one dwelling unit on the 2nd floor.			
<b>Applicable Codes</b>	<input checked="" type="checkbox"/> 2020 Existing Building Code of New York State	2020 Mechanical Code of New York State		
Project State: New York	<input checked="" type="checkbox"/> 2020 Residential Code of New York State	<input checked="" type="checkbox"/> 2020 Energy Conservation Construction Code of New York State		
	<input checked="" type="checkbox"/> 2020 Building Code of New York State	2010 Americans with Disabilities Act		
	<input checked="" type="checkbox"/> 2020 Fire Code of New York State	Fair Housing Amendments Act 1988		
	<input checked="" type="checkbox"/> 2020 Plumbing Code of New York State	<input checked="" type="checkbox"/> NYS DOH Sanitary Code Part 15 Migrant Farmworker Housing		
<b>Type of Project</b>	<input type="checkbox"/> new construction	<input type="checkbox"/> building addition	<input type="checkbox"/> alteration - level 3	<input checked="" type="checkbox"/> alteration - level 2
<b>Zone</b>	Westport Zoning Code V-BUS			
<b>Use &amp; Occupancy Classification</b>	2020 Building Code of New York State No change in occupancy. Assembly Group A-2: restaurant Residential Group R-3: one dwelling unit			
<b>Type of Construction</b>	2020 Building Code of New York State Type V-B: structural elements, exterior walls and interior walls are of any materials permitted by this code			

**Building Height & Area**

Occupancy Classification	Construction Type	Sprinkler	Bldg Ht Abv Grade Plane		# Stories Abv Grade Plane		Building Area	
			Allowable	Zoning	Allowable	Zoning	Allowable	Zoning
A-2	V-B	NS	40'-0"	35'-0"	1	NR	6,000 sf	NR
<b>Tabular Allowable Proposed</b>			most restrictive 35'-0"	most restrictive 1 story	most restrictive 1 story	most restrictive 6,000 sf	1,128 sf	

Occupancy Classification	Construction Type	Sprinkler	Bldg Ht Abv Grade Plane		# Stories Abv Grade Plane		Building Area	
			Allowable	Zoning	Allowable	Zoning	Allowable	Zoning
R-3	V-B	NS	40'-0"	35'-0"	3	UL	UL	NR
<b>Tabular Allowable Proposed</b>			most restrictive 35'-0"	most restrictive 3 stories	most restrictive 2 stories	most restrictive UL	959 sf	

<b>Allowable area for mixed-occupancy, multifamily building per 506.2.4</b>	Frontage increase not required. Allowable area for A-2 (Equation 5-3): 6,000 + (6,000 x 0) = 6,000 sf R-3 occupancy is unlimited.
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**Building Construction**

Fire Resistance Rating Requirements for Building Elements (Hours)	Building Element	Type I		Type II		Type III		Type IV		Type V	
		A	B	A	B	A	B	HT	A	B	
primary structural frame		3	2	1	0	1	0	1	0	1	0
	bearing walls:										
	- exterior	3	2	1	0	2	2	2	1	0	
- interior	3	2	1	0	1	0	1 / HT	1	0		
non-bearing walls:	- exterior walls and partitions							2304.1.1.2	0	0	
	- interior walls and partitions	0	0	0	0	0	0	HT	1	0	
floor construction		2	2	1	0	1	0	HT	1	0	
roof construction		1 1/2	1	1	0	1	0	HT	1	0	

<b>Fire Separations</b>	<input checked="" type="checkbox"/> required separation of occupancies per BCNYS Table 508.4: - 2 hr between R and A occupancies, not sprinklered
	<input checked="" type="checkbox"/> incidental use area protection per BCNYS Table 509: - 1 hr at furnace room with furnace over 400K BTU - 1 hr at boiler room with boiler over 15 psi and 10 hp
	<input checked="" type="checkbox"/> stairwells: not required (EBCNYS 802.2.1 Exception 1 2)

<b>Foam Plastics</b>	<input checked="" type="checkbox"/> foam insulation: flame spread < 75 and smoke developed < 450 (BCNYS 2603.3)
	<input checked="" type="checkbox"/> thermal barrier separation from interior required at foam insulation (BCNYS 2603.4)
	<input checked="" type="checkbox"/> NFPA 285 test NOT required for Type V-B exterior walls with foam insulation (BCNYS 2603.5)

<b>Finish Requirements</b>	<input checked="" type="checkbox"/> wall / ceiling finish: class C in exit stairways, exit passageways, corridors, and exit access stairways (FCNYS Table 803.3)
	<input checked="" type="checkbox"/> wall / ceiling finish: class C in rooms and enclosed spaces (FCNYS Table 803.3)
	<input checked="" type="checkbox"/> floor finish in exit enclosures and corridors to be minimum class II (FCNYS 804.3.3.2)

**Building Construction**

<b>Sprinkler System</b>	fully sprinklered, NFPA 513R system	above grade only	<input checked="" type="checkbox"/> not required (EBCNYS 803.2.2)
<b>Fire Dept Connection</b>	required	<input checked="" type="checkbox"/> not required (BCNYS 912.1)	
<b>Standpipe</b>	required	<input checked="" type="checkbox"/> not required (EBCNYS 803.3)	
<b>Fire Alarm System</b>	required	<input checked="" type="checkbox"/> not required (EBCNYS 803.4.1)	
<b>Smoke Alarms</b>	<input checked="" type="checkbox"/> required	not required	Smoke alarms installed in individual dwelling and sleeping units (EBCNYS 803.4.3)
<b>Portable Fire Extinguishers</b>	<input checked="" type="checkbox"/> required	not required	Provide each dwelling unit with a portable fire extinguisher having a minimum rating of 1-A:10-B:C. (BCNYS 906.1 Exception 1)
<b>CO Detection System</b>	<input checked="" type="checkbox"/> required	not required	(BCNYS 915.1)

**Building Construction**

<b>No of Means of Egress</b>	<input checked="" type="checkbox"/> (1) means of egress required for Group R-3 occupancies (BCNYS 1006.2)
<b>Travel Distances</b>	<input checked="" type="checkbox"/> maximum exit access travel distance (without sprinkler system): 200'-0" (BCNYS Table 1017.2)
<b>Egress Capacity</b>	<input checked="" type="checkbox"/> stair minimum width 0.3' per person or 22" (BCNYS 1005.3.1, EBCNYS 805.3.1.2.2) other components: 0.2' per person or 36" (for corridors) whichever is greater (BCNYS 1005.3.2 and 1020.2)
<b>Direction of Door Swing</b>	<input checked="" type="checkbox"/> pivot or side-hinged swinging doors shall swing in the direction of egress travel when serving a room or area containing an occupant load of 50 or more persons (EBCNYS 805.4.2)

**Building Construction**

<b>Energy Efficiency Requirements</b>	Insulation and Fenestration Requirements by Component (ECCNYS Table R402.1.4)	
Climate Zone: 6A	fenestration U-Factor: 0.30 maximum	mass wall R-Value: R-15/20 minimum
	slyght U-Factor: 0.55 maximum	floor R-Value: R-30 minimum
	glazed fenestration SHGC: NLR	basement wall R-Value: R-15/19 minimum
	ceiling R-Value: R-49 minimum	slab R-Value & depth: R-10, 4 ft minimum
	wood frame wall R-Value: 13 cavity + 10 continuous min	crawl space wall R-Value: R-15/19 minimum

**Accessibility Reqs**

<b>Dwelling &amp; Sleeping Units</b>	<input checked="" type="checkbox"/> a multifamily dwelling unit that is not provided with elevator service is not required to be a Type B unit
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**NYS Sanitary Code Pt 15**

<b>15.4(d) Sleeping Quarters</b>	(1) 50 sf of floor area per occupant required			
	Space	Occupants	Area Required	Area Provided
	bedroom 01	1	50 sf	96 sf
	bedroom 02	2	100 sf	101 sf
	bedroom 03	2	100 sf	100 sf
	(4) 21 sf of wall storage minimum 12" deep area required per occupant See furniture plan on A-820.			
<b>15.4(h) Fire Extinguishing Equip</b>	A minimum of type 2A rated fire extinguisher shall be provided in a readily accessible location not more than 100'-0" feet from each housing unit. In addition, a minimum of a type 5BC rated extinguisher shall be provided within 30'-0" of all rooms containing cooking facilities. Any extinguisher with an equivalent A-B-C rating may be provided.			

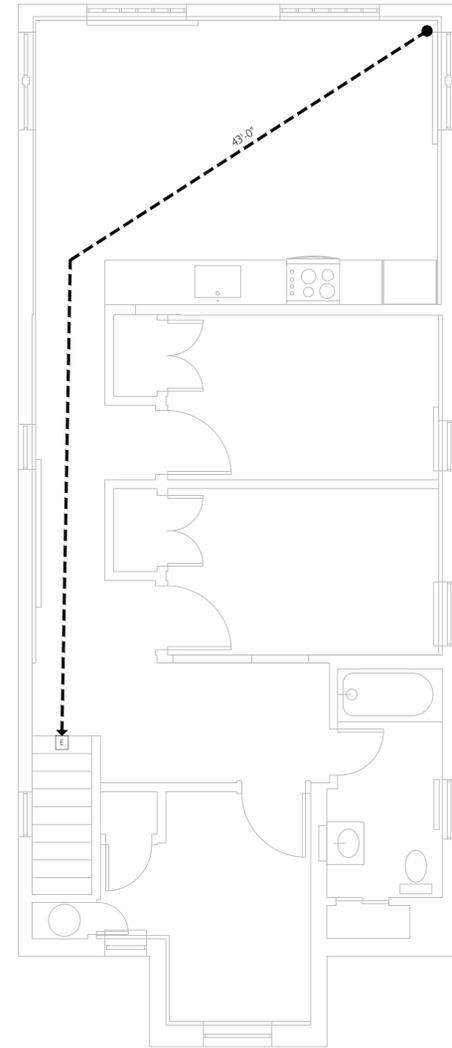
<b>15.8 Toilet Requirements</b>	minimum 1 toilet required per 15 occupants and 1 urinal per 30 men					
	Space	Occupants	Toilets Required	Toilets Provided	Urinals Required	Urinals Provided
unit 1	5	1	1	1	0	0

<b>15.10 Food Preparation Requirements</b>	minimum 2 stove burners per 5 occupants required			
	Space	Occupants	Burners Required	Burners Provided
unit 1	5	2	4	

<b>15.12 Laundry &amp; Bathing Requirements</b>	(a) 1 shower head required per 15 occupants			
	Space	Occupants	Heads Required	Heads Provided
unit 1	5	1	1	1

	(b) 1 mechanical washer required per 50 occupants			
	Space	Occupants	Washers Required	Washers Provided
unit 1	5	1	1	1 (sink provided)

	(c) 1 lavatory required per 15 occupants			
	Space	Occupants	Lavatories Required	Lavatories Provided
unit 1	5	1	1	1



Floor 2 Egress Plan  
Scale: 1/8" = 1'-0"

**ISSUES:**

01 03.20.23 BID 01

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**ESSEX FARM WORKER HOUSING**  
Firehouse  
6513 Main St.  
Westport NY 12993

G-002.00

Code Analysis + Egress Plans

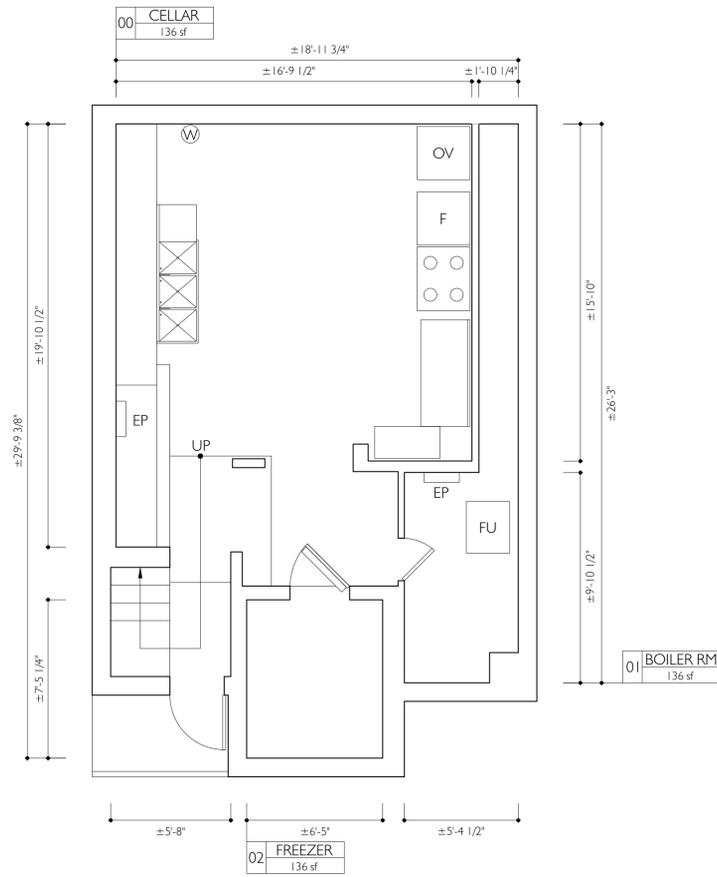
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# FIREHOUSE

## LEGEND

**ABBREVIATIONS**  
 FU furnace  
 EP electrical panel  
 F refrigerator  
 OV oven  
 W water meter  
 ± verify in field



Existing Cellar Plan  
 Scale: 1/4" = 1'-0"



**NOTE: NO WORK AT CELLAR LEVEL**

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## ESSEX FARM WORKER HOUSING

Firehouse  
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 Westport NY 12993

A-100.00

Existing Cellar Plan

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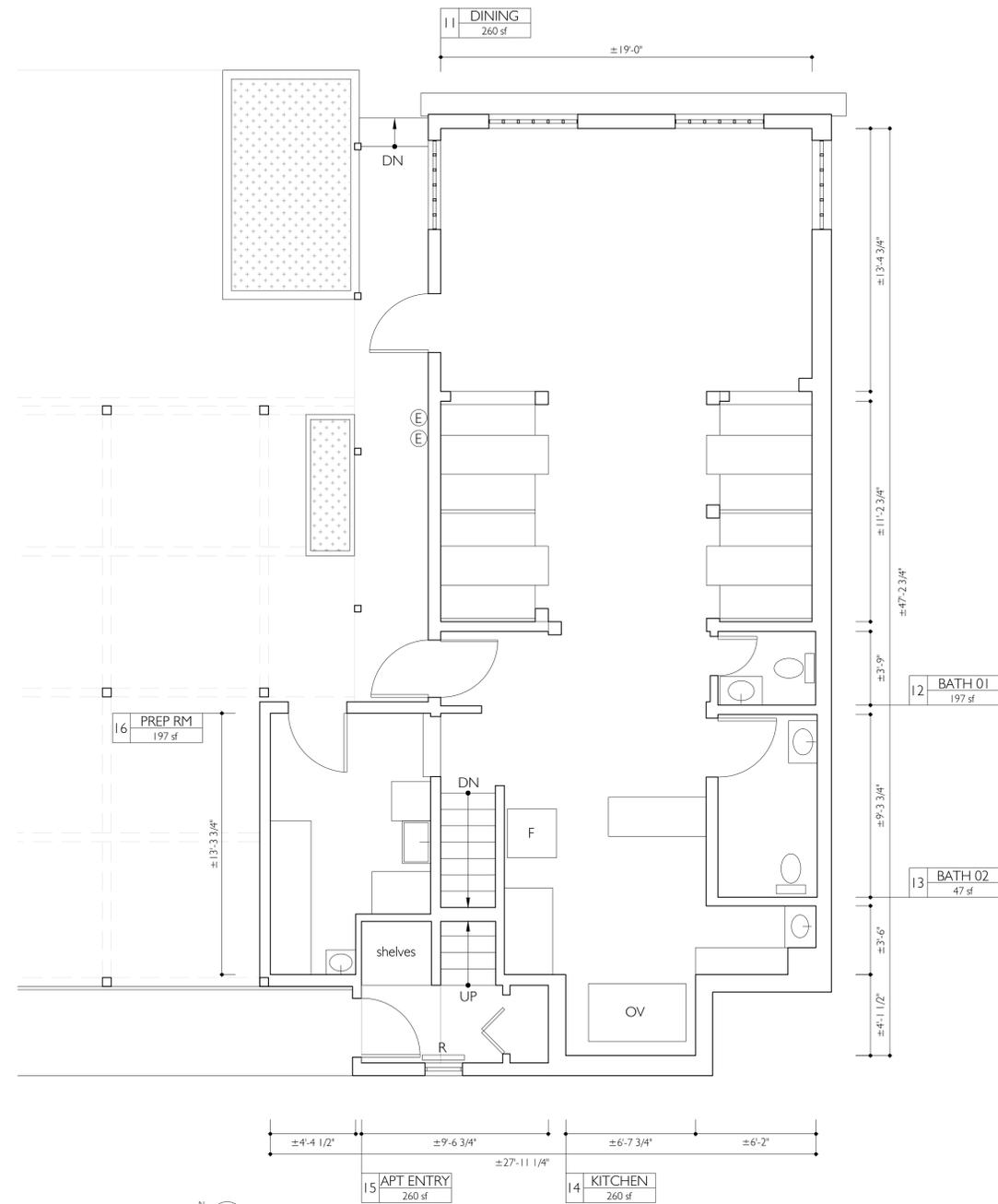
# FIREHOUSE

## LEGEND

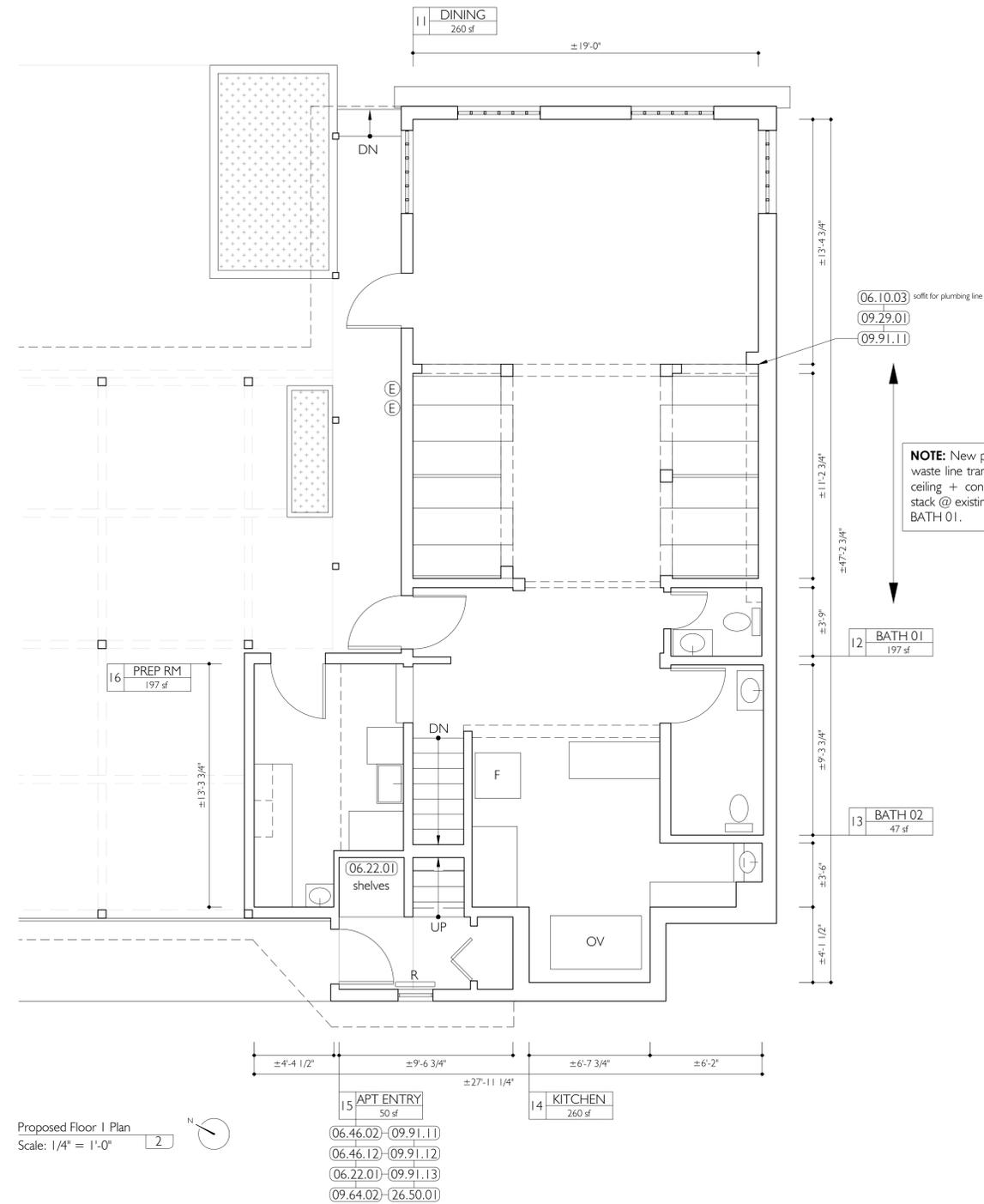
- remove item (demo)
- - - indicates above (proposed)
- planter

## ABBREVIATIONS

- E electrical meter
- F refrigerator
- OV oven
- W water meter
- ± verify in field



Existing Floor 1 Plan  
Scale: 1/4" = 1'-0"



Proposed Floor 1 Plan  
Scale: 1/4" = 1'-0"

**NOTE:** New plumbing waste line transfers @ ceiling + connects to stack @ existing BATH 01.

## KEY NOTES

- 06.10.03 2x rough carpentry (No. 1 or better) closet shelf
- 06.22.01 1x4 wood casing, clear pine flat stock poly finish
- 06.46.02 1x6 wood wall base, clear pine flat stock, poly finish
- 06.46.12 closet shelf
- 09.29.01 5/8" interior G.W.B per schedule
- 09.64.02 wood floor, 3" white oak strip
- 09.91.11 paint, interior, wall
- 09.91.12 paint, interior, trim
- 09.91.13 paint, interior, ceiling
- 26.50.01 light fixture (refer to A-600 lighting and A-720 RCP)

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## ESSEX FARM WORKER HOUSING

Firehouse  
6513 Main St.  
Westport NY 12993

A-110.00

Demo + Proposed Floor 1 Plans

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# FIREHOUSE

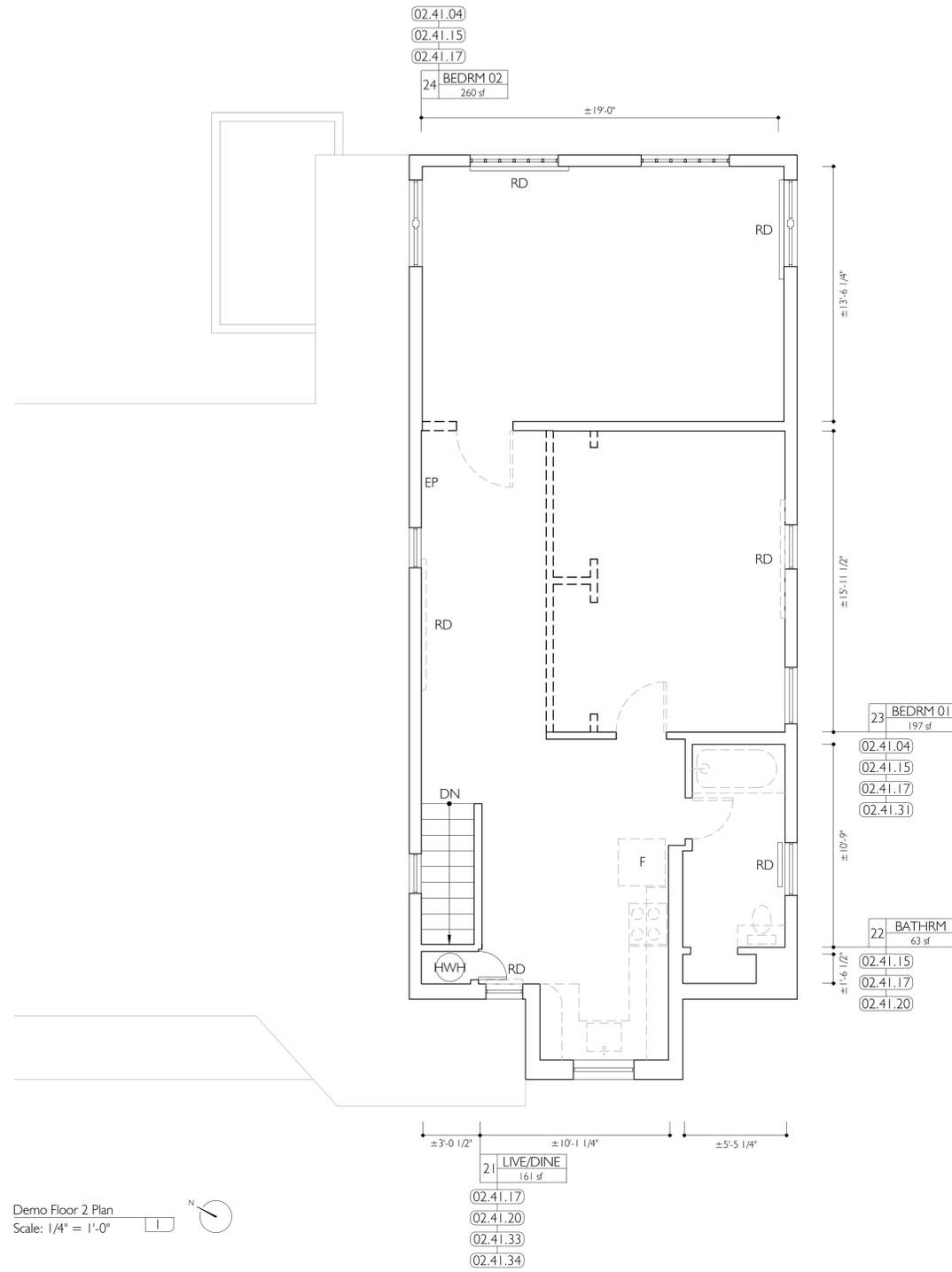
## LEGEND

- remove item (demo)
- indicates above (proposed)
- new partition

- # door tag
- SCD smoke / CO detector
- ▨ patch flooring

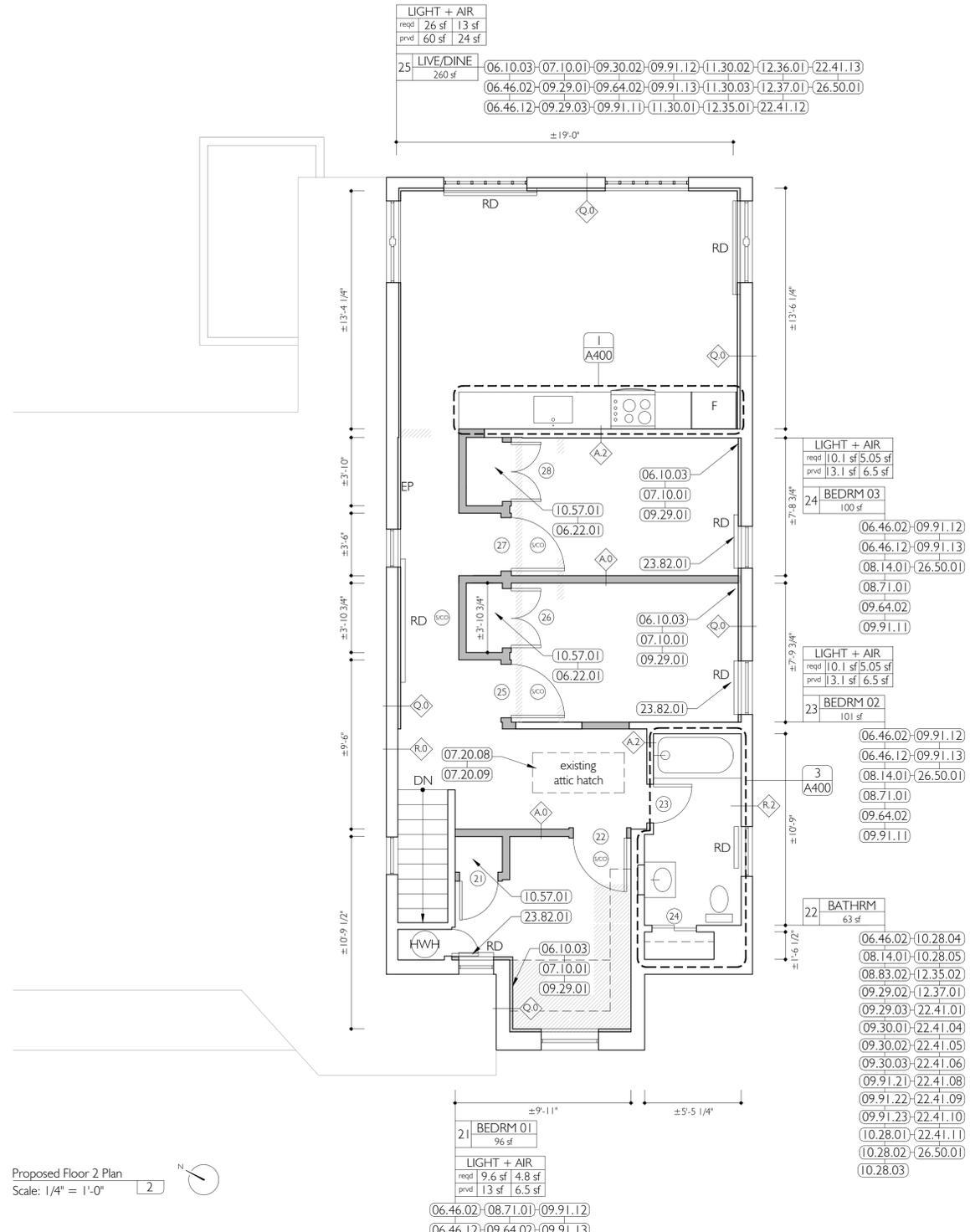
## ABBREVIATIONS

- DN down
- F refrigerator
- R range
- RD radiator
- ± verify in field
- HWH hot water heater



Demo Floor 2 Plan  
Scale: 1/4" = 1'-0"

**NOTE**  
REMOVE ALL INTERIOR SHEETROCK FINISHES, BASE TRIM AND CASINGS



Proposed Floor 2 Plan  
Scale: 1/4" = 1'-0"

## KEY NOTES

- 02.41.04 remove interior stud framing and non structural furring as indicated
- 02.41.15 remove existing door and framing as needed for proposed plan
- 02.41.17 remove floor finish to undamaged wood floor or subfloor
- 02.41.20 remove existing plumbing fixtures and cut back and cap waste and supply lines
- 02.41.31 remove existing radiator
- 02.41.33 remove existing refrigerator
- 02.41.34 remove existing carpentry (no. 1 or better)
- 06.10.03 2x rough carpentry (no. 1 or better)
- 06.22.01 closet shelf
- 06.46.02 1 x 4 wood casing, clear pine flat stock, poly finish (refer to A-550 for casing details)

- 06.46.12 1 x 6 wood wall base, clear pine flat stock, poly finish (refer to A-550 for VWall Base Details)
- 07.10.01 PRO CLIMA Intello X: Variable-permeability mesh-reinforced "smart" membrane air barrier/weather barrier
- 07.20.08 insulate attic hatch with 15" thick loose-fill cellulose insulation and weather stripping
- 07.20.09 add loose-fill cellulose insulation in attic to get to needed thickness of 16"
- 08.14.01 solid wood doors, trustile (refer to A-610 door schedule)
- 08.71.01 door hardware (refer to A-610)
- 08.83.02 mirrored medicine cabinet 20" x 40" (refer to A-600 bathroom schedule)
- 09.29.01 5/8" interior G.W.B. per schedule

- 09.29.02 5/8" interior moisture, mold and mildew resistant board
- 09.29.03 5/8" interior cementitious backer board
- 09.30.01 ceramic tile, 2" hexagon
- 09.30.02 ceramic tile, 2" x 8" subway
- 09.64.02 wood floor, 3" white oak strip
- 09.91.11 paint, interior, wall
- 09.91.12 paint, interior, trim
- 09.91.13 paint, interior, ceiling
- 09.91.21 paint, interior bathroom, wall
- 09.91.22 paint, interior bathroom, trim
- 09.91.23 paint, interior bathroom, ceiling
- 10.28.01 shower curtain rod
- 10.28.02 shower curtain
- 10.28.03 toilet paper holder

- 10.28.04 towel bar, 24" (refer to A-600 bathroom schedule)
- 10.28.05 robe hook
- 10.57.01 closet rod
- 11.30.01 range
- 11.30.02 refrigerator
- 11.30.03 microwave over range
- 12.35.01 kitchen cabinet
- 12.35.02 bathroom vanity cabinet, 30" wide (refer to A-600 bathroom schedule)
- 12.35.03 medicine cabinet 24" x 28"
- 12.36.01 kitchen countertop
- 12.37.01 cabinet hardware
- 22.41.01 lavatory undermount sink (refer to A-600 plumbing schedule)

- 22.41.04 lavatory faucet
- 22.41.05 bathtub
- 22.41.06 bathtub surround
- 22.41.08 bathtub spout
- 22.41.09 shower system
- 22.41.10 shower rough
- 22.41.11 toilet
- 22.41.12 kitchen undermount sink
- 22.41.13 kitchen faucet
- 23.82.01 electric baseboard heater
- 26.50.01 light fixture (see RCP A-900, A910 and A-600 lighting schedule)

## ISSUES:

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## ESSEX FARM WORKER HOUSING

Firehouse  
6513 Main St.  
Westport NY 12993

A-120.00

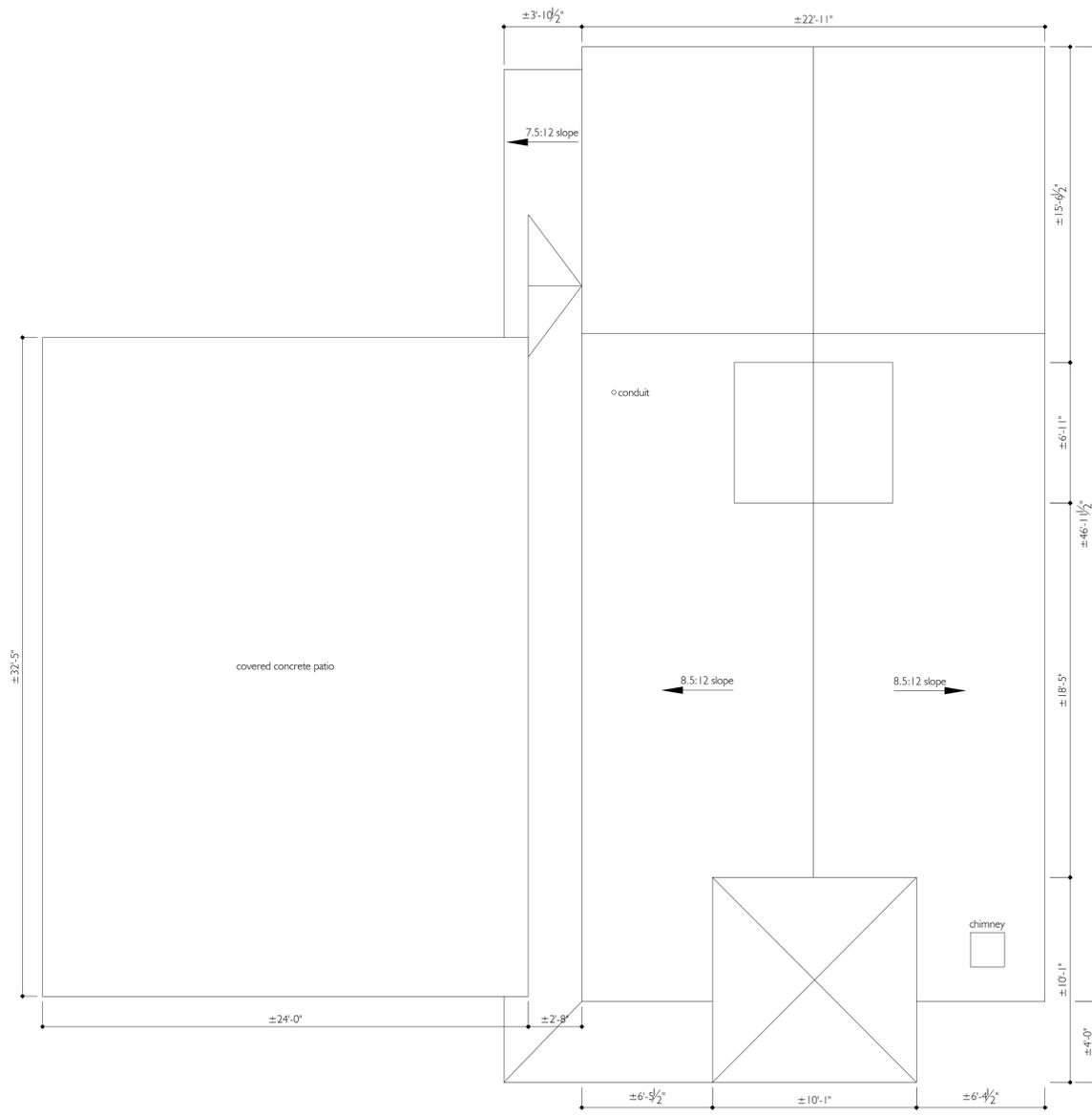
Demo + Proposed Floor 2 Plans

SEAL | SIGNATURE:



# FIREHOUSE

**ABBREVIATIONS**  
± verify in field



Existing Roof Plan  
Scale: 1/4" = 1'-0"

**NOTE: NO WORK AT ROOF LEVEL**

**ISSUES:**

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**ESSEX FARM WORKER HOUSING**

Firehouse  
6513 Main St.  
Westport NY 12993

A-130.00

Existing Roof Plan

SEAL | SIGNATURE:





Existing East Elevation  
Scale: 1/4" = 1'-0"

**NOTE:  
FOR REFERENCE ONLY.  
NO EXTERIOR WORK  
PROPOSED.**

**ISSUES:**

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**ESSEX FARM WORKER HOUSING**

Firehouse  
6513 Main St.  
Westport NY 12993

A-200.00

Existing East Elevation

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Existing North Elevation  
Scale: 1/4" = 1'-0"

**NOTE:  
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**ISSUES:**

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**ESSEX FARM WORKER HOUSING**

Firehouse  
6513 Main St.  
Westport NY 12993

A-210.00

Existing North Elevation

SEAL | SIGNATURE:





Existing West Elevation  
Scale: 1/4" = 1'-0"

**NOTE:  
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**ESSEX FARM WORKER HOUSING**

Firehouse  
6513 Main St.  
Westport NY 12993

A-220.00

Existing West Elevation

SEAL | SIGNATURE:





Proposed South Elevation  
Scale: 1/4" = 1'-0"

**NOTE:  
FOR REFERENCE ONLY.  
NO EXTERIOR WORK  
PROPOSED.**

**ISSUES:**

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**ESSEX FARM WORKER HOUSING**

Firehouse  
6513 Main St.  
Westport NY 12993

A-230.00

Existing South Elevation

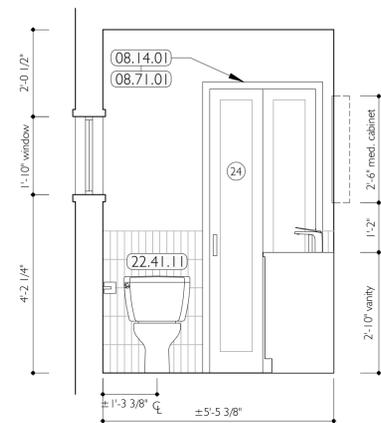
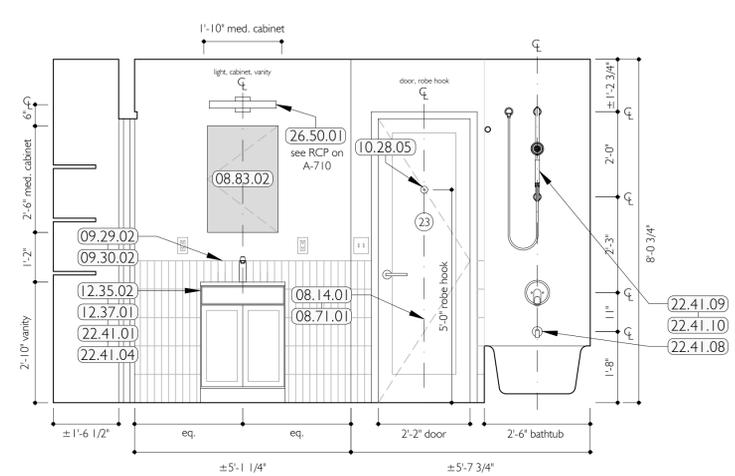
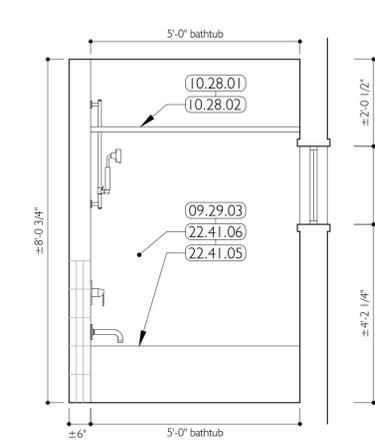
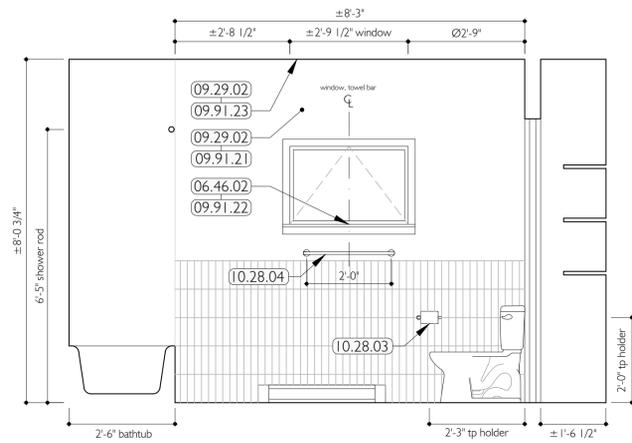
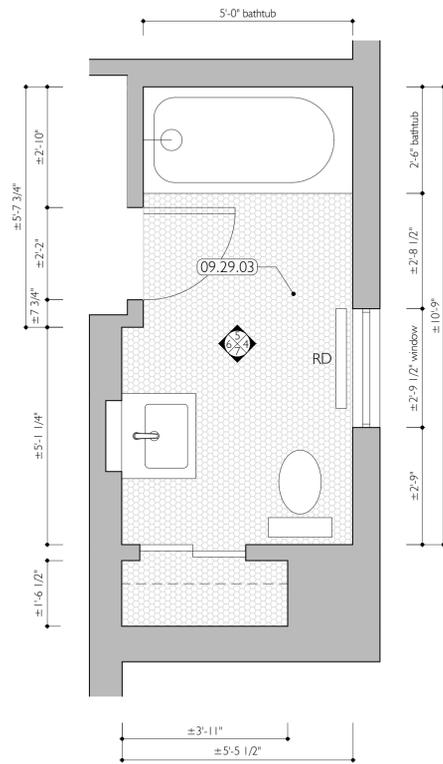
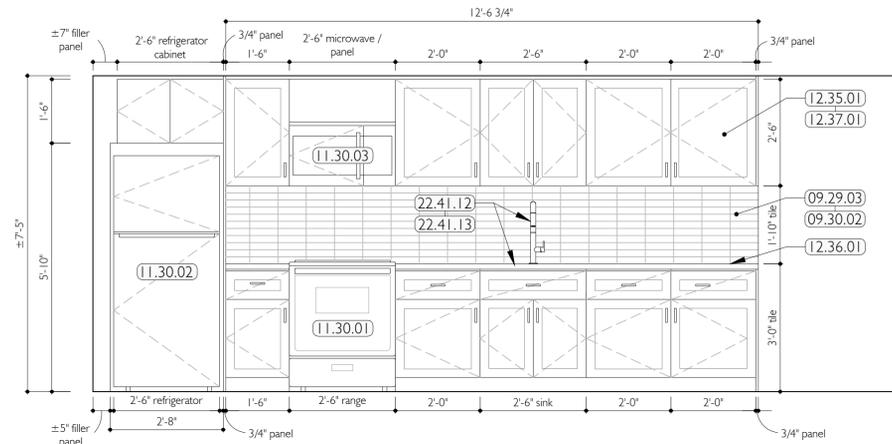
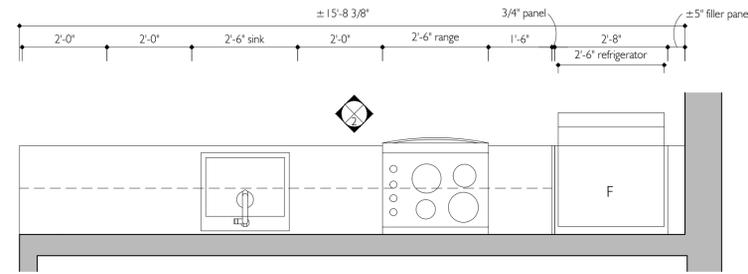
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# FIREHOUSE

## ABBREVIATIONS

- MW microwave
- F refrigerator
- RD radiator
- ± verify in field



## KEY NOTES

- 06.46.02 1x4 wood casing, clear pine flat stock, polyurethane finish
- 08.14.01 solid wood doors, trundle (refer to A-610 door schedule)
- 08.71.01 Door hardware (refer to A-610)
- 08.83.02 Mirrored medicine cabinet, 20" x 40" (refer to A-600 Bathroom Schedule)
- 09.29.02 5/8" interior moisture, mold, and mildew resistant board
- 09.29.03 5/8" interior cementitious backer board
- 09.30.01 Ceramic tile, 2" hexagon
- 09.30.02 Ceramic tile, 2" x 8" subway
- 09.91.21 Paint, interior bathroom, wall
- 09.91.22 Paint, interior bathroom, trim

- 09.91.23 Paint, interior bathroom, ceiling
- 10.28.01 Shower curtain rod (refer to A-600 Bathroom Schedule)
- 10.28.02 Shower curtain (refer to A-600 Bathroom Schedule)
- 10.28.03 Toilet paper holder (refer to A-600 Bathroom Schedule)
- 10.28.04 Towel bar, 24" (refer to A-600 Bathroom Schedule)
- 10.28.05 Robe hook (refer to A-600 Bathroom Schedule)
- 11.30.01 Range (refer to A-600 Kitchen Schedule)
- 11.30.02 Refrigerator (refer to A-600 Kitchen Schedule)
- 11.30.03 Microwave over range (refer to A-600

- 12.35.01 Kitchen cabinet (refer to A-600 Kitchen Schedule)
- 12.35.02 Bathroom vanity cabinet, 30" wide (refer to A-600 Bathroom Schedule)
- 12.35.03 Medicine cabinet, 20" x 30" (refer to A-600 Bathroom Schedule)
- 12.36.01 Countertop (refer to A-600 Bathroom or Kitchen Schedule)
- 12.37.01 Cabinet hardware (refer to A-600 Bathroom or Kitchen Schedule)
- 22.41.01 Lavatory undermount sink (refer to A-600 Plumbing Schedule)
- 22.41.04 Lavatory faucet (refer to A-600 Plumbing Schedule)

- 22.41.05 Bathtub (refer to A-600 Plumbing Schedule)
- 22.41.06 Bathtub surround (refer to A-600 Plumbing Schedule)
- 22.41.08 Bathtub spout (refer to A-600 Plumbing Schedule)
- 22.41.09 Shower system (refer to A-600 Plumbing Schedule)
- 22.41.10 Shower rough (refer to A-600 Plumbing Schedule)
- 22.41.11 Toilet (refer to A-600 Plumbing Schedule)
- 22.41.12 Kitchen undermount sink (refer to A-600 Plumbing Schedule)
- 22.41.13 Kitchen faucet (refer to A-600 Plumbing Schedule)
- 26.50.01 Light fixture (refer to A-600 Lighting Schedule and A-720 RCP)

## ISSUES:

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## ESSEX FARM WORKER HOUSING

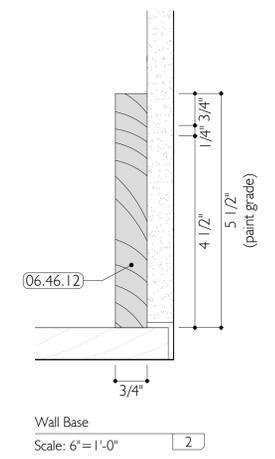
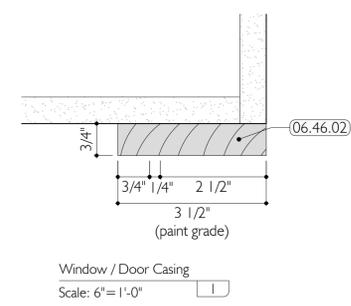
Firehouse  
6513 Main St.  
Westport NY 12993

## A-400

## INTERIOR ELEVS + PLANS

SEAL | SIGNATURE:





- KEY NOTES**
- 06.46.02 1 x 4 wood casing, clear pine flat stock, polyurethane finish (refer to A-550 for Casing Details)
  - 06.46.12 1 x 6 wood wall base, clear pine flat stock, poly finish (refer to A-550 for Wall Base Details)

**ISSUES:**

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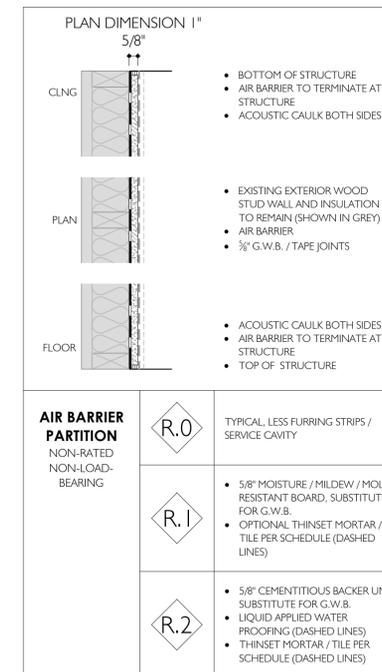
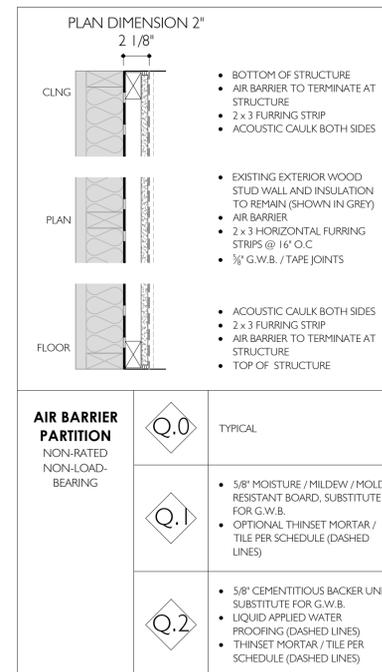
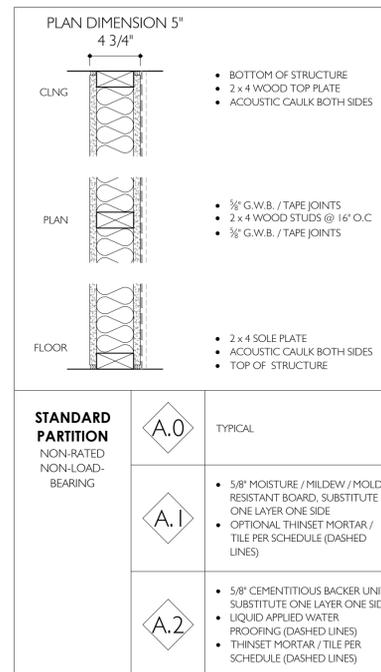
**ESSEX FARM WORKER HOUSING**  
Firehouse  
6513 Main St.  
Westport NY 12993

**A-550**

INTERIOR DETAILS

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**ESSEX FARM WORKER HOUSING**  
Firehouse  
6513 Main St.  
Westport NY 12993

**A-590**

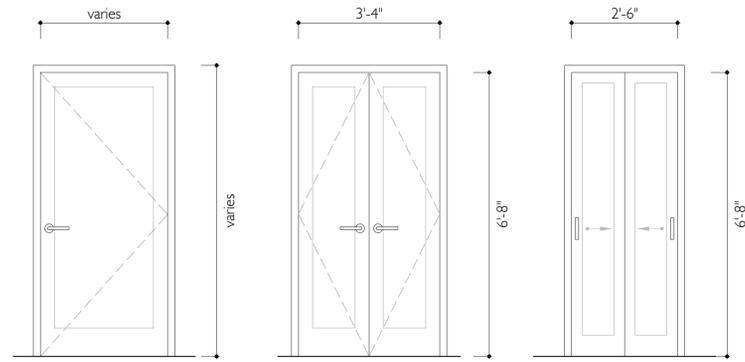
PARTITION TYPES  
SEAL | SIGNATURE:



# FIREHOUSE

## SCHEDULE NOTES

- All keynotes to be as specified (or approved equal). See project manual for additional information.
- All exterior, interior, and bathroom paint to be Benjamin Moore Aura: Exterior, Interior, and Bath + Spa (respectively).



**TYPE A**  
interior door

**TYPE A.2**  
interior door

**TYPE B**  
bypass sliding doors

Door Types  
Scale: 1/2" = 1'-0"

DOOR SCHEDULE												
#	type	quantity	DESCRIPTION	DIMENSIONS			MATERIAL	FRAME	FINISH	MANUFACTURER	MODEL	HARDWARE SET #
				thickness	width	height						
21	A	1	closet	1 3/8"	2'-2"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	4
22	A	1	bedroom 01	1 3/8"	3'-0"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	2
23	A	1	bathroom	1 3/8"	2'-2"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	2
24	B	1	closet	1 3/8"	2'-6"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	5
25	A	1	bedroom 02	1 3/8"	3'-0"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	2
26	A.2	1	closet	1 3/8"	3'-4"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	3
27	A	1	bedroom 03	1 3/8"	3'-0"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	2
28	A.2	1	closet	1 3/8"	3'-4"	6'-8"	wood	wood	paint grade	TruStile	TS1000 with square sticking and flat panel	3

1. Interior doors to be TruStile solid wood doors or approved equal.  
2. All hardware shall be Omnia levers with satin chrome finish. Provide privacy locks at all bathrooms and bedrooms.  
3. General contractor to provide door shop drawings and schedule for review and approval by architect and owner prior to ordering.

HARDWARE SETS SCHEDULE				
QTY	DESCRIPTION	MANUFACTURER	MODEL	FINISH
<b>SET #2: BEDROOM / BATHROOM DOOR</b>				
3	Hinges	Omnia	985BB/4BTN	satin chrome
1	Privacy Lever		912MD/R.SD15	
1	Faceplate / Strikeplate			
1	Door Stop (half-dome)	Baldwin	4000	satin nickel
<b>SET #3: CLOSET - DOUBLE DOOR</b>				
6	Hinges	Omnia	985BB/4BTN	satin chrome
2	Dummy Lever		912MD/R.SD15	
1	Magnetic Catch		Don-Jo	
2	Door Stop (half-dome)	Baldwin	4000	satin nickel
<b>SET #4: CLOSET - SINGLE DOOR</b>				
3	Hinges	Omnia	985BB/4BTN	satin chrome
1	Passage Lever		912MD/R.SD15	
1	Faceplate / Strikeplate			
1	Door Stop (half-dome)	Baldwin	4000	satin nickel
<b>SET #5: CLOSET - DOUBLE BYPASS SLIDING DOORS</b>				
6	Hinges	Omnia	985BB/4BTN	satin chrome
2	Flushcup Pulls		7035 / 0.26D	
1	Bypass Sliding Bypass Track and Hardware	National Hardware	N343-061	

PLUMBING SCHEDULE							
KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
22.41.01	Lavatory undermount sink	American Standard	0614.000	white	18" W x 12" L x 6 7/8" D	1	
22.41.04	Lavatory faucet	American Standard	7105121	polished chrome	7" H	1	WaterSense, ADA
22.41.05	Bathtub	American Standard	2946.102 or 2946.202	white	60" L x 32" W x 18" H	1	
22.41.06	Bathtub surround	American Standard	2946.BW	white	58" H	1	
22.41.08	Bathtub spout	American Standard	8888.022.002	polished chrome		1	
22.41.09	Shower system	American Standard	TU662221.002	polished chrome		1	slidebar with handshower system
22.41.10	Shower rough	American Standard	RJ10155			1	
22.41.11	Toilet	American Standard	2988.101	white		1	WaterSense, ADA
22.41.12	Kitchen undermount sink	American Standard	1858625221.1.075	stainless steel	28" W x 22" L x 6" D	1	ADA, 29" min cabinet required
22.41.13	Kitchen faucet	American Standard	4931.300	polished chrome	17-6/16" H	1	ADA, single deck mount

BATHROOM SCHEDULE							
KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
08.83.02	Mirrored medicine cabinet	Kohler	K-99002	aluminum	20" W x 30" H	1	recessed, soft close hinges
12.35.02	Bathroom vanity cabinet	KOB Kitchen and Bath	Stock cabinets	Gray Shaker	24" W x 33" H x 21" D	1	soft close hinges
12.37.01	Cabinet hardware	KOB Kitchen and Bath		polished chrome	4" pull	1	
12.36.01	Countertop	IceStone	QuartzStone	snowflake	1" thick		
10.28.01	Shower curtain rod	Kohler	K-9351-S	polished steel	20" W x 30" H	1	
10.28.02	Shower curtain						
10.28.03	Toilet paper holder	Kohler	K-27292-CP	polished chrome		1	
10.28.04	Towel bar, 24"	Kohler	K-27287-CP	polished chrome	24"	1	
10.28.05	Robe hook	Kohler	K-27290-CP	polished chrome	20" W x 30" H	1	

KITCHEN SCHEDULE							
KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
12.35.01	Kitchen upper cabinets	KOB Kitchen and Bath	Stock cabinets	Gray Shaker		1	soft close hinges and runners
	Kitchen base cabinets	KOB Kitchen and Bath	Stock cabinets	Gray Shaker		1	soft close hinges and runners
12.37.01	Cabinet hardware	KOB Kitchen and Bath		polished chrome	4" pull	1	
12.36.01	Countertop	IceStone	QuartzStone	snowflake	1" thick		
11.30.01	Range	General Electric	PH5930YFSS	stainless steel	30" W	1	slide in, induction range
11.30.02	Refrigerator	General Electric	GTE19SNR55	stainless steel	30" W	1	
11.30.03	Microwave	General Electric	JVM6172DKBB	stainless steel	30" W	1	microwave over range, vented to exterior

FURNITURE SCHEDULE							
KEYNOTE	DESCRIPTION	MANUFACTURER	MODEL	FINISH	SIZE	QTY	NOTES
12.58.01	Bed Frame - Twin XL	Ecologic: Academy	40-43680	rubberwood, steel	36" W x 80" D	2	Headboard and Footboard, Steel Tubular Platform
12.58.02	Bed Frame - Full XL	Ecologic: Academy	40-45480	rubberwood, steel	60" W x 80" D	1	Headboard and Footboard, Steel Tubular Platform
12.58.03	Mattress - Twin XL	Ecologic	99-VF-IS-3680	nylon	36" W x 80" L x 8" H	2	Nylon Inverted Seam
12.58.04	Mattress - Full XL	Ecologic	99-VF-IS-5480	nylon	60" W x 80" L x 8" H	1	Nylon Inverted Seam
12.58.07	Sofa	Ecologic: Collins	00-11003-2		80" W x 33" D x 29" H	1	3-Seat
12.58.09	Coffee Table	Ecologic: Pacifica	85-66440-T	engineered hardwood	40" W x 20" D x 18" H	1	
12.58.10	Dining Table	Savoy	5090	oak	60" W x 36" D x 30" H	1	
12.58.11	Chair	Savoy: Metro Chair	917WSB	oak	19" x 22" x 33"	4	
10.57.01	Closet rod						provide blocking as required

## ISSUES:

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**ESSEX FARM WORKER HOUSING**  
Firehouse  
6513 Main St.  
Westport NY 12993

A-600

DOOR TYPES AND SCHEDULES

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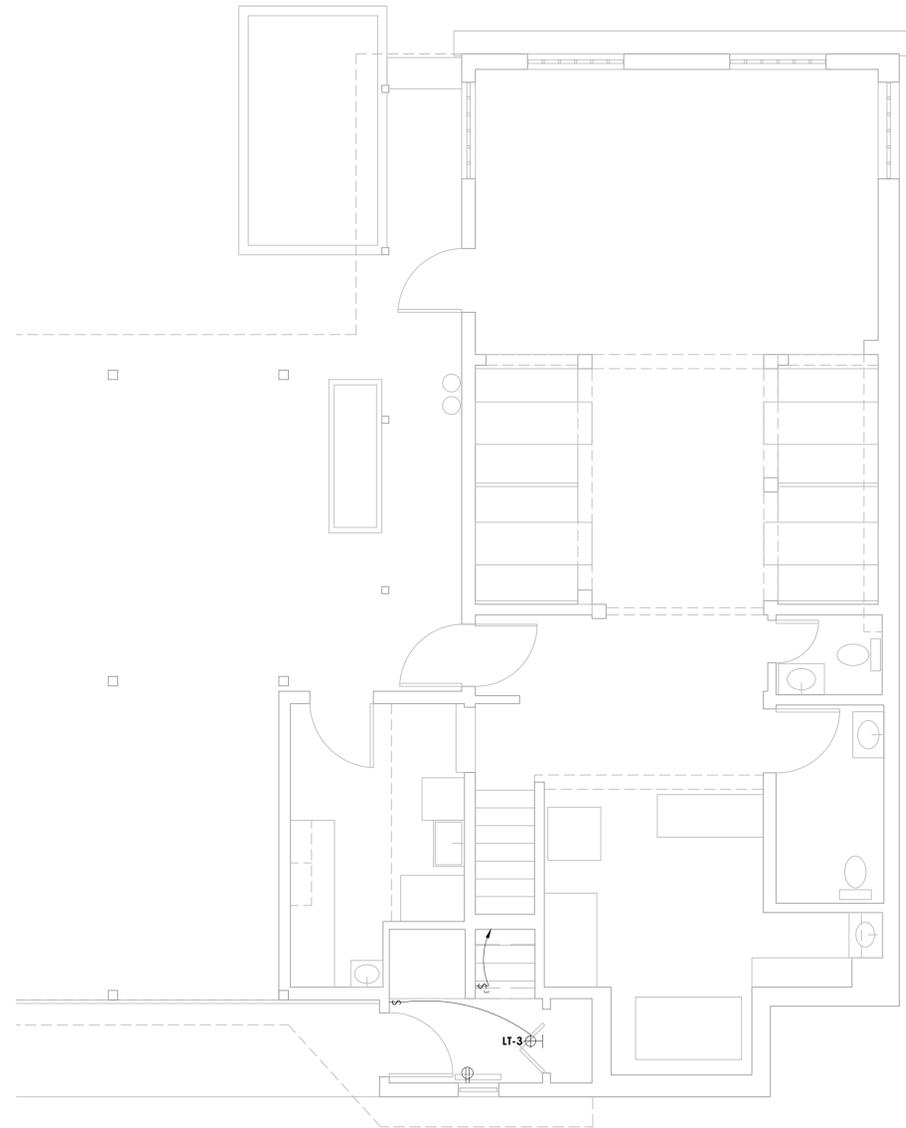
# FIREHOUSE

## LEGEND

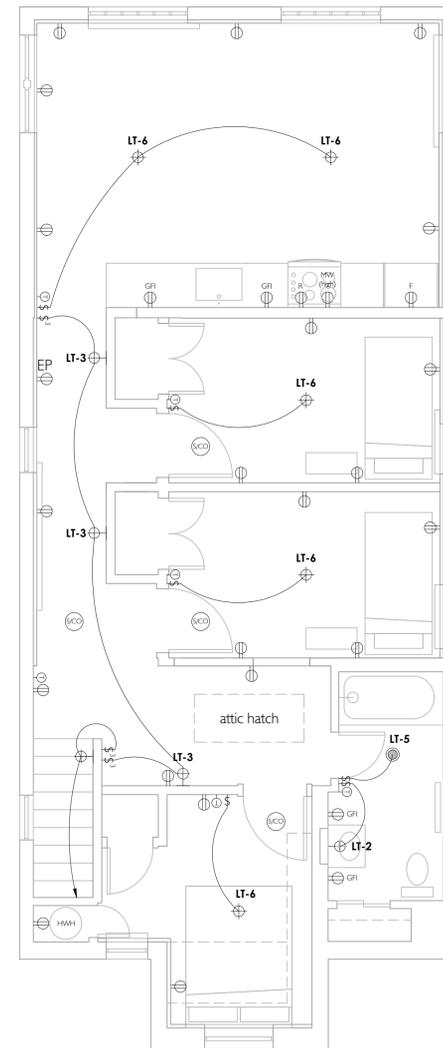
- ⊕ ceiling mounted light
- recessed light
- ⊕ ceiling fan
- ⊕ wall mounted light
- linear light
- ▨ radiant flooring
- ⊕ duplex outlet
- ⊕ USB / outlet combo
- ⊕ quad outlet
- ⊕ floor outlet
- ⌞ switch
- ⌞ 3 way switch
- ⌞ dimmer switch
- ⊞ electrical panel
- ⊞ smoke / CO detector
- ⊞ intercom
- ⊞ security camera
- ⊞ thermostat
- ⊞ telephone
- ⊞ TV / data
- ⊞ coaxial cable
- ⊞ doorbell
- ⊞ exit sign

## ABBREVIATIONS

- DN down
- F refrigerator
- GFI ground fault interrupt
- HWH hot water heater
- R range
- MW microwave



Floor 1 RCP  
Scale: 1/4" = 1'-0" 1



Floor 2 RCP  
Scale: 1/4" = 1'-0" 2

APARTMENT 1: LIGHT FIXTURE SCHEDULE										
SYMBOL	TAG	DESCRIPTION	MANUFACTURER	MODEL	FINISH	WATTS	LAMP	COLOR	QTY	NOTES
⊕	LT-2	bath sconce, interior, 18" bar	MAXIM Spec	52000-SN	satin nickel	12	LED	3000K	1	
⊕	LT-3	wall sconce, interior 11" Ø	MAXIM Trim	57664-WT	white	20	LED	3000K	4	Triac CL dimming
●	LT-5	recessed light / fan combo, 4" Ø	BROAN	744LED	white	66/9.5	LED	2700K	1	includes 70cfm exhaust fan
⊕	LT-6	ceiling mount, interior, 16" Ø	BROMIDESIGN Lynch	1661521537	white / silver	allow 50	LED	3000K	5	requires (3) LED A lamps

NOTES:  
 1. See interior and exterior elevations for switch, outlet, and fixture heights.  
 2. Center light fixtures in soffits and in rooms unless noted otherwise.  
 3. Coordinate fixture installation with engineering systems.  
 4. Coordinate locations of junction boxes for equipment with equipment contractor. Provide gang boxes for all key type switches. Review final locations with the Architect.

## ISSUES:

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## ESSEX FARM WORKER HOUSING

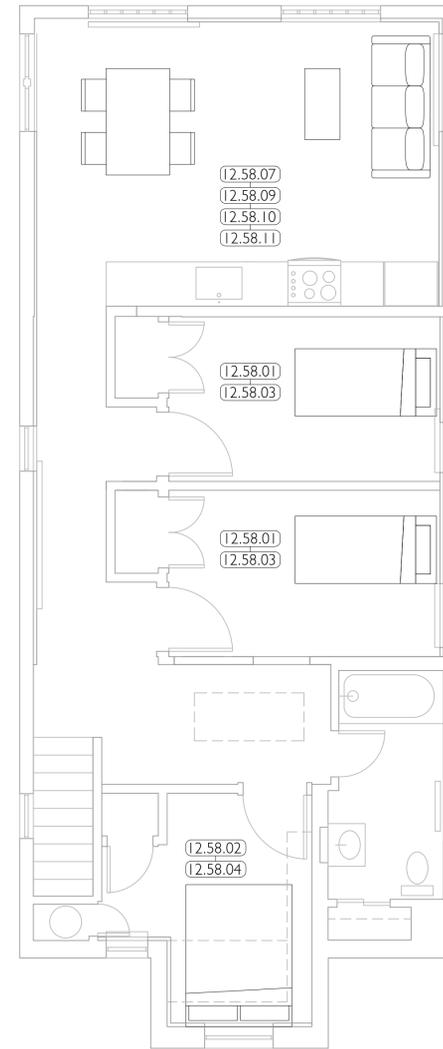
Firehouse  
6513 Main St.  
Westport NY 12993

A-710.00

Proposed Floor 1 + 2 RCPs

SEAL | SIGNATURE:





Floor 2 Furniture Plan  
 Scale: 1/4" = 1'-0" 1

- KEY NOTES**  
 (refer to A-600 Furniture Schedule)
- 12.58.01 Bed Frame - Twin XL
  - 12.58.02 Bed Frame - Full XL
  - 12.58.03 Mattress - Twin XL
  - 12.58.04 Mattress - Full XL
  - 12.58.07 Sofa
  - 12.58.09 Coffee Table
  - 12.58.10 Dining Table
  - 12.58.11 Chair

**ISSUES:**  
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**ESSEX FARM WORKER HOUSING**  
 Firehouse  
 6513 Main St.  
 Westport NY 12993

**A-820**  
 FURNITURE PLAN  
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**PLUMBING GENERAL NOTES**

- 1) All plumbing work shall comply with the New York State Plumbing Code.
- 2) Install piping in concealed locations, unless otherwise indicated and except in equipment rooms and service areas.
- 3) Install equipment level and plumb, parallel and perpendicular to other building systems and components in exposed interior spaces, unless otherwise indicated.
- 4) Install material at fire rated construction perimeters and openings containing penetrating sleeves, piping, and other items requiring firestopping.
- 5) Where piping penetrates floor, ceiling, or wall, close off space between pipe or duct and adjacent work with firestopping insulation and caulk airtight.
- 6) Plumbing Contractor shall coordinate final pipe and equipment elevations with other trades. Piping installations shall not interfere with space usage, lighting systems, electrical systems, or HVAC grilles and diffusers.
- 7) Coordinate temporary shutdown of plumbing systems with owner prior to performing work. Provide temporary services.
- 8) The Contractor for this work shall carefully inspect and acquaint themselves with all drawings in order to fully understand the work required. The Contractor shall field measure and verify all dimensions and conditions before proceeding with the work.

9) Piping layouts are diagrammatic and intended to show general arrangement, size, and capacity. All offsets are not necessarily shown. The plumbing Contractor shall arrange and coordinate the work, furnish necessary offsets, valves, vents, and fittings to avoid conflicts with other mechanical and electrical services and with structural and architectural elements.

10) The Contractor shall be responsible for the removal of debris generated by this work and workers at the end of each working day, for general good housekeeping by their workers, and shall supply debris container(s) or dumpster(s) as required.

11) Refer to architectural plans for locations of fire walls and walls which require sealing. The plumbing Contractor shall be responsible for sealing all floor and wall penetrations with fire rated sealant before final payment.

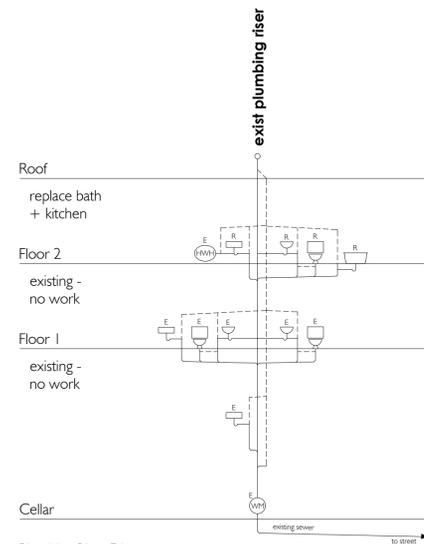
12) The Contractor shall replace any piping system and components which do not pass testing procedures specified and retest repaired portions of the system.

13) The Contractor shall make final connections to all plumbing equipment and equipment supplied by others, including required faucets, stops, valves, fittings, traps, etc.

14) The Contractor shall provide and install all indirect waste piping.

15) The Contractor shall run all piping to avoid reinforcing and / or footings at all column lines.

16) Trap primers shall be provided and readily available as per local code for all floor drains with no water content.



Plumbing Riser Diagram  
 n t s  
**NOTE:** install drain waste vent to town sewer system and water piping to town water system for full bathroom and kitchen

# 6513 MAIN STREET

**DRAWINGS**  
 P-001.02 Plumb Riser Diagram + Notes  
 P-120.00 Floor 2 Plumbing Plan

FIXTURE	NUMBER	SIZE OF PLUMBING LINES		
		WASTE	VENT	COLD WATER
water closet	1	3"	2"	1/2"
lavatory	1	1/2"	2"	1/2"
sink	2	1/2"	2"	1/2"
shower	1	2"	2"	1/2"
washer / dryer	1	2"	2"	1/2"

SYSTEM	FLUID TEMP	INSULATION CONDUCTIVITY (BTU/IN)(H*FT2*F)	NOMINAL PIPE SIZE			NOMINAL PIPE SIZE		
			< 1"	1" to < 1-1/2"	1-1/2" to < 4"	< 1"	1" to < 1-1/2"	1-1/2" to < 4"
			CODE REQUIRED MINIMUM INSULATION			SPECIFIED INSULATION THICKNESS		
domestic hot water supply	110°F - 140°F	0.21 - 0.28	1"	1"	1-1/2"	1"	1"	1-1/2"
domestic cold water supply	45°F - 55°F	0.21 - 0.27	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
domestic hot water recirculation	95°F - 115°F	0.21 - 0.28	1"	1"	1-1/2"	1"	1"	1-1/2"

**FIREHOUSE**

- ABBREVIATIONS**
- E existing fixture
  - HWH hot water heater
  - LAV lavatory
  - N new
  - R replace fixture
  - WC water closet
  - WM water meter

**ISSUES:**  
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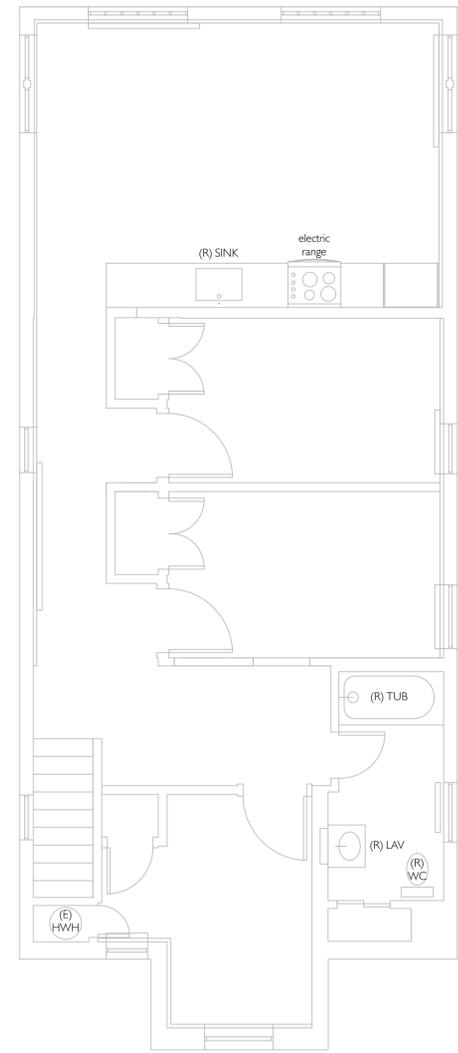
**ESSEX FARM WORKER HOUSING**  
 Firehouse  
 6513 Main St.  
 Westport NY 12993

P-001.00  
 Plumbing Riser Diagram + Notes  
 SEAL | SIGNATURE:



# FIREHOUSE

- ABBREVIATIONS**  
E existing fixture  
HWH hot water heater  
LAV lavatory  
N new  
R replace fixture  
WC water closet  
WM water meter



Floor 2 Plumbing Plan  
Scale: 1/4" = 1'-0"

**ISSUES:**

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**ESSEX FARM WORKER HOUSING**

Firehouse  
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Westport NY 12993

P-120.00

Floor 2 Plumbing Plan  
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## LEGEND

	SINGLE LINE DUCTWORK - NEW
	SINGLE LINE DUCTWORK - EXISTING
	EXISTING DUCTWORK - DEMOLISH
	EQUIPMENT - NEW
	PIPING
	CONDENSATE PIPING
	DUCTWORK WITH ACOUSTIC LINING
	DUCT UNDER POSITIVE PRESSURE (SUPPLY AIR OR FAN DISCHARGE)
	DUCT UNDER NEGATIVE PRESSURE (RETURN, EXHAUST OR OUTSIDE AIR)
	VANED ELBOW (SEE DETAIL)
	RADIUS ELBOW
	BRANCH DUCT TAKE OFF
	DUCT FLEXIBLE CONNECTION
	10" BY 6" SUPPLY REGISTER 150 CFM 10x6
	VOLUME DAMPER
	FIRE DAMPER AND ACCESS DOOR
	AUTOMATIC DAMPER (ELECTRIC)
	COMBINATION SMOKE AND FIRE DAMPER AND ACCESS DOOR
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	TYPE A CEILING DIFFUSER 400 CFM SUPPLY AIR
	TYPE A CEILING REGISTER (CEILING GRILLE)
	SQUARE DIFFUSER WITH BLANKING PLATE
	THERMOSTAT
	TEMP SENSOR
	SMOKE DETECTOR
	STATIC PRESSURE SENSOR
	CARBON MONOXIDE DETECTOR
	CARBON DIOXIDE DETECTOR
	A - EQUIPMENT TYPE B - FLOOR/LOCATION C - EQUIPMENT DESIGNATION

## ABBREVIATIONS

A/AMP	AMPERE	EQ	EQUAL	PD	PRESSURE DROP
ACCU	AIR COOLED CONDENSING UNIT	(ER)	EXISTING TO BE RELOCATED	PSIG	PSI GAUGE
AD	ACCESS DOOR	EWB	ENTERING WET BULB	(R)	RELOCATED
AHU	AIR HANDLING UNIT	'F	DEGREES FAHRENHEIT	RA	RETURN AIR
BTU	BRITISH THERMAL UNIT	FA	FREE AREA (SQ. FT.)	REF	REFRIGERANT
BTUH	BTU PER HOUR	FC	FLEXIBLE CONNECTION	RG	RETURN GRILLE
CAD	CONDENSER AIR DISCHARGE	FD	FIRE DAMPER	RL	REFRIGERANT LIQUID
CAI	CONDENSER AIR INTAKE	FT	FEET	RLA	RUNNING LOAD AMPS
CD	CEILING DIFFUSER	HD	HEAD	RS	REFRIGERANT SUCTION
CFM	CUBIC FEET PER MINUTE	HR	HOUR	RM	ROOM
CG	CEILING GRILLE	HT	HEIGHT	SA	SUPPLY AIR
CLG	CEILING	IN	INCH OR INCHES	SP	STATIC PRESSURE
COD	CABLE OPERATED DAMPER	KW	KILOWATT	SPEC	SPECIFICATION
COND	CONDENSATE	LAT	LEAVING AIR TEMPERATURE	TEMP	TEMPERATURE
CP	CONDENSATE PUMP	LBS	POUNDS	TD	TRANSFER DUCT
CR	CEILING REGISTER	LD	LINEAR DIFFUSER	TG	TRANSFER GRILLE
CU FT	CUBIC FEET	LDB	LEAVING DRY BULB TEMPERATURE	TV	TURNING VANES
DB	DRY BULB	MBH	THOUSAND BTU PER HOUR	TYP	TYPICAL
(DE)	EXISTING TO BE REMOVED	MIN	MINIMUM	V	VOLTS
DIAM	DIAMETER	NFA	NET FREE AREA (SQ. FT.)	W	WIDTH
DWG	DRAWING	NO.	NUMBER	W/	WITH
(E)	EXISTING TO REMAIN	NTS	NOT TO SCALE	W/O	WITHOUT
EXH	EXHAUST AIR	OA	OUTSIDE AIR	WB	WET BULB
EAT	ENTERING AIR TEMPERATURE	OAI	OUTSIDE AIR INTAKE	WMS	WIRE MESH SCREEN
EDB	ENTERING DRY BULB TEMPERATURE	P	PUMP		
ELEC	ELECTRIC	PC	PUMPED CONDENSATE		

## HEATING/COOLING LOAD CALCULATION AND EQUIPMENT SIZING NOTE:

ALL THE MECHANICAL EQUIPMENT SPECIFIED IN THIS DRAWING SET HAS BEEN DESIGNED TO SUFFICIENTLY HEAT AND COOL THE OCCUPABLE AREAS OF THE BUILDING. REQUIRED HEATING AND COOLING DEMANDS HAVE BEEN CALCULATED IN ACCORDANCE WITH ASHRAE/ACCA 183, AND TAKE INTO ACCOUNT ALL BUILDING ENVELOPE, LIGHTING, VENTILATION & OCCUPANCY LOADS BASED ON THE PROJECT DESIGN. EQUIPMENT SELECTIONS WERE MADE TO MEET THE SYSTEM PEAK LOADS (HEATING OR COOLING).

## SCOPE OF WORK

MECHANICAL MODIFICATIONS TO INCLUDE HVAC REPLACEMENT AND REPLACEMENT OF ASSOCIATED DUCTWORK. NO CHANGE OF USE, OCCUPANCY OR EGRESS UNDER THIS APPLICATION.

## ENERGY COMPLIANCE STATEMENT

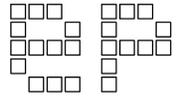
THE PROPOSED MECHANICAL DESIGN REPRESENTED IN THIS DOCUMENT IS CONSISTENT WITH THE BUILDING PLANS, SPECIFICATIONS AND OTHER CALCULATIONS SUBMITTED WITH THIS PERMIT APPLICATION. THE PROPOSED MECHANICAL SYSTEMS HAVE BEEN DESIGNED TO MEET THE 2020 ECCCNS AND TO COMPLY WITH THE MANDATORY REQUIREMENTS SET FORTH.

EP ENGINEERING SHALL NOT HAVE CONTROL OVER, CHARGE OF, OR RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, NOR SHALL THE CONSULTANT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. EP ENGINEERING HAS NO DUTY TO SPECIFY IN ITS DESIGN COVID 19 MEASURES, AND NO DUTY TO INVESTIGATE, OBSERVE, MONITOR OR REPORT ANY FAILURE OF ANY CONTRACTOR OR OTHER THIRD PARTY TO FOLLOW ALL COVID 19 GUIDELINES OR REQUIREMENTS ASSOCIATED WITH THE PROJECT.

## DRAWING LIST

- M-100.00 MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS
- M-302.00 MECHANICAL CONSTRUCTION PLAN - 2ND FLOOR
- M-800.00 MECHANICAL SPECIFICATIONS (1 OF 3)
- M-801.00 MECHANICAL SPECIFICATIONS (2 OF 3)
- M-802.00 MECHANICAL SPECIFICATIONS (3 OF 3)

## FIRE HOUSE



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212.257.6190 TEL  
212.994.8091 FAX  
110 WILLIAM STREET  
32ND FL  
NEW YORK, NY 10038  
www.EPENGINEERING.com

### ISSUES:

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**ESSEX COUNTY FARMWORKER HOUSING RENOVATION**  
Firehouse  
6513 MAIN STREET  
Westport NY 12993

M-100.00

MECHANICAL SYMBOLS, NOTES & ABBREVIATIONS

SEAL / SIGNATURE:

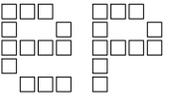


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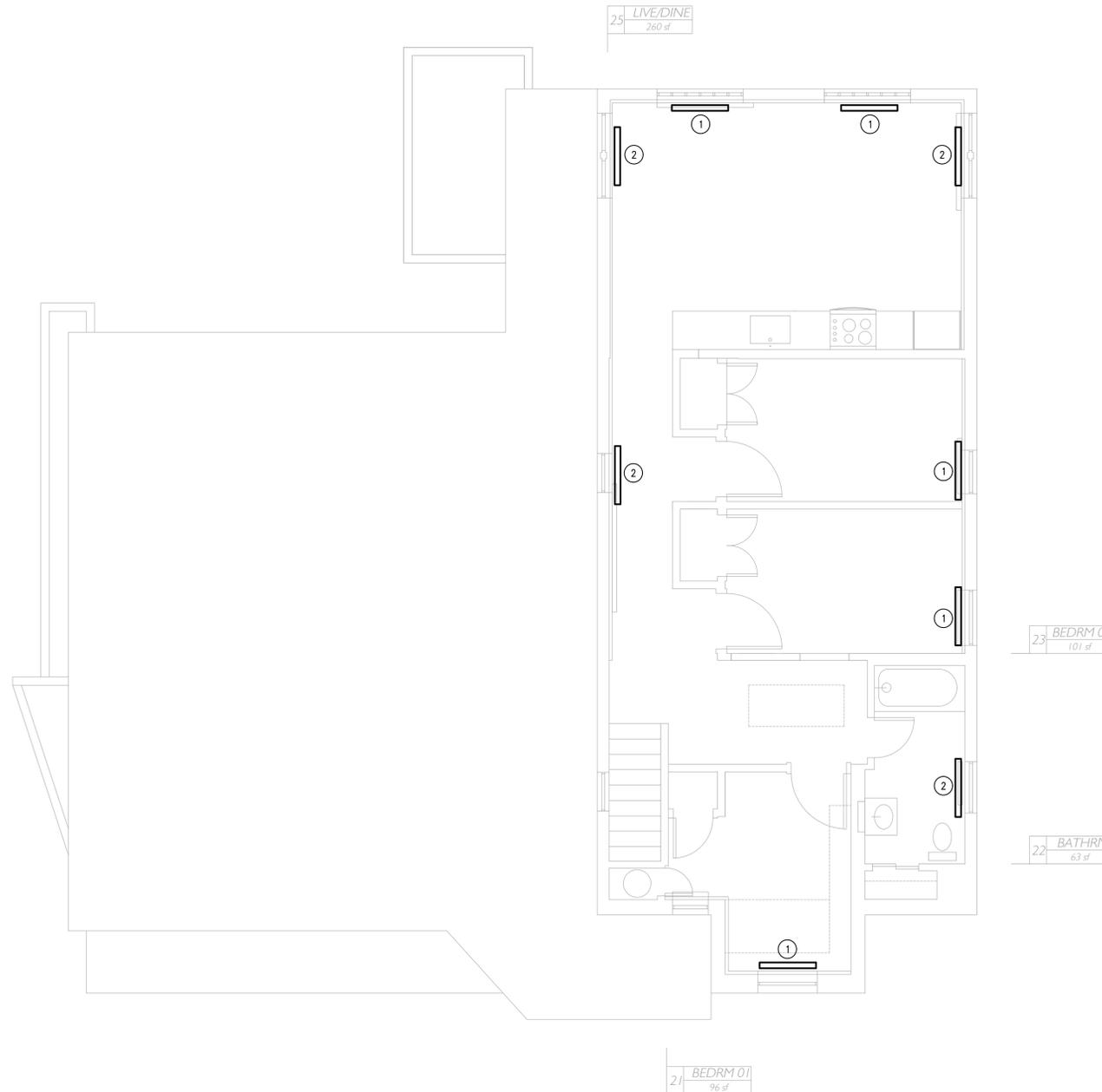
212.257.6190 TEL  
212.994.8091 FAX  
110 WILLIAM STREET  
32ND FL  
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**PLAN NOTES**

1. GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL HVAC/MECHANICAL DRAWINGS.
2. DRAWINGS ARE DIAGRAMMATIC. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD. RELOCATE EXISTING WORK THAT INTERFERES WITH WORK OF THIS CONTRACT.
3. COORDINATE THIS WORK WITH THAT OF OTHER TRADES.
4. NEITHER ACCURACY NOR COMPLETION OF SERVICES AND UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING SERVICES AND UTILITIES IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
5. MANUFACTURERS MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
6. PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS RECOMMENDATIONS.
7. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
8. SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH EXISTING OPERATIONS IN THE FACILITY.

**KEY NOTES**

- 1 PROVIDE 2 kW BASEBOARD HEATER SIMILAR TO INDEECO 00200C. PROVIDE INTEGRAL THERMOSTAT AND DISCONNECT SWITCH.
- 2 PROVIDE 1.5 KW BASEBOARD HEATER SIMILAR TO INDEECO 00100C. PROVIDE INTEGRAL THERMOSTAT AND DISCONNECT SWITCH.



**MECHANICAL CONSTRUCTION PLAN - 2ND FLOOR**  
1 SCALE: 1/4"=1'-0"

**ISSUES:**

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**ESSEX COUNTY FARMWORKER HOUSING RENOVATION**

Firehouse  
6513 MAIN STREET  
Westport NY 12993

M-302.00

MECHANICAL CONSTRUCTION PLAN - 2ND FLOOR

SEAL / SIGNATURE:



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THE SCALE OF THIS DRAWING IS CORRECT WHEN PRINTED ON 24x36 SIZE PAPER. ALL OTHER PAPER SIZES WILL NOT SHOW THE CORRECT SCALE.

1. GENERAL

- A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.
- B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
- C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED INCLUDING HALLWAYS, DOOR WIDTHS, ELEVATOR DIMENSIONS, ETC. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH AVAILABLE RESTRICTIVE SPACES. ASCERTAIN FROM BUILDING OWNER AT WHAT TIMES OF DAY EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
- D. DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF ARCHITECT. COORDINATION WITH THE EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES IS REQUIRED.
- E. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE NECESSARY, CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. SINGLE ROD SHALL BE SIMILAR TO GRINDING FILE, #21. MULTI-ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.
- F. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COSTS SHALL NOT BE MADE WITHOUT APPROVAL.
- G. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES IN MAKING UP THE WORK PROPOSAL.
- H. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO ENSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.
- I. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT.
- J. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
- K. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
- L. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL.
- M. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDENS. AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.
- N. ALL PRESENT MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT, WITH THE EXCEPTION OF SPECIFIC EQUIPMENT AND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT AS OR NOTED TO BE RELOCATED ON THE DRAWINGS. SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.
- O. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- P. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
- Q. THE CONTRACTOR'S PROPOSAL FOR ALL WORK

- R. UNLESS OTHERWISE SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.
- S. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- T. SUBMISSION OF A PROPOSAL SHALL BE CONSIDERED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC. WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH SHOULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON-SITE INSPECTION SHALL VERIFY EXISTING DUCTWORK, PIPING (SIZES, CLEARANCES, ETC.) AND CONDITIONS.
- U. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
- V. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.
- W. GUARANTEE:
  - i. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THIS WORK. FINAL ACCEPTANCE SHALL BE DEFINED AS THE TIME AT WHICH THE MECHANICAL WORK IS TAKEN OVER AND ACCEPTED BY THE OWNER, AND IS UNDER CARE, CUSTODY, AND CONTROL OF THE OWNER. ENGAGE THE SERVICES OF VARIOUS MANUFACTURERS SUPPLYING THE EQUIPMENT FOR THE PROPER STARTUP AND OPERATION OF ALL SYSTEMS INSTALLED. INSTRUCT THE OWNERS PERSONNEL IN THE PROPER OPERATION AND SERVICING OF THE SYSTEM.
  - ii. THE CONTRACTOR SHALL GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL INCLUDE RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THIS CONTRACTOR.
  - iii. THIS CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND OPERATION OF ALL SYSTEMS UNTIL THE FINAL ACCEPTANCE OF THE WORK.
  - iv. ALL AIR CONDITIONING UNIT COMPRESSORS AND REFRIGERATION COMPONENTS SHALL HAVE A 5-YEAR WARRANTY.
  - X. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES, WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.
- Y. DEFINITIONS:
  - i. "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
  - ii. "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
  - iii. "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
  - iv. "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
  - v. "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.
  - vi. "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
  - vii. "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

2. SCOPE OF WORK

- A. THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
- B. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK, AND BE RESPONSIBLE THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.
- C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OF ACCEPTANCE OF THIS WORK. UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO COVER THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.
- D. PERMITS AND FEES
  - i. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK, AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TEST OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.
  - ii. THIS CONTRACTOR SHALL PREPARE OR HIRE THE NECESSARY CONSULTANTS TO PREPARE AND FILE ALL PLANS, CALCULATION, FORMS, ETC. REQUIRED FOR FILING WITH ALL AGENCIES REQUIRED FOR THIS WORK INCLUDING BUT NOT LIMITED TO: DEP. OF DEPARTMENT OF ENVIRONMENTAL PROTECTION, DEC (DEPARTMENT OF ENVIRONMENTAL CONSERVATION), BUREAU OF AIR RESOURCES, EPA (ENVIRONMENTAL PROTECTION AGENCY), FDNY, ETC.
- E. INSPECTIONS & TESTING / SPECIAL INSPECTIONS
  - i. THIRD PARTY INSPECTION AGENCY SHALL BE HIRED BY THE OWNER TO PERFORM ALL INSPECTIONS REQUIRED BY ALL LOCAL CODES.
  - F. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, DUCTWORK, PIPING AND CONTROL SYSTEMS INDICATING CAPACITY DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.
  - G. WITHIN 15 DAYS AFTER AWARD OF CONTRACT, SUBMIT FOR REVIEW, A LIST OF ALL MATERIAL AND EQUIPMENT MANUFACTURER'S PRODUCTS THAT ARE TO BE USED, AS WELL AS NAMES OF ALL SUBCONTRACTORS WHOM THIS TRADE PROPOSES TO UTILIZE ON THIS PROJECT.

3. SHOP DRAWINGS

- A. INDICATE ON EACH SUBMISSION: PROJECT NAME AND LOCATION, ARCHITECT AND ENGINEER, ITEM IDENTIFICATION AND APPROVAL STAMP OF PRIME CONTRACTOR, SUBCONTRACTOR NAMES AND PHONE NUMBERS, REFERENCE TO THE APPLICABLE DESIGN DRAWING OR SPECIFICATION ARTICLE, DATE AND SCALE.
- B. THE WORK DESCRIBED IN ALL SHOP DRAWING SUBMISSION SHALL BE CAREFULLY CHECKED FOR ALL CLEARANCES (INCLUDING THOSE REQUIRED FOR MAINTENANCE AND SERVICING), FIELD CONDITIONS, MAINTENANCE OF ARCHITECTURAL CONDITIONS AND PROPER COORDINATION WITH ALL TRADES ON THE JOB.
- C. EACH SUBMITTED SHOP DRAWING IS TO INCLUDE A CERTIFICATION THAT ALL RELATED JOB CONDITIONS HAVE BEEN CHECKED AND VERIFIED AND THAT THERE ARE NO CONFLICTS.
- D. ALL SHOP DRAWINGS ARE TO BE SUBMITTED TO ALLOW 5 BUSINESS DAYS FOR CHECKING IN ADVANCE OF FIELD REQUIREMENTS. ALL SUBMITTALS TO BE COMPLETE AND CONTAIN ALL REQUIRED AND DETAILED INFORMATION. SHOP DRAWINGS WITH MULTIPLE PARTS SHALL BE SUBMITTED AS A PACKAGE.
- E. IF SUBMITTALS DIFFER FROM THE CONTRACT DOCUMENT REQUIREMENTS, MAKE SPECIFIC MENTION OF SUCH DIFFERENCES IN A LETTER OF TRANSMITTAL WITH REASONS FOR SUBSTITUTION, TOGETHER WITH REASONS FOR SAME.
- F. ELECTRONIC COPIES OF ENGINEERING DRAWINGS:
  - i. IF THE CONTRACTOR REQUIRES (.DWG) FORMAT, THE DRAWINGS WILL BE FORWARDED ONLY UPON RECEIPT OF SIGNED ACCEPTANCE OF THE DRAWING PERMISSION FROM THE ARCHITECT MUST

4. AS-BUILTS AND EQUIPMENT OPERATION INSTRUCTIONS

- A. PROVIDE ALL COORDINATION DRAWINGS, DUCTWORK AND PIPING AS-BUILTS IN AUTOCAD 2013 AND PDF FORMAT. ALL CATALOG CUTS AND SUBMITTALS TO BE PROVIDED IN ELECTRONIC PDF FORMAT. THE ARCHITECT WILL FORWARD ALL SUBMISSIONS TO THE ENGINEER.
- B. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS, EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.
- C. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2" INCH X 11" IN FORMAT. THE CONTRACTOR SHALL GIVE ONE COPY OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.
- D. THE INSTRUCTIONS SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE CONTENTS OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER, MECHANICAL CONTRACTOR AND SUBCONTRACTORS.
- E. FINAL AS-BUILT DRAWINGS INDICATING AS INSTALLED CONDITIONS SHALL BE PROVIDED TO THE ARCHITECT AND ENGINEER AFTER COMPLETION OF THE INSTALLATION.
- F. SUBSTITUTIONS
  - A. NO SUBSTITUTE MATERIAL OR MANUFACTURER OF EQUIPMENT SHALL BE PERMITTED WITHOUT A FORMAL WRITTEN SUBMITTAL TO THE ENGINEER WHICH INCLUDES ALL DIMENSIONAL, PERFORMANCE AND MATERIAL SPECIFICATIONS, ANY CHANGES IN LAYOUT, ELECTRICAL CHARACTERISTICS, STRUCTURAL REQUIREMENTS

5. SUBSTITUTIONS

- A. NO SUBSTITUTE MATERIAL OR MANUFACTURER OF EQUIPMENT SHALL BE PERMITTED WITHOUT A FORMAL WRITTEN SUBMITTAL TO THE ENGINEER WHICH INCLUDES ALL DIMENSIONAL, PERFORMANCE AND MATERIAL SPECIFICATIONS, ANY CHANGES IN LAYOUT, ELECTRICAL CHARACTERISTICS, STRUCTURAL REQUIREMENTS
- B. ALL SUBSTITUTED EQUIPMENT SHALL CONFORM TO SPACE REQUIREMENTS AND PERFORMANCE REQUIREMENTS SHOWN ON CONTRACT DOCUMENTS. CONTRACTOR SHALL REPLACE ANY EQUIPMENT THAT DOES NOT MEET THESE REQUIREMENTS AT HIS OWN EXPENSE. ANY MODIFICATIONS TO ASSOCIATED SYSTEMS OR ADJUSTMENTS TO EQUIPMENT TO THIS SUBSTITUTION SHALL BE AT THIS CONTRACTOR'S EXPENSE.
- C. CONTRACTOR SHALL SUBMIT BID BASED ON SPECIFIED ITEMS AND SHALL SUPPLY AS AN ALTERNATE PRICE ANY SUBSTITUTIONS.
- D. THIS CONTRACTOR SHALL PROVIDE AS AN ADD ALTERNATE PRICE, A FULL ONE YEAR SERVICE OF ALL MECHANICAL COMPONENTS AND SYSTEMS, WITH PRICES FOR YEARS 2, 3 AND 4 FOLLOWING THIS FIRST YEAR. AT THE TIME OF ACCEPTANCE OF PROJECT, THE TENANT OR OWNER'S REPRESENTATIVE WILL DECIDE TO ACCEPT WHICH ALTERNATE, IF ANY. THIS IS IN ADDITION TO THE WARRANTY BEING PROVIDED AS PART OF THE BASE CONTRACT.
- E. ACCESS DOORS IN GENERAL CONSTRUCTION
  - A. THIS CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR APPROVAL A PLAN INDICATING THE SIZE (MINIMUM 18 INCH X 18 INCH) AND LOCATION OF ALL ACCESS DOORS REQUIRED FOR OPERATION AND MAINTENANCE OF ALL CONCEALED EQUIPMENT, DEVICES, VALVES, DAMPERS AND CONTROLS. CONTRACTOR SHALL ARRANGE FOR FURNISHING AND INSTALLATION OF ALL ACCESS DOORS IN FINISHED CONSTRUCTION AND INCLUDE COSTS IN THE BID.
  - B. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL EQUIPMENT, DAMPERS, VALVES, ETC. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION, PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
- F. SHEET METAL WORK
  - A. DUCT CONSTRUCTION, INCLUDING SEET METAL THICKNESSES, SEAM AND JOINT CONSTRUCTION, REINFORCEMENTS, HANGERS AND SUPPORTS, SHALL COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" LATEST EDITION AND PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.
  - B. EXCEPT AS OTHERWISE SHOWN OR NOTED, ALL DUCTWORK AND OTHER SEET METAL WORK SHALL BE GALVANIZED SHEET STEEL.
  - C. DESCRIPTION OF DUCTWORK PRESSURE CLASS AND EQUIPMENT:
    - i. 2 INCH DUCT CLASS AND LESS: ALL OTHER LOW PRESSURE DUCTWORK. SEAL CLASS C, LEAKAGE CLASS 24 (RECTANGULAR) OR CLASS 12 (ROUND).
    - ii. 3 INCH DUCT CLASS: ALL SUCTION AND DISCHARGE OF KITCHEN EXHAUST AND OTHER EXHAUST DUCTWORK. SEAL CLASS B, LEAKAGE CLASS 12 (RECTANGULAR METAL OR CLASS 6 (ROUND)).
    - iii. 4 INCH AND GREATER DUCT CLASS: ALL SUPPLY/RETURN DUCTWORK FROM DISCHARGE/INTAKE OF FANS, AIR HANDLING UNITS OR AC UNITS TO INLET/OUTLET OF TERMINAL BOXES ON FLOOR, ALL OUTDOOR DUCTWORK AND ALL DUCTWORK RUNNING THROUGH UNCONDITIONED SPACES. SEAL CLASS A, LEAKAGE CLASS 6 (RECTANGULAR METAL) OR CLASS 3 (ROUND).
  - D. GENERAL FABRICATION REQUIREMENTS: COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE", LATEST EDITION, BASED ON THE FOLLOWING STATIC-PRESSURE CLASS UNLESS OTHERWISE INDICATED.
    - i. THE FOLLOWING FITTING CONNECTIONS AND DUCT CONSTRUCTION GAUGES ARE NOT ACCEPTABLE.
      - a) DRIVE SLIP [T-1, T-2] FITTING CONNECTIONS
      - b) 26 GAUGE DUCTWORK.
    - ii. TRANSVERSE JOINTS: SELECT JOINT TYPES AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE", TRANSVERSE (GIRTH) JOINTS" FOR STATIC-PRESSURE CLASS, APPLICABLE SEALING REQUIREMENTS, MATERIALS INVOLVED, DUCT-SUPPORT INTERVALS, AND OTHER PROVISIONS IN SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE." FITTINGS AND/OR JOINTS OF TWO DIFFERENT GAUGES, CONNECTED JOINT RATING SHALL MEET MORE STRINGENT CONDITIONS.

6. SERVICE AND WARRANTY (MAINTENANCE CONTRACT)

- A. THIS CONTRACTOR SHALL PROVIDE AS AN ADD ALTERNATE PRICE, A FULL ONE YEAR SERVICE OF ALL MECHANICAL COMPONENTS AND SYSTEMS, WITH PRICES FOR YEARS 2, 3 AND 4 FOLLOWING THIS FIRST YEAR. AT THE TIME OF ACCEPTANCE OF PROJECT, THE TENANT OR OWNER'S REPRESENTATIVE WILL DECIDE TO ACCEPT WHICH ALTERNATE, IF ANY. THIS IS IN ADDITION TO THE WARRANTY BEING PROVIDED AS PART OF THE BASE CONTRACT.
- B. ACCESS DOORS IN GENERAL CONSTRUCTION
  - A. THIS CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR APPROVAL A PLAN INDICATING THE SIZE (MINIMUM 18 INCH X 18 INCH) AND LOCATION OF ALL ACCESS DOORS REQUIRED FOR OPERATION AND MAINTENANCE OF ALL CONCEALED EQUIPMENT, DEVICES, VALVES, DAMPERS AND CONTROLS. CONTRACTOR SHALL ARRANGE FOR FURNISHING AND INSTALLATION OF ALL ACCESS DOORS IN FINISHED CONSTRUCTION AND INCLUDE COSTS IN THE BID.
  - B. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL EQUIPMENT, DAMPERS, VALVES, ETC. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION, PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
- C. FLEXIBLE DUCTWORK SHALL NOT BE USED ON THIS PROJECT.
- D. ACCESS DOORS: INSULATED OR UNINSULATED, SAME AS DUCT.
  - i. PROVIDE MINIMUM 20 INCH X 14 INCH ON MAIN DUCTS, AND 12 INCH X 6 INCH ON BRANCH DUCTS, UNLESS OTHERWISE APPROVED, AT FIRE DAMPERS, AND AT ALL DUCT ACCESSORIES SUCH AS HUMIDIFIERS, DUCT SMOKE DETECTORS, AUTO DAMPERS, AND LOUVERS.
  - ii. ALL ACCESS DOORS TO BE HINGED, WITH LATCH SIMILAR TO VENTLOCK NO. 100.
- E. FLEXIBLE CONNECTIONS: NEOPRENE-COATED GLASS FABRIC, 30 OZ PER SQUARE YD WITH SEWED AND CEMENTED SEAMS, SIMILAR TO VENT FABRICS. PROVIDE WITH METAL COLLARS. ALLOW MINIMUM MOVEMENT OF 1 INCH.
- F. TURNING VANES: GALVANIZED STEEL SMALL DOUBLE-THICKNESS VANES WITH 2 INCH INSIDE RADIUS.
- G. FIRE DAMPERS: DYNAMIC, RATED AND LABELED ACCORDING TO UL 555 BY AN NRTL GALVANIZED STEEL CONSTRUCTION, CURTAIN TYPE WITH BLADES OUT OF THE AIRSTREAM (TYPE B) SPRING LOADED, EQUIPPED WITH FUSIBLE LINK, CONFORMING TO NFPA STANDARD 90A AND APPROVED BY NEW YORK CITY, SIMILAR TO POTOORFF OR RUSKIN. RATED AS REQUIRED. PROVIDE FIRE DAMPERS AS NOTED ON THE PLANS AND IN THE WALLS, FIRE-RESISTANCE PARTITIONS, FIRE RATED CEILINGS, EXIT CORRIDOR WALLS. PROVIDE ACCESS DOOR IN DUCT ADJACENT TO EACH FIRE DAMPER. SEE INSTALLATION ON DRAWING.
- H. COMBINATION FIRE/SMOKE DAMPERS:
  - i. COMBINATION FIRE/SMOKE DAMPERS SHALL BE INSTALLED AS INDICATED ON DRAWING AND AS REQUIRED BY LOCAL CODES. DAMPERS TO BE UL 555S LATEST EDITION LISTED AND LABELED AND IN CONFORMANCE WITH NFPA.
  - ii. COMBINATION FIRE/SMOKE DAMPERS SHALL BE CLASS 1 (ONE), DUAL OVERRIDE REMOTE RESETTABLE, OPPOSED MULTIBLADE TYPE WITH FIRESTAT OR EQUIVALENT HEAT RESPONSIVE DEVICE, 120-VOLT ACTUATOR AS REQUIRED, MOUNTED OUT OF THE AIR STREAM, WITH DAMPER OPERATOR AND BLADE POSITION INDICATOR SWITCHES. PROVIDE MOTOR MOUNT BRACKET FOR STRENGTHENING FOR DAMPERS OVER 10 INCH IN HEIGHT. PROVIDE A 10 GAUGE WELDED VERTICAL STIFFENER AT EACH CORNER TO PREVENT DAMPER MISALIGNMENT.
  - iii. PROVIDE ACCESS DOOR IN DUCT ADJACENT TO EACH FIRE/SMOKE DAMPER.
  - iv. PROVIDE FIRE/SMOKE DAMPERS AS NOTED ON THE PLANS AND IN DUCTS AND OPENINGS IN SHAFTS, FLOORS, FIRE WALLS, FIRE-RESISTANCE PARTITIONS, FIRE RATED CEILINGS AND SMOKE BARRIERS.
  - v. THE HVAC CONTRACTOR SHALL PROVIDE ACCESS DOORS, RELAYS, END SWITCHES, E/P SWITCHES, CONTROL COMPONENTS, AIR PIPING, POWER WIRING, CONTROL WIRING AND INTERLOCK WIRING AS REQUIRED TO ACCOMPLISH THE SEQUENCE OF

7. AIR OUTLETS

- A. GENERAL:
  - i. MARGIN TYPES, COLORS, FINISH AND METHODS OF ATTACHMENT FOR ALL DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH ARCHITECTURAL CEILING AND WALL DETAILS AND SPECIFICATIONS. FINISH SHALL MATCH COLOR SAMPLE AS APPROVED.
  - ii. FRAME TYPE SUITABLE FOR MOUNTING IN CEILING OR WALL CONSTRUCTION AS INDICATED ON ARCHITECTURAL PLANS.
  - iii. EXACT LOCATION OF ALL AIR OUTLETS AS PER ARCHITECTURAL PLANS.
  - iv. PROVIDE MOUNTING AND BLOCKING
  - v. SUITABLE FOR OPERATION AT 20% EXCESS AND 20% LESS THAN NOTED CAPACITY FOR CONSTANT VOLUME SYSTEMS AND AT 20% EXCESS AND 60% LESS THAN NOTED CAPACITY FOR VARIABLE VOLUME SYSTEMS.
  - vi. MANUFACTURER RESPONSIBLE FOR EXAMINATION OF EACH OUTLET AND GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING RANGE.
  - vii. ALL REGISTERS SHALL BE PROVIDED WITH OPPOSED BLADE VOLUME DAMPERS. DAMPER OPERATING LEVERS SHALL BE LOCATED ON THE FACE OF AIR OUTLETS. CEILING DIFFUSERS SHALL NOT HAVE BUTTERFLY DAMPERS WITHIN NECK.
  - viii. MANUFACTURER RESPONSIBLE FOR EXAMINATION OF EACH OUTLET AND GUARANTEE THAT EACH WILL PROVIDE REQUIRED NC LEVELS AND COMFORT SPACE CONDITIONS WITHOUT DRAFTS THROUGHOUT OPERATING RANGE.
  - viii. ALL REGISTERS SHALL BE PROVIDED WITH OPPOSED BLADE VOLUME DAMPERS. DAMPER OPERATING LEVERS SHALL BE LOCATED ON THE FACE OF AIR OUTLETS. CEILING DIFFUSERS SHALL NOT HAVE BUTTERFLY DAMPERS WITHIN NECK.
- B. TESTING AND BALANCING
  - A. ALL AIR AND WATER BALANCING SHALL BE BY AN INDEPENDENT CONTRACTOR NOT AFFILIATED WITH THE MECHANICAL CONTRACTOR AND IN ACCORDANCE WITH LOCAL STANDARDS. CONTRACTOR SHALL UTILIZE BASE BUILDING BALANCING CONTRACTOR OR APPROVED EQUAL CONTACT BUILDING MANAGEMENT.
  - B. CONTRACTOR TO BALANCE ENTIRE SYSTEM TO AIR AND/OR WATER QUANTITIES AS SHOWN ON ALL RELATED DRAWINGS FOR THIS JOB, AND AS DESCRIBED HEREIN. BALANCING MUST BE DONE IN THE PRESENCE OF A BUILDING ENGINEER.
  - C. AIR BALANCING SHALL BE ACCOMPLISHED BY THE EXAMINATION OF EACH BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. AIR SUPPLY OUTLETS TO BE BALANCED TO A UNIFORM SUPPLY ACROSS ENTIRE FACE. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY.
  - D. WATER BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF BALANCING VALVES AT PUMPS FOR PROPER FLOW. ADJUST FLOW

8. REGISTER AND GRILLES

- A. ALL ROOM NC LEVELS SHALL BE 35 OR LESS.
- B. PROVIDE SOUNDLINING FOR THE FOLLOWING DUCTWORK:
  - i. ALL DUCTWORK WITH MECHANICAL ROOMS AND NOT LESS THAN 25 FEET ON EACH SIDE OF ALL FANS AND AC UNITS.
  - ii. ALL AIR TRANSFER AND JUMPER DUCTS.
  - iii. RETURN AIR STUB DUCTS AT MER WALLS AND SHAFT INTAKE OPENINGS FOR FULL LENGTH.
  - iv. DOWNSTREAM OF ALL TERMINAL BOXES (cv, vav) FOR A MINIMUM OF 15 FEET).
  - v. ALL MIXED AIR PLENUMS, EXCEPT WHERE MOISTURE CARRYOVER FROM OUTDOOR AIR LOUVER WILL OCCUR.
  - vi. EXPOSED SUPPLY DUCTWORK SHALL BE ACOUSTICALLY LINED IN LIEU OF EXTERNAL INSULATION.
  - vii. ALSO WHERE NOTED ON A DRAWING.
- C. SOUNDLINING IN DUCTWORK: FIBROUS GLASS, MINIMUM 1 LB DENSITY, 1-1/2" THICKNESS, MAXIMUM DEFLECTION FACTOR AT 75°F MEAN TEMPERATURE WITH ACRYLIC COATED FINISH FACTORY APPLIED EDGE COATING AND STENCILED IN ACCORDANCE WITH NFPA 90A AND NFPA 99. MINIMUM DEFLECTION FACTOR AT 25. LINING SHALL NOT SUPPORT MICROBIAL GROWTH AND SHALL BE TESTED IN ACCORDANCE WITH ASTM C 1071 AND ASTM G21/G22. SIMILAR TO MANVILLE PERMACOTE LINACOUSTIC.
- D. ALL SOUNDLINING, ADHESIVES, FACES AND ACCESSORIES TO BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, EXCEPT AS OTHERWISE NOTED.
- E. TESTING AND BALANCING
  - A. ALL AIR AND WATER BALANCING SHALL BE BY AN INDEPENDENT CONTRACTOR NOT AFFILIATED WITH THE MECHANICAL CONTRACTOR AND IN ACCORDANCE WITH LOCAL STANDARDS. CONTRACTOR SHALL UTILIZE BASE BUILDING BALANCING CONTRACTOR OR APPROVED EQUAL CONTACT BUILDING MANAGEMENT.
  - B. CONTRACTOR TO BALANCE ENTIRE SYSTEM TO AIR AND/OR WATER QUANTITIES AS SHOWN ON ALL RELATED DRAWINGS FOR THIS JOB, AND AS DESCRIBED HEREIN. BALANCING MUST BE DONE IN THE PRESENCE OF A BUILDING ENGINEER.
  - C. AIR BALANCING SHALL BE ACCOMPLISHED BY THE EXAMINATION OF EACH BRANCH DAMPERS FOR MAJOR ADJUSTMENTS. AIR SUPPLY OUTLETS TO BE BALANCED TO A UNIFORM SUPPLY ACROSS ENTIRE FACE. ADJUSTMENT OF TERMINAL DAMPERS AND DEVICES SHALL BE FOR TRIM OR MINOR ADJUSTMENT ONLY. THIS SHALL BE DONE TO PERMIT THE LEAST NOISE GENERATION IN THE TERMINAL AREAS AND UTILIZE MINIMUM FAN ENERGY.
  - D. WATER BALANCING SHALL BE ACCOMPLISHED BY ADJUSTMENT OF BALANCING VALVES AT PUMPS FOR PROPER FLOW. ADJUST FLOW

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MECHANICAL SPECIFICATIONS (1 OF 3)

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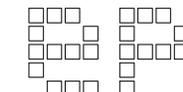


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THROUGH COILS AS REQUIRED.

E. UPON COMPLETION OF THE INSTALLATION, THE CONTRACTOR SHALL REBALANCE ANY EXISTING PORTIONS OF AIR DISTRIBUTION SYSTEM AND WATER DISTRIBUTION SYSTEM AFFECTED BY THE RENOVATION AND ALSO BALANCE ALL NEW WORK.

F. IF DISCREPANCIES EXIST IN THE REPORT THAT REQUIRE FIELD VERIFICATION, THE TESTING AND BALANCING COMPANY IN THE PRESENCE OF THE ENGINEER SHALL VISIT THE JOBSITE FOR FIELD VERIFICATION OF THE REPORT.

G. THE CONTRACTOR SHALL PROVIDE ALL LABOR, PRESSURE GAUGES, FLOW METERS, SHEAVES, AND BELTS REQUIRED TO BALANCE SYSTEMS.

H. BALANCING REPORT SHALL BE PROVIDED ON NEBB OR AABC-TYPE FORMS.

I. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY A CERTIFIED NEBB OR AABC TECHNICIAN.

J. BALANCING AND TESTING SHALL BE PERFORMED AND SUPERVISED BY ONE OF THE FOLLOWING INDEPENDENT FIRMS SPECIALIZING IN TESTING AND BALANCING:

- i. INTERNATIONAL TESTING AND BALANCING
ii. INDEPENDENT TESTING & BALANCING
iii. MERENDINO ASSOCIATES.

K. THE PERFORMANCE AND CAPACITY OF ALL SYSTEMS AND EQUIPMENT TO BE DEMONSTRATED BY THE CONTRACTOR.

L. AFTER SUBMISSION OF THE FIELD VERIFIED BALANCING REPORT, THE AIR BALANCING COMPANY SHALL RETURN TO THE JOB SITE TO PERFORM TWO (2) OCCUPANT COMFORT BALANCES AS DIRECTED BY THE OWNER OR ENGINEER.

M. THE FINAL REPORT AFTER THE COMFORT BALANCE IS TO BE INCLUDED IN PROJECT OPERATING AND MAINTENANCE MANUAL TO OWNER AND ENGINEER.

N. THE TESTING AND BALANCING AGENCY SHALL INCLUDE AS PART OF THEIR WORK AN EXTENDED WARRANTY OF 90 DAYS AFTER COMPLETION OF TEST AND BALANCE WORK. THE ENGINEER AT HIS DISCRETION DURING THE WARRANTY PERIOD MAY REQUEST A RECHECK, OR RESETTING OF ANY EQUIPMENT. THE MECHANICAL CONTRACTOR AND THE BALANCING CONTRACTOR SHALL PROVIDE THE NECESSARY FACILITIES TO FACILITATE THIS WORK.

O. BALANCING AGENCY SHALL PERMANENTLY MARK ALL ADJUSTMENT DEVICES (VALVES, DAMPERS, ETC.) TO ENABLE THE SETTING TO BE RESTORED.

P. AIR BALANCING:

i. PRE-CONSTRUCTION AIR TESTING: MEASURE PRESSURE, TEMPERATURE, AND VOLUME OF AIR FROM EXISTING BASE BUILDING SYSTEM BEFORE STARTING WORK. TRAVERSE MAIN SUPPLY AND RETURN DUCTS BEFORE WORK TO OBTAIN TOTAL FLOW. SUBMIT REPORT TO ENGINEER IMMEDIATELY AFTER COMPLETION OF TEST.

ii. HVAC CONTRACTOR SHALL ENSURE THAT A FIRST SET OF AIR FILTERS ARE IN PLACE, WHENEVER FANS ARE RUNNING AND REPLACED WITH A NEW CLEAN SET OF FILTERS BEFORE TESTING IS COMMENCED.

iii. TEST, ADJUST, REPLACE SHEAVES, AND BALANCE ALL EQUIPMENT AND AIR DISTRIBUTION SYSTEMS TO PROVIDE AIR QUANTITIES INDICATED ON PLANS WITH PLUS OR MINUS 5 PERCENT.

iv. TEST REPORT SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

- a) FLOW, LEAKAGE CLASS, TEMPERATURE, STATIC PRESSURE OF AIR AT ALL TRUNK DUCTS SERVING AREAS OF WORK.
b) TEMPERATURE OF AIR LEAVING OUTLETS AT TWO (2) TYPICAL AIR OUTLETS.
c) QUANTITY OF AIR AT EACH AIR INLET AND OUTLET AFTER BALANCING.
d) PROVIDE FOR ALL FANS, FAN MOTOR HP, AMPS, VOLTS, FAN RPM, CFM, INLET AND DISCHARGE STATIC PRESSURE, SHEAVE POSITION.
e) PROVIDE FOR ALL AIR CONDITIONING UNITS, SUPPLY CFM, OUTSIDE AIR CFM, RETURN AIR CFM, MIXED AIR CFM. PROVIDE OUTSIDE AIR, MIXED AIR AND SUPPLY AIR TEMPERATURES (DRY BULB - COOLING AND HEATING, WET-BULB-COOLING), INDICATE UNIT OPERATING MODE DURING TEST.
f) CALIBRATE ALL NEW TERMINAL BOXES (VAV) AS REQUIRED TO MEET SPECIFIED MINIMUM/MAXIMUM CFM.
g) LISTING OF DESIGN AND ACTUAL READINGS AS WELL AS ALL MANUFACTURER'S DATA FOR EQUIPMENT.

12. INSULATION - GENERAL REQUIREMENTS

A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES ARE TO BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC. USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84) (ASA 42.52-1963), FLAMESPREAD, MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED:

MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETECTION OF MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.

B. PRODUCTS SHALL NOT CONTAIN ASBESTOS, LEAD, MERCURY, OR MERCURY COMPOUNDS.

C. DEFINITIONS:

i. EXPOSED: INDOOR DUCTS, PIPING OR EQUIPMENT LOCATED IN MECHANICAL ROOMS AND IN AREAS WHICH WILL BE VISIBLE WITHOUT REMOVING CEILING OR OPENING ACCESS PANELS.

ii. CONCEALED: INDOOR DUCTS, PIPING OR EQUIPMENT WHICH IS NOT EXPOSED.

iii. OUTDOOR: DUCTS, PIPING OR EQUIPMENT WHICH IS EXPOSED TO THE WEATHER.

13. DUCTWORK INSULATION

A. INSULATE ALL DUCTWORK IN ACCORDANCE WITH INSULATION SCHEDULE ON M-600 DRAWING EXCEPT AS OTHERWISE NOTED.

B. REINSULATE ALL DUCTWORK AND PIPING WHICH IS EXISTING AND DAMAGED DURING CONSTRUCTION OR REQUIRED TO BE RELOCATED. INSULATE WITH SAME MATERIAL AND THICKNESS.

C. NON-INSULATED DUCTWORK:

i. WHERE SOUNDING INSULATION IS OF MINIMUM THICKNESS SPECIFIED FOR INSULATION.

ii. AIR CONDITIONING RETURN AIR DUCTWORK EXPOSED IN AIR CONDITIONED SPACES AND INSTALLED IN HUNG CEILING WHERE SPACE IMMEDIATELY ABOVE AND BELOW ARE BOTH AIR CONDITIONED.

D. MATERIAL:

i. TYPE D-1: MINIMUM 1-LB DENSITY FIBERGLASS BLANKET, MAXIMUM 0.28 K-FACTOR AT 75°F MEAN TEMPERATURE WITH FACTORY-APPLIED FIRE-RETARDANT FOIL-SKIRM-KRAFT FACING SIMILAR TO MANVILLE MICROLITE.

ii. TYPE D-2: 3 LB. FIBERGLASS BOARD, THE MAXIMUM K FACTOR SHALL BE 0.23 AT 75°F MEAN TEMPERATURE WITH A MINIMUM DENSITY OF 3 LB. THE INSULATION SHALL BE PROVIDED WITH A FACTORY-APPLIED ALL PURPOSE OR ALL SERVICE FACING. THE INSULATION SHALL BE EQUAL TO MANVILLE TYPE 814 SPIN-GLAS AP.

iii. TYPE D-3: MINIMUM 6 LB FIBERGLASS BOARD, MAXIMUM 0.22 K-FACTOR AT 75°F MEAN TEMPERATURE WITH FACTORY-APPLIED ALL PURPOSE OR ALL SERVICE FACING. SIMILAR TO MANVILLE 817 SPIN-GLAS AP.

E. INSTALLATION:

i. FIBERGLASS BLANKET: 2 INCH LAP STRIPS AT ALL SEAMS. SECURE BOTTOM OF ALL DUCTS OVER 24 INCH WIDE WITH MIN. 2 ROWS OF WELD PINS 12 INCH ON CENTER. SECURE ALL SEAMS WITH FOIL VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE.

ii. FIBERGLASS BOARD: SEAL JOINTS AND BREAKS IN FACING WITH 3 INCH WIDE TAPE TO MATCH FACING AND ADHERE WITH VAPOR SEAL ADHESIVE. APPLY 5 INCH WIDE TAPE AT CORNERS, WELD PINS ON TOP, SIDES AND BOTTOM.

14. PIPING INSULATION

A. INSULATE ALL PIPING IN ACCORDANCE WITH INSULATION SCHEDULE ON M-600 DRAWING EXCEPT AS OTHERWISE NOTED.

B. PIPING, VALVES AND FITTINGS TO BE INSULATED:

- i. LOW TEMPERATURE PIPING SYSTEMS, 40 TO 100°F INCLUDING
a) CHILLED WATER SUPPLY AND RETURN.
b) CONDENSER WATER SUPPLY AND RETURN.
c) GLYCOL WATER SUPPLY AND RETURN.
d) CONDENSATE DRAIN PIPING.
ii. LOW TEMPERATURE HOT PIPING SYSTEMS, 100 TO 250°F INCLUDING
a) LOW TEMPERATURE HOT WATER SUPPLY AND RETURN.
b) LOW PRESSURE STEAM SUPPLY TO 15 PSIG.
c) LOW PRESSURE CONDENSATE RETURN, EXCEPT STEAM TRAPS AND TRAP ASSEMBLY AND RADIATION ROUNDOUS CONCEALED IN RADIATION ENCLOSURES.
d) PUMPED CONDENSATE DISCHARGE.

C. MATERIAL

i. TYPE P-1: MINIMUM 4 LB DENSITY MOLDED FIBERGLASS, MAXIMUM 0.23 K-FACTOR AT 75°F MEAN TEMPERATURE WITH FACTORY-APPLIED FIRE-RETARDANT FOIL-SKIRM-KRAFT FACING. ALL SERVICE JACKET, SIMILAR TO OWENS-CORNING 650 ASJ.

ii. TYPE P-4: MINIMUM 1 LB DENSITY FIBERGLASS FITTING INSERTS, MAXIMUM 0.28 K-FACTOR AT 75°F MEAN TEMPERATURE SIMILAR TO MANVILLE HI-LO TEMP INSULATION INSERTS.

iii. TYPE P-6: MINIMUM 6 LB MOLDED FOAMED PLASTIC, MAXIMUM 0.27

K-FACTOR AT 75°F MEAN TEMPERATURE. MAXIMUM 0.17 PERMEANCE. SIMILAR TO ARMSTRONG ARMAFLEX II.

D. FINISH:

i. TYPE F-1: FITTING COVER, MOLDED WHITE PVC JACKET, UL CLASS 1. MAXIMUM PERMEANCE 0.05 SIMILAR TO MANVILLE ZESTRON.

ii. TYPE F-4: PVC JACKETING WITH MINIMUM 0.016 INCH WALL THICKNESS AND LONGITUDINAL JOINTS WITH LOCK SEAMS.

E. OUTDOOR PIPING:

i. FOR ALL PIPING, FITTINGS AND VALVES LOCATED OUTDOORS, INCREASE SCHEDULED INSULATION THICKNESS BY A MINIMUM OF 1 INCH AND PROVIDE F-4 FINISH. PROVIDE VAPORSEAL ON ALL OUTDOOR PIPES, VALVES AND FITTINGS SUBJECT TO CONDENSATION.

ii. COORDINATE WITH ELECTRICAL CONTRACTOR FOR ALL HEAT TRACING REQUIREMENTS AND PIPING LENGTH REQUIREMENTS. ELECTRICAL TO PROVIDE CABLING AND THERMOSTAT.

F. INSTALLATION:

i. BEFORE APPLYING INSULATION ALL PRESSURE AND LEAK TESTS SHALL BE COMPLETED AND APPROVED.

ii. ALL INSULATION SHALL BE BUTTED FIRMLY TOGETHER. PROVIDE 2 INCH LAP STRIPS AT ALL SEAMS SECURED WITH ADHESIVE. USE VAPOR BARRIER TAPE AND VAPORSEAL ADHESIVE WHERE REQUIRED. STAPLES NOT PERMITTED. REFRIGERANT PIPING INSULATION SHALL HAVE MITERED FITTINGS.

iii. ALL INSULATION AND VAPOR BARRIERS SHALL BE CONTINUOUS PASSING THROUGH SLEEVES, HANGERS, ETC., OR OTHER OPENINGS. PROVIDE SADDLES OR SHIELDS FOR PROTECTION.

iv. INSULATION FOR STRAINERS OR OTHER FILTERS OR ACCESSORIES REQUIRING SERVICING OR INSPECTION SHALL HAVE INSULATION REMOVABLE AND REPLACEABLE WITHOUT DAMAGE.

15. FIRE-RATED INSULATION SYSTEMS

A. FIRE-RATED BOARD: STRUCTURAL-GRADE, PRESS-MOLDED, XONOLITE CALCIUM SILICATE, FIREPROOFING BOARD SUITABLE FOR OPERATING TEMPERATURES UP TO 1700°F. COMPLY WITH ASTM C 656, TYPE II, GRADE 6. TESTED AND CERTIFIED TO PROVIDE A 2-HOUR FIRE RATING BY A NRTL ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. MANUFACTURED BY JOHNS MANVILLE; FIRETEMP WRAP; FIREMAST DUCT WRAP, 3M; FIRE BARRIER WRAP PRODUCTS, UNIFRAX CORPORATION; FLYREWRAP.

B. FIRE-RATED BLANKET: HIGH-TEMPERATURE, FLEXIBLE, BLANKET INSULATION WITH FSX JACKET THAT IS TESTED AND CERTIFIED TO PROVIDE A 2-HOUR FIRE RATING BY A NRTL ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. MANUFACTURED BY JOHNS MANVILLE; FIRETEMP WRAP; FIREMAST DUCT WRAP, 3M; FIRE BARRIER WRAP PRODUCTS, UNIFRAX CORPORATION; FLYREWRAP.

C. NYC PROJECTS: PRODUCT SHALL HAVE LISTING FOR THE PARTICULAR APPLICATION

16. VIBRATION ISOLATION

A. FURNISH AND INSTALL ALL NECESSARY VIBRATION ISOLATORS, VIBRATION HANGERS, MOUNTING PADS, RAILS, ETC., TO ISOLATE VIBRATION AND SOUND FROM BEING TRANSMITTED TO THE BUILDING STRUCTURE. ALL VIBRATION PRODUCTS SHALL BE SPECIFICALLY DESIGNED FOR THEIR INTENDED USE. PROVIDE ISOLATION FOR MOTORIZED EQUIPMENT.

B. MANUFACTURER OF THE VIBRATION ISOLATION EQUIPMENT SHALL HAVE THE FOLLOWING RESPONSIBILITIES

- i. SUBMIT TYPE, SIZE, DEFLECTION, LOCATION AND DETAILS INCLUDING FIRE RATING FOR EACH ISOLATOR PROPOSED FOR ITEMS IN THE SPECIFICATION AND ON THE DRAWINGS.
ii. SUBMIT DETAILS OF ALL STEEL FRAMES AND CONCRETE INERTIA BASES TO BE USED IN CONJUNCTION WITH THE ISOLATION IN THIS SPECIFICATION AND IN THE DRAWINGS.
iii. CLEARLY OUTLINE THE PROCEDURES FOR INSTALLING AND ADJUSTING THE ISOLATORS OR HANGERS.
iv. GUARANTEE THE SPECIFIED ISOLATION SYSTEMS DEFLECTION AND THAT A MINIMUM OF 90% EFFICIENCY WILL BE OBTAINED.

C. THE FOLLOWING ARE APPROVED MANUFACTURERS, PROVIDED THEIR SYSTEMS STRICTLY COMPLY WITH THE DESIGN INTENT FOR PERFORMANCE, DEFLECTION AND STRUCTURAL CAPACITY OF THIS SPECIFICATION.

- i. MASON INDUSTRIES, INC., HAUPPAUGE, NY
ii. VIBRATION MOUNTINGS & CONTROLS, INC., BLOOMINGDALE, NJ
iii. AMBER BOOTH, HOUSTON, TX
iv. KINETICS NOISE CONTROL, INC

D. PROVIDE INSTALLATION INSTRUCTIONS, DRAWINGS AND FIELD SUPERVISION TO ASSURE PROPER INSTALLATION AND PERFORMANCE.

E. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS INCLUDING THE LOAD AND SPRING STATIC DEFLECTION FOR EACH FLOOR OR CEILING HUNG ISOLATOR.

F. PROVIDE LEVELING DEVICES AND APPROVED

RESILIENT DEVICES AS REQUIRED TO LIMIT EQUIPMENT AND PIPING MOTION IN EXCESS OF 1/4 INCH ISOLATORS SHALL HAVE CAPABILITY OF SUPPORTING EQUIPMENT AND PIPING AT A FIXED ELEVATION DURING INSTALLATION AND AT A SPECIFIED HEIGHT AFTER ADJUSTMENT.

G. ALL SLR SHALL HAVE AT LEAST 50% ADDITIONAL LOAD CAPACITY ABOVE DESIGN LOAD.

H. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE EQUIPMENT CANNOT SUPPORT POINT LOADS.

I. PROVIDE CORROSION PROTECTION FOR EQUIPMENT MOUNTED OUTDOORS. SPRING CORROSION RESISTANCE SHALL BE POWDER COATING OF THE SPRING WITH THE STEEL HOUSING HOT DIPPED GALVANIZED. ALL HARDWARE TO BE CADMIUM PLATED.

J. CENTRIFUGAL FANS

i. FLOOR MOUNTED AXIAL FANS, CABINET FANS, FAN SECTIONS, AIR HANDLING UNITS UTILIZE MASON TYPE SLF FREE STANDING SPRING OR EQUAL.

ii. CEILING HUNG UTILIZE MASON TYPE 30 N OR EQUAL.

iii. 3 HP AND LESS MOTOR TYPE B-1 BASE WITH SPRING ISOLATORS MASON TYPE SLF SPRING ISOLATORS OR EQUAL.

iv. 24 INCH DIAMETER AND UP, WITH UP TO 40 HP MOTOR-TYPE B-1 BASE WITH MASON TYPE SLF SPRING ISOLATORS OR EQUAL.

v. MOTOR SIZE - MINIMUM CONCRETE THICKNESS

- a) 5 TO 15 HP - 6 INCHES
b) 20 TO 50 HP - 8 INCHES

K. FLOOR MOUNTING OF PACKAGED AIR CONDITIONING UNIT WITH INTERNAL ISOLATION FOR COMPRESSORS - NEOPRENE IN SHEAR - TYPE SUPER W- BRIDGE BEARING.

L. ROOFTOP AC UNITS - SPRING ROOF CURB - TYPE RSC AND/OR DUNNAGE STEEL WITH TYPE SLR WITH VERTICAL LIMB STOPS.

M. SUPPORT OF PIPING IN EQUIPMENT ROOMS AND WHERE EXPOSED ON ROOF

i. ALL WATER PIPING OUTSIDE OF SHAFTS SHALL BE 50 FEET OF CONNECTED ROTATING EQUIPMENT TO BE SUPPLIED WITH ISOLATORS.

ii. HANGER ROD ISOLATORS (TYPE 30N) MOUNTINGS.

iii. INDOOR SUPPORTED PIPING ISOLATORS (TYPE SLR).

iv. VERTICAL RISER PIPING ANCHOR AND GUIDES (TYPE ADA).

N. FLOOR AND ROOF MOUNTING OF FACTORY ASSEMBLED AIR HANDLING UNITS, AIR CONDITIONING UNITS, HEAT EXCHANGERS AND CONDENSING UNITS, - SPRING ISOLATORS (ROOF MOUNTED EQUIPMENT TYPE SLR), OR (INDOOR EQUIPMENT TYPE SLF).

O. PROVIDE FLEXIBLE CONNECTIONS BETWEEN ALL FANS AND DUCTWORK (REFER TO DUCTWORK SECTION FOR SPECIFICATIONS).

17. PIPING - GENERAL REQUIREMENTS

A. COMPLETE WITH: PIPE, FITTINGS, VALVES, STRAINERS, MOTORIZED VALVE OPERATORS, HANGERS, SUPPORTS, GUIDE, SLEEVES, AND ACCESSORIES.

B. ALL ITEMS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS:

- i. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
ii. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
iii. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
iv. MANUFACTURERS STANDARDIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY (MSS).

C. GASKETS: ONE PIECE RING TYPE 1/16 INCH MINIMUM THICKNESS KLINGER C4400 ONLY (OR APPROVED EQUAL, SUBMIT FOR APPROVAL BEFORE USE).

D. WELDING

i. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH ALL CODES APPLICABLE TO THE PARTICULAR SERVICE. WELDING FILLER METALS: COMPLY WITH AWS SPECIFICATIONS IN ACCORDANCE WITH THE OWNER'S WATER TREATMENT SPECIFICATION. THE HVAC CONTRACTOR SHALL HIRE THE SERVICES OF THE BASE BUILDING WATER TREATMENT CONTRACTOR. COORDINATE WITH THE OWNER'S WATER TREATMENT COMPANY AND PROVIDE ALL SPECIFICATION REQUIREMENTS AND REQUIRED LABOR. COORDINATE ALL REQUIREMENTS WITH BASE BUILDING MANAGEMENT FOR BASE BUILDING VENDOR.

ii. COMPLY WITH SECTION II, PART C OF THE ASME BOILER AND PRESSURE VESSEL CODE FOR WELDING MATERIALS APPROPRIATE FOR WALL THICKNESS AND CHEMICAL ANALYSIS OF PIPE BEING WELDED.

iii. QUALIFY PROCESSES AND OPERATORS ACCORDING TO ASME BOILER AND PRESSURE VESSEL CODE, SECTION IX, "WELDING AND BRAZING QUALIFICATIONS".

COMPLY WITH PROVISIONS IN ASME B31 SERIES, "CODE FOR PRESSURE PIPING."

iv. WELDERS SHALL BE QUALIFIED FOR ALL REQUIRED PIPE SIZES, MATERIAL, WALL THICKNESS, AND POSITION IN ACCORDANCE WITH THE AMERICAN SOCIETY OF MECHANICAL ENGINEERING (ASME) SECTION IX, BOILER AND PRESSURE VESSEL CODE. CERTIFY THAT EACH WELDER HAS PASSED AWS QUALIFICATION TESTS FOR WELDING PROCESSES INVOLVED AND THAT CERTIFICATION IS CURRENT.

v. COPIES OF THE CERTIFIED WELDER QUALIFICATION REPORTS SHALL BE MAINTAINED BY THE RESPONSIBLE WELDING AGENCY AND THE COMPANY PERFORMING THE WELDING, AND SHALL BE SUBMITTED TO THE OWNER AND/OR ENGINEER UPON REQUEST.

vi. ALL DEFECTIVE WELDS SHALL BE CHIPPED OUT AND REPAIRED AT NO COST TO THE OWNER, BASED ON PROCEDURE TO BE SPECIFIED AT THE TIME.

E. COPPER TUBE BRAZING

i. ALL BRAZING SHALL BE DONE IN ACCORDANCE WITH ALL CODES APPLICABLE TO THE PARTICULAR SERVICE. BRAZING FILLER METALS: AWS A5.8, BCUC SERIES, COPPER-PHOSPHORUS ALLOYS FOR JOINING COPPER WITH COPPER; OR BAG-1, SILVER ALLOY FOR JOINING COPPER WITH BRONZE OR STEEL.

ii. QUALIFY PROCESS AND OPERATORS IN ACCORDANCE WITH ASME BOILER AND PRESSURE VESSEL CODE, SECTION IX, "WELDING AND BRAZING QUALIFICATIONS".

iii. BRAZERS SHALL BE QUALIFIED FOR ALL REQUIRED TUBE SIZES, MATERIAL, WALL THICKNESS, AND POSITION IN ACCORDANCE WITH THE AMERICAN SOCIETY OF MECHANICAL ENGINEERING (ASME), SECTION IX, BOILER AND PRESSURE VESSEL CODE.

iv. COPIES OF THE CERTIFIED BRAZER QUALIFICATION REPORTS SHALL BE MAINTAINED BY THE RESPONSIBLE BRAZING AGENCY AND THE COMPANY PERFORMING THE BRAZING, AND SHALL BE SUBMITTED TO THE OWNER AND/OR ENGINEER UPON REQUEST.

v. ALL DEFECTIVE BRAZEMENTS SHALL BE CHIPPED OUT AND REPAIRED AT NO COST TO THE OWNER, BASED ON PROCEDURE TO BE SPECIFIED AT THE TIME.

F. GASKETS

i. PIPE-FLANGE GASKET MATERIALS: SUITABLE FOR CHEMICAL AND THERMAL CONDITIONS OF PIPING SYSTEM CONTENTS. ASME B16.21, NONMETALLIC, FLAT, ASBESTOS-FREE, 1/8-INCH MAXIMUM THICKNESS UNLESS THICKNESS OR SPECIFIC MATERIAL IS INDICATED.

G. ALL PRESSURIZED HYDRONIC PIPING TO BE TESTED HYDROSTATICALLY TO 150 PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER, BUT NEVER EXCEED TEST PRESSURE. ANSI B16.1 BASIS. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE CORRECTED FOR TEMPERATURE CHANGE. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST.

H. REFRIGERANT PIPING

a) TEST REFRIGERANT PIPING FOR TIGHTNESS AND LEAKS UNDER PRESSURE OR VACUUM - COORDINATE WITH MANUFACTURER REQUIREMENTS. THE DURATION OF EACH TEST SHALL BE TWENTY-FOUR (24) HOURS.

b) TEST JOINTS IN ACCORDANCE WITH ASHRAE 15-LATEST EDITION. THERE SHALL BE NO OBSERVABLE LEAKS OR CHANGES IN PRESSURE. IF EITHER IS OBSERVED, SEAL LEAKS, AND REPEAT TEST PROCEDURES

I. SYSTEM FILLING

j. SYSTEMS OR PORTIONS OF SYSTEMS TO BE TESTED SHALL HAVE PROVISIONS FOR FILLING, VENTING (AIR REMOVAL), DRAINAGE AND TEST PRESSURE CONNECTION.

ii. LIQUID USED FOR TESTING SHALL BE CLEAN CITY WATER MIXED WITH CHEMICALS SPECIFIED BY THE BASE BUILDING WATER TREATMENT CONTRACTOR. THE HVAC CONTRACTOR SHALL HIRE THE SERVICES OF THE BUILDING WATER TREATMENT CONTRACTOR AND PROVIDE ALL REQUIRED LABOR. PROVIDE TEMPORARY METERING AND MIXING DEVICES AS REQUIRED. THE HVAC CONTRACTOR SHALL OBTAIN ALL REQUIREMENTS FROM THE BUILDING MANAGEMENT.

I. FLUSHING AND CLEANING AND TREATMENT

i. AFTER COMPLETION OF HYDROSTATIC TESTS AND EMPTYING, PROVIDE LABOR FOR INITIAL FLUSHING, CLEANING, AND PASSINATING IN ACCORDANCE WITH THE OWNER'S WATER TREATMENT SPECIFICATION. THE HVAC CONTRACTOR SHALL HIRE THE SERVICES OF THE BASE BUILDING WATER TREATMENT CONTRACTOR. COORDINATE WITH THE OWNER'S WATER TREATMENT COMPANY AND PROVIDE ALL SPECIFICATION REQUIREMENTS AND REQUIRED LABOR. COORDINATE ALL REQUIREMENTS WITH BASE BUILDING MANAGEMENT FOR BASE BUILDING VENDOR.

ii. PROVIDE ONE YEAR'S SUPPLY OF NECESSARY WATER TREATMENT CHEMICALS FOR NEW SYSTEM TO THE OWNER OR TENANT INCLUDING THE FOLLOWING:

iii. CLOSED SYSTEM TREATMENT (CHILLED WATER, SECONDARY WATER, CLOSED CONDENSER WATER AND HOT WATER). PROVIDE AGENTS TO REDUCE SCALE DEPOSITS, TO ADJUST PH AND TO INHIBIT CORROSION. TREATMENT SHALL NOT CONTAIN ANY CHROMATES OR OTHER TOXIC SUBSTANCES. USE PROPER CHEMISTRY TO PROVIDE BACTERIA COUNTS BELOW 103/ COLONIES PER MILLILITER (AEROBIC & NON AEROBIC). PH LEVELS TO BE BETWEEN 7.0 AND 9.0. CORROSION RATE TO BE LESS THAN 1/2 MILS/YEAR STEEL, 1/10 MILS/YEAR COPPER.

iv. OPEN SYSTEM TREATMENT (CONDENSER WATER) PROVIDE AGENTS TO REDUCE SCALE DEPOSITS, TO ADJUST PH AND TO INHIBIT CORROSION. TREATMENT SHALL NOT CONTAIN ANY CHROMATES OR OTHER TOXIC SUBSTANCES. USE PROPER CHEMISTRY TO PROVIDE BACTERIA COUNTS BELOW 105/ COLONIES PER MILLILITER (AEROBIC AND NON-AEROBIC). PH TO BE BETWEEN 7.5 AND 8.5. CORROSION RATES TO BE LESS THAN 1 MILS/YEAR -STEEL AND 1/10 MILS/YEAR COPPER.

J. PROVIDE DIELECTRIC FITTINGS WHERE DISSIMILAR METALS ARE TO BE JOINED.

K. HOT (WET) TAPS:

i. PROVIDE NEW HOT (WET) TAP CONNECTIONS INTO PIPING SYSTEMS AS INDICATED ON THE PLANS.

ii. PROVIDE ALL REQUIRED EQUIPMENT AND MATERIALS SUCH AS A TAPPING MACHINE, WELDING MACHINE, FULL PORTED VALVE AND A PRESSURE CONTAINING FITTING. VALVE AND PRESSURE FITTING SHALL BE RATED FOR THE WORKING PRESSURE OF THE PIPING SYSTEM.

iii. HOT TAP TO BE PERFORMED BY A QUALIFIED CONTRACTOR WHO IS SPECIALIZED IN PERFORMING THIS TYPE OF WORK. CONTRACTORS NAME SHALL BE SUBMITTED TO THE OWNER, OWNER'S REPRESENTATIVE, BUILDING MANAGEMENT AND THE CITY OF WESTPORT PRIOR TO COMMENCING WORK.

iv. HOT (WET) TAP COUPON IS TO BE TURNED OVER TO BUILDING MANAGEMENT.

L. DRAIN DOWN FOR NEW PIPING CONNECTION INTO EXISTING:

i. CONTRACTOR TO OBTAIN SCHEDULE AND COORDINATE WITH BUILDING MANAGEMENT FOR SYSTEM DRAIN DOWN AND CONNECTION INTO EXISTING BUILDING PIPING. ALL COSTS ASSOCIATED WITH DRAIN DOWN ARE TO BE INCLUDED AS PART OF BID.

M. ALL INSTRUMENTATION (PRESSURE GAUGES AND THERMOMETERS) SHALL BE RATED FOR THE SAME PRESSURE AND TEMPERATURE AS PIPING SYSTEM AND RATED SPECIFICALLY FOR THE SERVICE AS THE PIPING. PRESSURE GAUGES ARE TO BE LIQUID FILLED WITH 1% ACCURACY. SELECT GAUGES AND THERMOMETERS SO THAT THE MID-POINT IS AT THE WORKING PRESSURE AND TEMPERATURE. INSTRUMENTS TO BE MANUFACTURED BY WEISS INSTRUMENT, MILJOCCO CORPORATION OR APPROVED EQUAL.

i. PROVIDE THERMOMETERS IN PIPING AS INDICATED ON THE DRAWINGS AND AT THE INLET AND OUTLET OF EACH HYDRONIC COIL, HEAT EXCHANGER AND PIECE OF EQUIPMENT THAT INVOLVES A DIFFERENTIAL TEMPERATURE. THERMOMETERS TO BE ORGANIC LIQUID FILLED.

ii. PROVIDE PRESSURE GAUGES IN PIPING AS INDICATED ON THE DRAWINGS AND AT SUCTION AND DISCHARGE OF EACH PUMP AND AT INLETS AND OUTLETS OF EACH HYDRONIC COIL, HEAT EXCHANGER AND PIECE OF EQUIPMENT THAT INVOLVES A DIFFERENTIAL PRESSURE.

N. PIPE SUPPORTS:

i. PROVIDE ADEQUATE SUPPORT FOR PIPE AND CONTENTS TO PREVENT SAGGING, VIBRATION OR SWAYING AND ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE STRUCTURE CANNOT SUPPORT POINT LOADS.

ii. HORIZONTAL PIPING TO BE SUPPORTED BY FORGED STEEL ADJUSTABLE CLEVIS TYPE HANGER. MAXIMUM SPACING AS FOLLOWS:

- a) STEEL 1 INCH AND SMALLER: 6 FEET.
b) STEEL 1-1/4 INCH AND LARGER: 10 FEET.
c) COPPER 1 INCH AND SMALLER: 5 FEET.
d) COPPER 1-1/2 IN TO 2-1/2 INCH: 8 FEET.
e) COPPER 3 INCH: 10 FEET.

f) PROVIDE ADDITIONAL SUPPORTS AT CHANGES IN DIRECTION, BRANCH PIPING AND RUNNERS OVER 5 FEET AND CONCENTRATE LOADS DUE TO VALVES, STRAINERS AND OTHER SIMILAR ITEMS.

iii. ROD SIZE

- a) PIPE 2 IN AND SMALLER: 3/8 IN
b) PIPE 2-1/2 IN TO 3 IN: 1/2 IN

c) PIPE 4 TO 8 IN: 3/4 IN

iv. VERTICAL PIPING:

a) BASE ELOW SUPPORT WITH BEARING PLATE ON STRUCTURAL SUPPORT.

b) GUIDES AT EVERY SECOND FLOOR (SPACING NOT TO EXCEED 25 FEET).

c) TOP SUPPORT HANGER OR SADDLE IN HORIZONTAL CONNECTION WITH PROVISIONS FOR EXPANSION.

d) INTERMEDIATE STEEL RISER CLAMP SUPPORT BOLTED AND WELDED TO PIPE BEARING ON STRUCTURAL STEEL OR BEARING PLATE AT FLOOR.

e) FOR MULTIPLE PIPES, COORDINATE GUIDES, BEARING PLATES AND ACCESSORY STEEL.

O. VALVES - GENERAL REQUIREMENTS

i. VALVE PRESSURE AND TEMPERATURE RATINGS: NOT LESS THAN INDICATED AND AS REQUIRED FOR SYSTEM PRESSURES AND TEMPERATURES.

ii. VALVE SIZES: SAME AS UPSTREAM PIPING UNLESS OTHERWISE INDICATED.

iii. VALVE-END CONNECTIONS:

a) FLANGED: WITH FLANGES ACCORDING TO ASME B16.1 FOR IRON VALVES

b) FLANGED: WITH FLANGES ACCORDING TO ASME B16.5 FOR STEEL VALVES

c) FLANGED: WITH FLANGES ACCORDING TO ASME B16.24 FOR BRONZE VALVES.

d) SOLDER JOINT: WITH SOCKETS ACCORDING TO ASME B16.18.

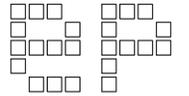
e) THREADED: WITH THREADS ACCORDING TO ASME B1.20.1.

f) VALVE BYPASS AND DRAIN CONNECTIONS: MSS SP-45.

iv. GENERAL-DUTY VALVE APPLICATIONS: UNLESS OTHERWISE INDICATED, USE THE FOLLOWING VALVE TYPES:

- i. STANDARD EFFICIENCY UNLESS OTHERWISE NOTED.
  - ii. 1.15 SERVICE FACTOR INCLUDING MOTORS SERVED FROM A VFD
  - iii. SQUIRREL CAGE INDUCTION, OPEN DRIPPROOF TYPE, 1750 RPM, NEMA TYPE B INSULATION CLASS, CONTINUOUS DUTY, EXCEPT AS NOTED.
21. MOTOR CONTROLLERS
- A. SUPPLIED BY HVAC CONTRACTOR AND INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
  - B. ENCLOSURES:
    - i. PROVIDE ENCLOSURES FOR STARTERS AND VFD'S SUITABLE FOR OPERATING ENVIRONMENT. ENCLOSURE'S SHALL BE NEMA 1 VENTILATED SHEETMETAL FOR INDOOR APPLICATION, NEMA 3R WITH ADDITIONAL GASKETING WEATHER-PROOF RAIN TIGHT ENCLOSURE FOR EXPOSED OUTDOOR SERVICE OR INDOOR SERVICE EXPOSED TO MOISTURE. PROVIDE DISCONNECT SWITCH ON ENCLOSURE AS REQUIRED FOR SERVICE.
  - C. WITH SOLID-STATE (ELECTRONIC) OVERLOAD PROTECTION. COORDINATE ALL MOTOR CONTROLLER TYPES AND SIZES WITH MOTOR TYPES AND SIZES.
  - D. 1/3 HP AND SMALLER: PROVIDE MANUAL STARTER EXCEPT USE MAGNETIC TYPE WHERE AUTOMATICALLY CONTROLLED.
    - i. MANUAL TYPE: 2-POLE TOGGLE SWITCH WITH OVERLOAD PROTECTION AND PILOT LIGHT.
  - E. 1/2 HP AND LARGER: PROVIDE MAGNETIC STARTER:
    - i. COMBINATION UNFUSED DISCONNECT SWITCH AND MAGNETIC STARTER EXCEPT AS NOTED.
    - ii. SOLID-STATE (ELECTRONIC) OVERLOAD PROTECTION IN EACH PHASE LEG WITH RESET IN ENCLOSURE.
    - iii. HOA SELECTOR SWITCH FOR AUTOMATICALLY OPERATED MOTORS. SAFETY CONTROLS COMMON TO BOTH CONTROLS.
    - iv. RED, GREEN AND AMBER PILOT LIGHTS.
    - v. SWITCHES: HORSE-POWER-RATED, EXTERNAL PADLOCKING TYPE.
    - vi. HOLDING COILS: 10 WATT, 120 VOLT.
    - vii. CONTACTS: MAIN LINE AND MINIMUM (2) - NORMALLY OPEN, (2) - NORMALLY CLOSED 10 AMP AUXILIARIES, IN ADDITION TO CONTACTS
    - viii. REQUIRED FOR CONTROLS SPECIFIED.
    - ix. CONTROL TRANSFORMER: FOR MOTORS OVER 120 VOLTS, TO STEP DOWN CONTROL VOLTAGE TO 120 VOLTS; OF THE REQUIRED CAPACITY WITH FUSE AND GROUND CONNECTION ON VOLTAGE SIDE.
    - x. FUSES: SIMILAR TO BUSSMAN.
    - xi. RELAYS: TO SUPPLEMENT AUXILIARY CONTACTS IN CONTROLLER. MINIMUM 10 WATT COIL AND TWO 10 AMP CONTACTS.
    - xii. TERMINALS: SUITABLE FOR CONDUCTORS NOTED AND AS APPROVED.
  - F. DISCONNECT SWITCHES ARE PROVIDED BY THE ELECTRICAL CONTRACTOR IF NOT INTEGRAL WITH EQUIPMENT.
  - G. ACCEPTABLE MANUFACTURERS:
    - i. EATON/ CUTLER HAMMER.
    - ii. SQUARE D.
    - iii. ALLEN BRADLEY.
    - iv. ABB
22. EQUIPMENT
- A. PROVIDE ALL EQUIPMENT AND ACCESSORIES OF THE SIZES AND CAPACITIES AS SCHEDULED AND AS INDICATED ON THE DRAWINGS.
  - B. INSTALL EQUIPMENT IN ACCORDANCE WITH APPROVED SHOP DRAWINGS, MANUFACTURERS INSTRUCTIONS AND ALL CODES AND REGULATIONS WHICH APPLY.
  - C. PROVIDE EQUIPMENT SUPPORTS AND/OR MOUNTINGS AS INDICATED ON THE DRAWING, IN VIBRATION SPECIFICATION AND AS FOLLOWS:
    - i. FLOOR MOUNTED EQUIPMENT - PROVIDE DIMENSIONS FOR A 4 INCH CONCRETE HOUSEKEEPING PAD WITH ALL REQUIRED WATERPROOFING TO THE CONSTRUCTION MANAGER.
    - ii. EQUIPMENT ON FLOOR STANDS - PROVIDE FLOOR STAND OF STRUCTURAL STEEL OR STEEL PIPES AND FITTINGS ATTACHED TO FLOOR.
    - iii. ROOF MOUNTED EQUIPMENT - PROVIDE PREFABRICATED ISOLATED ROOF CURB WITH INTEGRAL VIBRATION ISOLATORS.
    - iv. CEILING MOUNTED EQUIPMENT - PROVIDE SUPPORTS WITH APPROVED SUITABLE ANCHORS SUSPENDED DIRECTLY FROM BUILDING STEEL STRUCTURE.
    - v. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED TO ADEQUATELY SUPPORT THE EQUIPMENT LOAD.
- vi. EQUIPMENT SHALL BE INSTALLED WITH VIBRATION ISOLATION, REFER TO VIBRATION ISOLATION SECTION.
- D. RIGGING
- i. THIS CONTRACTOR SHALL SURVEY THE BUILDING AND VERIFY THE RIG PATH PRIOR TO PURCHASE OF EQUIPMENT. CONFIRM ALL EQUIPMENT FITS THROUGH ALL HALLWAYS, DOORS, ELEVATORS, WINDOWS, ETC. WITHOUT REQUIRING MAJOR ALTERATIONS TO THE EXISTING BUILDING CONDITIONS. ANY MODIFICATIONS TO EXISTING CONDITIONS SHALL BE REPAIRED OR REPLACED BY CONTRACTOR.
  - ii. THIS CONTRACTOR SHALL PROVIDE ALL REQUIRED RIGGING, HOISTING AND BRACING TO INSTALL THE EQUIPMENT AS INDICATED ON THE PLANS. THIS WORK SHALL BE PERFORMED BY AN INSURED CERTIFIED LICENSED RIGGING COMPANY THAT IS EXPERIENCED IN RIGGING EQUIPMENT OF THE TYPE INDICATED FOR THE AREAS SHOWN ON THE CONSTRUCTION DOCUMENTS. THIS CONTRACTOR SHALL SUBMIT RIGGING PLANS FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK.
  - iii. ALL PERMITS REQUIRED FROM THE AUTHORITIES AND AGENCIES INVOLVED TO PERFORM THE RIGGING ARE THE RESPONSIBILITIES OF THIS CONTRACTOR.
  - iv. ALL STRUCTURAL SUPPORTS, MODIFICATIONS OR ADDITIONS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK. ALL SUPPLEMENTAL STRUCTURAL SUPPORTS, ELEVATOR CHARGES /MODIFICATIONS, BRACING AND PROTECTION REQUIRED FOR THE RIG IS THE RESPONSIBILITY OF THIS CONTRACTOR.
  - v. THE RIGGING CONTRACTOR SHALL HIRE AND PAY FOR ALL CHARGES AND SERVICES OF THE BUILDING ELEVATOR CONTRACTOR FOR THE RIGGING OF THE EQUIPMENT.
- E. UP FRONT PURCHASE OF EQUIPMENT
- i. THE CONTRACTOR SHALL SUBMIT A LIST OF LONG LEAD TIME ITEMS THAT WILL AFFECT THE SCHEDULE OF THE PROJECT IF NOT PURCHASED IMMEDIATELY UP FRONT AT THE START OF THE PROJECT. THE MECHANICAL CONTRACTOR SHALL SUBMIT PROPOSED MANUFACTURER AND LEAD TIMES FOR ALL PROJECT EQUIPMENT AT TIME OF PROJECT AWARD.
23. AUTOMATIC CONTROLS - GENERAL REQUIREMENTS
- A. WORK INCLUDED
    - i. FURNISH AND INSTALL AS HEREIN SPECIFIED, A COMPLETE AUTOMATIC TEMPERATURE CONTROL SYSTEM. MANUFACTURER SHALL BE SUBMITTED WITH BID AND APPROVED BY ENGINEER BEFORE BID AWARD. THE ATC CONTRACTOR SHALL BE AN INDEPENDENT CONTRACTOR NOT AFFILIATED WITH THE MECHANICAL CONTRACTOR.
    - ii. PROVIDE POWER FOR PANELS AND CONTROL DEVICES FROM A SOURCE DESIGNATED BY THE ELECTRICAL CONTRACTOR.
    - iii. COORDINATE INSTALLATION SCHEDULE WITH THE MECHANICAL CONTRACTOR AND GENERAL CONTRACTOR.
    - iv. FURNISH, MOUNT, AND WIRE ALL ASSOCIATED PANELS AND DEVICES FOR THE SYSTEM TO BE COMPLETELY OPERATIONAL REGARDLESS OF FUNCTION OR VOLTAGE, UNLESS OTHERWISE STATED.
  - B. SUBMITTALS
    - i. PRODUCT DATA: INCLUDE MANUFACTURER'S TECHNICAL LITERATURE FOR EACH CONTROL DEVICE INDICATED, LABELED WITH SETTING OR ADJUSTABLE RANGE OF CONTROL. INDICATE DIMENSIONS, CAPACITIES, PERFORMANCE CHARACTERISTICS, ELECTRICAL CHARACTERISTICS, FINISHES FOR MATERIALS, AND INSTALLATION AND STARTUP INSTRUCTIONS FOR EACH TYPE OF PRODUCT INDICATED.
    - ii. SHOP DRAWINGS: DETAIL EQUIPMENT ASSEMBLIES AND INDICATE DIMENSIONS, WEIGHTS, LOADS, REQUIRED CLEARANCES, METHOD OF FIELD ASSEMBLY, COMPONENTS, AND LOCATION AND SIZE OF EACH FIELD CONNECTION.
      - a) SCHEMATIC FLOW DIAGRAMS SHOWING FANS, COILS, DAMPERS, VALVES, AND CONTROL DEVICES.
      - b) WIRING DIAGRAMS: POWER, SIGNAL, AND CONTROL WIRING.
      - c) DETAILS OF CONTROL PANEL FACES, INCLUDING CONTROLS, INSTRUMENTS, AND LABELING.
  - C. QUALITY ASSURANCE
    - i. INSTALLER QUALIFICATIONS: A QUALIFIED INSTALLER WHO IS AN AUTHORIZED REPRESENTATIVE OF THE AUTOMATIC CONTROL SYSTEM MANUFACTURER FOR BOTH INSTALLATION AND MAINTENANCE OF UNITS REQUIRED FOR THIS PROJECT.
    - ii. COMPLY WITH ALL CURRENT GOVERNING CODES, ORDINANCES, AND REGULATIONS INCLUDING UL, NFPA, THE LOCAL BUILDING CODE, NEC, ETC.
    - iii. MATERIALS AND EQUIPMENT SHALL BE THE CATALOGUED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN PRODUCTION AND INSTALLATION OF AUTOMATIC TEMPERATURE CONTROL
- SYSTEMS AND SHALL BE MANUFACTURER'S LATEST STANDARD DESIGN THAT COMPLIES WITH THE SPECIFICATION REQUIREMENTS.

# FIRE HOUSE



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**www.EPENGINEERING.com**

## ISSUES:

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## ESSEX COUNTY FARMWORKER HOUSING RENOVATION

Firehouse  
6513 MAIN STREET  
Westport NY 12993

M-802.00

MECHANICAL SPECIFICATIONS (3 OF 3)

SEAL / SIGNATURE:



IT IS A VIOLATION FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER AN ITEM ON THIS PLAN IN ANY WAY PURSUANT TO NYS EDUCATION LAW, SECOND 7209(2). IF AN ITEM BEARING THE SEAL OF AN ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THIS ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

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THE SCALE OF THIS DRAWING IS CORRECT WHEN PRINTED ON 24x36 SIZE PAPER. ALL OTHER PAPER SIZES WILL NOT SHOW THE CORRECT SCALE.

# HEATING/COOLING LOAD CALCULATION AND EQUIPMENT SIZING NOTE:

ALL THE MECHANICAL EQUIPMENT SPECIFIED IN THIS DRAWING SET HAS BEEN DESIGNED TO SUFFICIENTLY HEAT AND COOL THE OCCUPIABLE AREAS OF THE BUILDING. REQUIRED HEATING AND COOLING DEMANDS HAVE BEEN CALCULATED IN ACCORDANCE WITH ASHRAE/ACCA 183, AND TAKE INTO ACCOUNT ALL BUILDING ENVELOPE, LIGHTING, VENTILATION & OCCUPANCY LOADS BASED ON THE PROJECT DESIGN. EQUIPMENT SELECTIONS WERE MADE TO MEET THE SYSTEM PEAK LOADS (HEATING OR COOLING).

# ENERGY COMPLIANCE STATEMENT

THE PROPOSED MECHANICAL DESIGN REPRESENTED IN THIS DOCUMENT IS CONSISTENT WITH THE BUILDING PLANS, SPECIFICATIONS AND OTHER CALCULATIONS SUBMITTED WITH THIS PERMIT APPLICATION. THE PROPOSED MECHANICAL SYSTEMS HAVE BEEN DESIGNED TO MEET THE 2020 ECCCNS AND TO COMPLY WITH THE MANDATORY REQUIREMENTS SET FORTH.

## COMcheck Software Version 4.1.5.5 Mechanical Compliance Certificate

**Project Information**  
 Energy Code: 2020 NYStretch Energy Code - 2018 IECC  
 Project Title: Firehouse  
 Location: New York, New York  
 Climate Zone: 4a  
 Project Type: Alteration  
 Construction Site: 6513 Main Street Westport, NY 12993  
 Owner/Agent: Designer/Contractor:

**Mechanical Systems List**

Quantity	System Type & Description
4	Baseboard Heaters 2 kW (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 7 kWh/uh No minimum efficiency requirement applies Fan System: Unspecified
5	Baseboard Heaters 1.5 kW (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 5 kWh/uh No minimum efficiency requirement applies Fan System: Unspecified

**Mechanical Compliance Statement**  
 Compliance Statement: The proposed mechanical alteration project is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2020 NYStretch Energy Code - 2018 IECC version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.  
 GIOVANNI E. MELENDEZ - PARTNER  
 Signature: [Signature] Date: 5/12/2023

Project Title: Firehouse Report date: 05/12/23  
 Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Firehouse COMCheck.c Page 1 of 10

## COMcheck Software Version 4.1.5.5 Inspection Checklist

Requirements: 100.0% were addressed directly in the COMcheck software  
 Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 (PR2) <sup>1</sup>	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.11 (PR38) <sup>3</sup>	New parking garages and new parking lots powered by the energy services for a building, and with 10 or greater parking spaces, provide either: 1. Panel capacity and conduit for the future installation of minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces; or 2. Minimum 208/240V 40-amp outlets for 5 percent of the total parking spaces and not less than two parking spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

**Additional Comments/Assumptions:**

Project Title: Firehouse Report date: 05/12/23  
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Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2 (F09) <sup>1</sup>	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature, future connection to controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

**Additional Comments/Assumptions:**

Project Title: Firehouse Report date: 05/12/23  
 Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Firehouse COMCheck.c Page 3 of 10

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 (PL6) <sup>1</sup>	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.5, C404.5.1, C404.5.2 (PL6) <sup>1</sup>	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.6.3 (PL7) <sup>1</sup>	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.6.3 (PL7) <sup>1</sup>	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.7 (PL8) <sup>1</sup>	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C404.7 (PL8) <sup>1</sup>	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

**Additional Comments/Assumptions:**

Project Title: Firehouse Report date: 05/12/23  
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Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 (ME41) <sup>1</sup>	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.11.3 (ME61) <sup>2</sup>	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.11.3 (ME61) <sup>2</sup>	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.8.1 (ME65) <sup>1</sup>	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.8.1 (ME65) <sup>1</sup>	HVAC fan systems at design conditions do not exceed allowable fan system motor nameplate hp or fan system bhp.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.8.3 (ME117) <sup>1</sup>	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.8.3 (ME117) <sup>1</sup>	Fans have efficiency grade (FEG) >= 67. The total efficiency of the fan at the design point of operation <= 15% of maximum total efficiency of the fan.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.12.1 (ME71) <sup>2</sup>	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.3.3 (ME55) <sup>1</sup>	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.
C405.8.1 (ME36) <sup>3</sup>	New traction elevators with a rise of 75 feet or more have a power conversion system that complies as follows: C405.8.1.1 Induction motors with a Class IE2 efficiency ratings are used. C405.8.1.1.2 Transmissions does not reduce the efficiency of the combined motor/transmission below that shown for the Class IE2 motor for elevators with capacities below 4,000 lbs. C405.8.1.1.3 Potential energy released during motion recovered with a regenerative drive that supplies electrical energy to the building electrical system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

**Additional Comments/Assumptions:**

Project Title: Firehouse Report date: 05/12/23  
 Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Firehouse COMCheck.c Page 5 of 10

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C405.10 (ME37) <sup>3</sup>	Commercial kitchen equipment shall comply with the minimum efficiency requirements of Tables C405.9(1) through table C405.9(5).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.2 (ME59) <sup>1</sup>	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.7.1 (ME59) <sup>1</sup>	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.2 (ME115) <sup>1</sup>	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.6 (ME141) <sup>1</sup>	HVAC systems serving guestrooms in Group R-3 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.7.4 (ME57) <sup>1</sup>	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.7.5 (ME116) <sup>1</sup>	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and safety hood rating requirements and maximum exhaust rate criteria. See section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.11.1 (ME60) <sup>2</sup>	HVAC ducts and plenums insulated in accordance with C403.11.1 and C403.11.2, verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.4.1 (ME63) <sup>2</sup>	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 55F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.10 (ME123) <sup>3</sup>	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

**Additional Comments/Assumptions:**

Project Title: Firehouse Report date: 05/12/23  
 Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Firehouse COMCheck.c Page 6 of 10

**Additional Comments/Assumptions:**

Project Title: Firehouse Report date: 05/12/23  
 Data filename: P:\2023\2023.039 - Champlain Migrant Houses\Trade Assets\Mech\Calc\Firehouse COMCheck.c Page 7 of 10

**Additional Comments/Assumptions:**

Project Title: Firehouse Report date: 05/12/23  
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# STABLES

**CLIENT**  
 Essex County  
 7551 Court Street P.O. Box 217  
 Elizabethtown, NY 12932  
 518.873.3895

**ARCHITECT**  
 david cunningham architecture planning pllc  
 543 Union Street Suite 1C  
 Brooklyn NY 11215  
 718.208.0815

**ASSOCIATE ARCHITECT**  
 Civic Architecture Workshop PLLC  
 543 Union Street Suite 1C  
 Brooklyn NY 11215  
 917.501.7337

**ENGINEER: STRUCTURAL**  
 Old Structures Engineering  
 90 Broad Street Suite 1501  
 New York NY 10004  
 212.244.4546

**ENGINEER: MEP**  
 EP Engineering LLC  
 110 William Street 32nd Floor  
 New York NY 10038  
 212.257.6190

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**ESSEX COUNTY FARMWORKER HOUSING RENOVATION**  
 Stables  
 10 Marks Road  
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 ENERGY COMPLIANCE CERTIFICATES (1 OF 2)  
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