



34 Myrtle St. #3 Boston, MA

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Mini-split installation: Application summary

- In **May, 2024**, I closed on the **purchase of my new home at 34 Myrtle St. #3**
- Today, I am **seeking the Beacon Hill Architectural Commission's approval to install a Ductless Air Conditioning System** (also known as 'mini-split' system)
- The **mini-split system requires the condenser be installed externally** for venting purposes
- As a part of this project, **I am proposing the condenser be installed on the outside of the rear wall in the private, back entrance for 34 Myrtle**
 - While the proposed location is in a 'private' walkway for 34 Myrtle, **the unit would be visible from a public walkway behind the Myrtle St. playground**
- The **logistics of the project** are as follows:
 - Total cost of the installation is ~\$15k
 - The bulk of the installation would be internal (e.g., running lines)

Mini-split installation: Condenser installation process (1/3)

- Lines / wiring installed internally, with thin-profile compressor installed on the **rear exterior of the building (about 5' to 7' above the back alley door)**
 - The compressor would connect to the internal system with a wire connected through a ~3" diameter punch hole
- The **compressor would be 27' 9/16" by 35' 7/16"**
- **Metal "evaporation pan" underneath the system to catch any dripping**, which would be disposed of via an external or internal drip line (if external, the drip line would be positioned away from the doorframe)
 - In general, mini-split systems produce less condensation given the heat exchange process/condensation occurs indoors
- The **maximum sound is 51 decibels (db), compared to the 60db of the Frigidaire window** units left to me by the previous tenant ([link](#))
 - Mini-split system would produce a decibel level 57.5% lower than the decibel level of the two combined window units
 - According to generally accepted industry standards, 50 db is considered "quiet," equating to that of a refrigerator ([link](#))

Mini-split installation: Condenser installation process (2/3)

ESTIMATE FOR SUPPLY & INSTALLATION OF NEW FUJITZU MINI SPLIT SYSTEM

SYSTEM TO CONSIST OF 1 FUJITZU AOU24RLXFZH OUTDOOR CONDENSOR TO BE WALL MOUNTED ABOVE REAR DOORWAY, 1 FUJITZU ASUH07LPAS & 1 ASUH18LPAS INDOOR UNITS WITH ALL NECESSARY REFRIGERATION LINES, DRAIN PIPING & COMMUNICATION CABLE.

LABOR & MATERIALS \$11,500

SUPPLY & INSTALLATION OF INDOOR REFRIGERATION LINES, DRAIN PIPING & COMMUNICATION CABLE FOR FUTURE USE.

LABOR & MATERIALS \$3,100

Mini-split installation: Condenser installation process

(3/3)

PRODUCT FEATURES

Operate as few as one indoor unit or all indoor units
 Mix & match from 4 indoor unit styles
 Blue-fin condenser coil coating



CONNECTABLE INDOOR UNITS	
TYPE	Slim Duct (ADUH)
	Wall Mount (ASU/ASUH)
	Compact Cassette (ACUH)
	Floor Mount (AGU)
NUMBER	2 to 3
DIMENSIONS:	

Units: In. (mm)

MODEL NUMBERS				
Outdoor Unit	AOU24RLXFZ			
System	24RLXFZ			
EFFICIENCIES				
Indoor Unit Type	Non - Ducted	Ducted	Mix	
SEER	18	15.5	16.75	
SEER2	18.5	16	17.25	
EER	12.5	10.6	11.55	
EER2	12.5	10.6	11.55	
HSPF	9.5	9.0	9.3	
HSPF2	8.7	8.5	8.6	
COP	Btu/hW	4.04	3.42	3.73
COP	kW/kW	13.8	11.7	12.7
COP2	Btu/hW	4.04	3.42	3.73
COP2	kW/kW	13.8	11.7	12.7
OUTDOOR TEMPERATURE OPERATION RANGE				
Cooling	F(°C)	14 to 115 (-10 to 46)		
Heating	F(°C)	5 to 75 (-15 to 24)		
CAPACITIES				
Total Capacity Range	Rated	14,000 - 27,000		
Cooling	Min.-Max.	22,000		
	Btu/h	6,100 - 27,000		
Heating	Rated	24,000		
	Min.-Max.	6,800 - 29,800		
LINESET REQUIREMENTS				
Connection Method	Flare			
Liquid	Ø1/4 (Ø6.35) × 3			
Gas	Ø3/8 (Ø9.52) × 2 + Ø1/2 (Ø12.7) × 1			
Pre-charge length (Total)	98 (30)			
Max. length (Total)	164 (50)			
Max. length (Each)	82 (25)			
Min. length (Total)	49 (15)			
Min. length (Each)	16 (5)			
Max. height difference	49 (15)			
Max. height difference between indoor units	33 (10)			
OUTDOOR DIMENSIONS & WEIGHT				
Net (H x W x D)	In (mm)	27-9/16 × 35-7/16 × 13 (700 × 900 × 330)		
Gross (H x W x D)	In (mm)	34-1/16 × 41-5/16 × 17-1/2 (865 × 1,050 × 445)		
Net Weight	Lb (kg)	124 (56)		
Gross Weight	Lb (kg)	141 (64)		

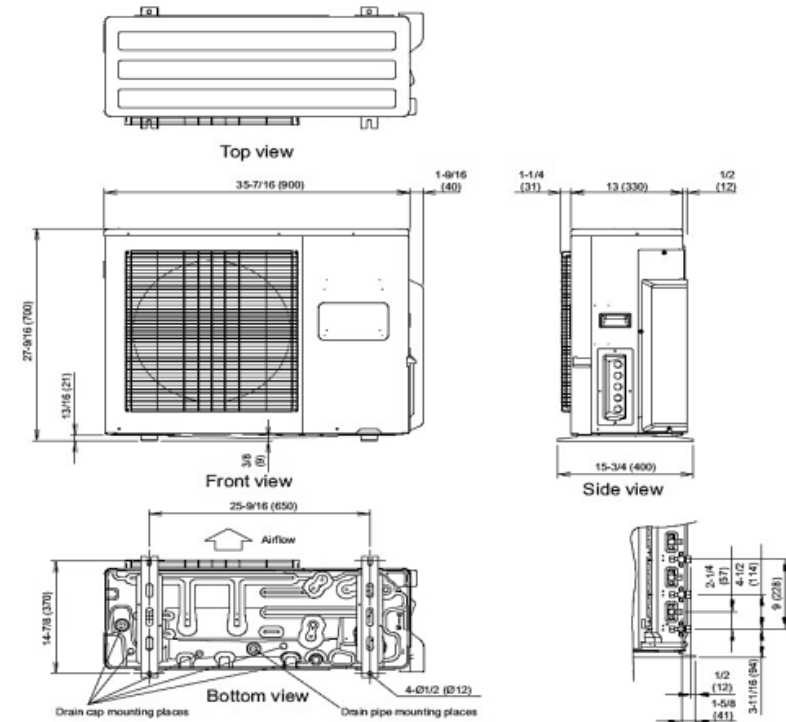
Warranty Information

7 Year Compressor, 5 Year Parts
 7 Year Compressor, 5 Year Parts out-of-the-box Warranty

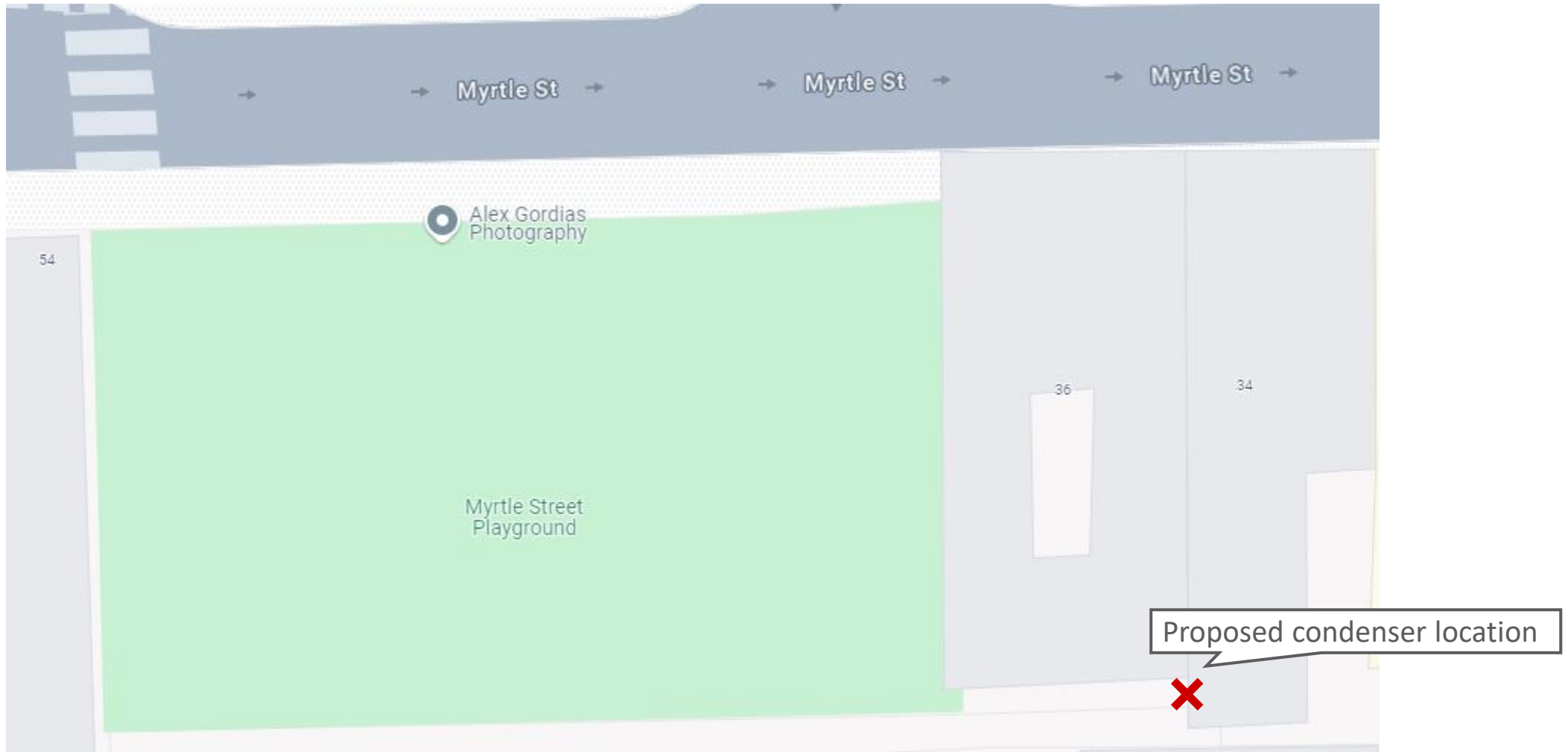
10 Year Compressor, 10 Year Parts
 10 Year Compressor, 10 Year Parts Warranty when registered within 60 days of installation in a residence

12 Year Compressor, 12 Year Parts
 12 Year Compressor, 12 Year Parts Warranty when registered within 60 days of installation in a residence, and installed by a Fujitsu Elite contractor

SOUND PRESSURE			
Outdoor Unit	Cooling	dB (A)	
	Heating	51	
		52	
FAN DATA			
Outdoor Unit	Cooling	CFM (m3/h)	1,942 (3,300)
Airflow rate	Heating	CFM (m3/h)	1,942 (3,300)
ELECTRICAL SPECIFICATIONS			
Indoor Unit Type	Non - Ducted	Ducted	Mix
Voltage/Frequency/Phase	1Ø 208/230 V 60 Hz		
Available Voltage Range	187-264V		
Current	Cooling	7.7	9.1
	Heating	7.6	9
Maximum Operating Current	13.7		
Starting current	9		
MCA	17		
Maximum Circuit Breaker	20		
Rated Input	Cooling	1.76	2.08
Power	Heating	1.73	2.05
Max. Input Power	Cooling	2.6	2.84
	Heating	2.93	2.93



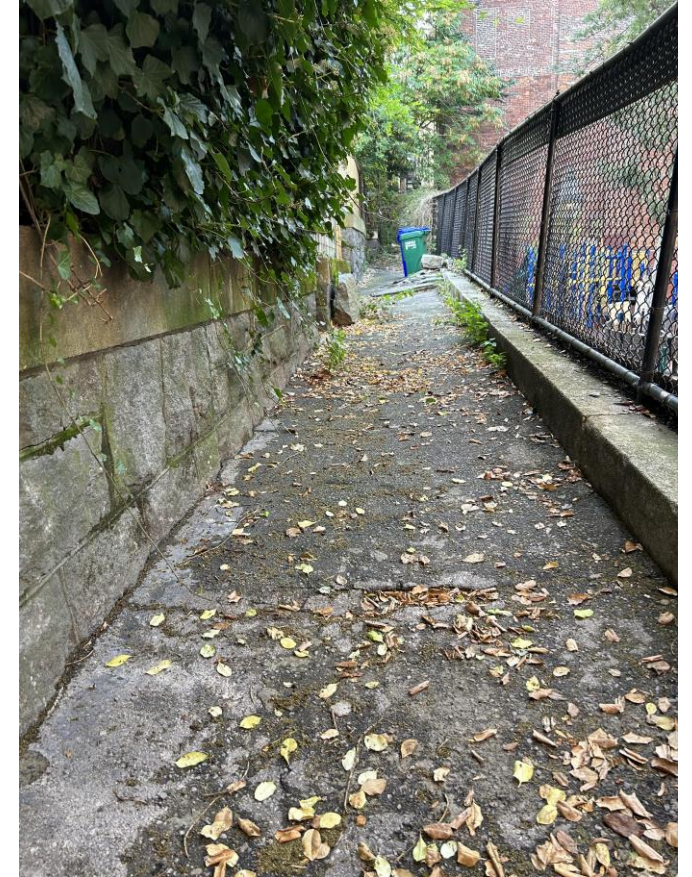
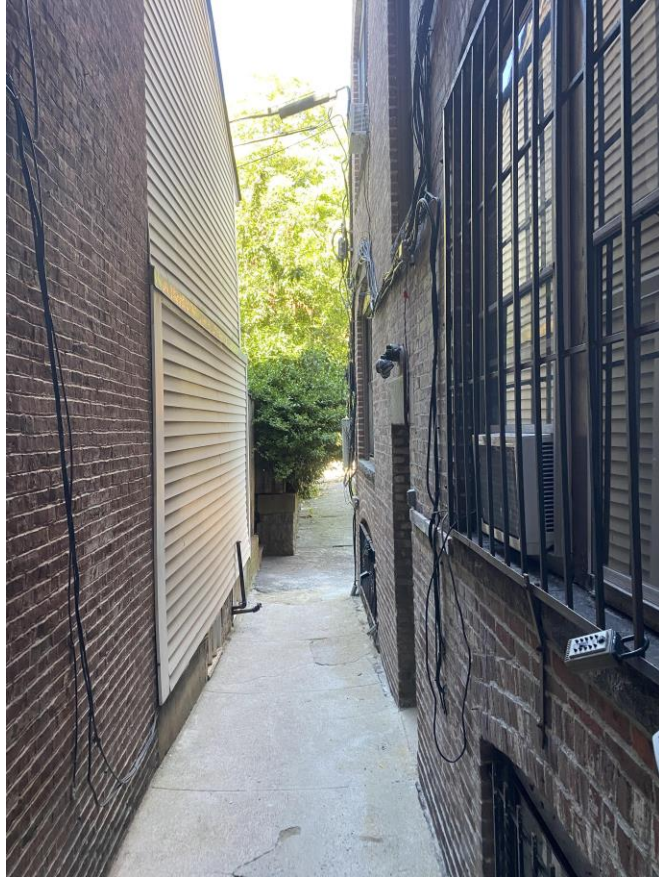
Mini-split installation: Proposed installation location (1/3)



Mini-split installation: Proposed installation location – location of proposed mini-split condenser (2/3)

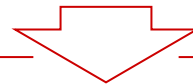


Mini-split installation: Proposed installation location -
Public pathway from which condenser is visible (3/3)



Mini-split installation: Benefits / other considerations for request

- No air conditioning unit in Myrtle Street windows, which can be an “eye-sore” and cause dripping on the sidewalk
- Safety, given increased incidences of high-heat summers
- More ‘central’ circulation / temperature control lowers environmental footprint
- Modernizes living space with little impact to ‘charm’ of building



Historic properties like 34 Myrtle are becoming increasingly special, resulting in the need for innovative solutions to preserve and protect them

Questions

