

# Charles Washington Hall

## RENOVATIONS

Corner of George & Washington Streets  
Charles Town, W.Va.

For the  
City of Charles Town  
City of Ranson

Planning & Engineering (prime)  
Hall Planning & Engineering, Inc  
316 Williams Street  
Tallahassee, FL 32303

Landscape Architecture  
Stromberg/Garrigan & Assoc., Inc.  
102 E. Main Street-The Penn Bldg  
Somerset, PA 15501

Historic Preservation & Architecture  
Landmarks SGA, LLC  
102 E. Main Street-The Penn Bldg  
Somerset, PA 15501

Structural Engineer  
R.L. Silman Associates  
1053 31st Street NW  
Washington D.C. 20007

Mech/Elect Engineer  
Comfort Design, Inc.  
620 Pennsylvania Avenue  
Winchester, VA 22601

Architect



Issue/Revision Seal  
REVISED VRF MARCH 4, 2015



Drawing Title



## Mechanical Schedules & Details

Date 9/26/14  
Scale: As Shown Project Number 11105  
Drawing Number

# M1.2

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| <b>CITY MULTI</b> Model: <b>PV FY-P48E00B</b> <b>MITSUBISHI ELECTRIC</b><br>Manufactured for MITSUBISHI ELECTRIC US, INC.  |  |
| Job Name:  | Date:  |
| Schedule Reference:  | Date:  |
| <b>AHU-1</b><br>  | <b>SPECIFICATIONS</b><br><b>Capacity*</b><br>Cooling.....48,000 Btu/h<br>Heating.....54,000 Btu/h<br><b>Power</b><br>Power Source.....1-phase, 208 / 230V, 60Hz<br><b>Power Consumption</b><br>Cooling.....0.29 / 0.29 kW<br>Heating.....0.29 / 0.29 kW<br><b>Current</b><br>Cooling.....1.62 / 1.47 A<br>Heating.....1.62 / 1.47 A<br>Minimum Circuit Ampacity (MCA).....2.02 A<br>Maximum Overcurrent Protection (MOCP) Fuse.....15 A<br><b>External Finish</b> .....Pre-painted heavy-gauge steel<br><b>External Dimensions</b><br>Inches.....58-3/4 H x 24-1/2 W x 21-3/4 D<br>mm.....1,492 H x 622 W x 552 D<br><b>Net Weight</b><br>Unit.....160 lbs. / 73 kg<br><b>Coil Type</b> .....Cross Fin<br>(Aluminum Plate Fin and Copper Tube)<br><b>Fan</b><br>Type x Quantity.....Forward Curved Blower x 1<br><b>Airflow Rate (Low-Mid-High)</b> .....1,072 - 1,310 - 1,414 CFM<br><b>External Static Pressure</b><br>In. WG.....0.30 / 0.50 / 0.80 (Selectable)<br><b>Motor Type</b> .....High Efficiency DC (ECM)<br><b>Refrigerant Piping Dimensions</b><br>Liquid (High Pressure).....3/8" / 9.52 mm (Brazed)<br>Gas (Low Pressure).....5/8" / 15.88 mm (Brazed)<br><b>Drain Connections</b><br>Primary and Secondary.....FPT 3/4" / 19.05 mm<br><b>Sound Data (Low - Mid - High)</b><br>(measured at medium static setting)<br>Sound Pressure Levels.....38 - 39 - 39 dB(A)<br>Sound Power Levels.....52 - 53 - 54 dB(A)<br>* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:<br>Cooling   Indoor: 80° F (27° C) DB / 67° F (19° C) WB<br>Cooling   Outdoor: 95° F (35° C) DB<br>Heating   Indoor: 70° F (21° C) DB<br>Heating   Outdoor: 47° F (8° C) DB / 43° F (6° C) WB<br><b>OPTIONS</b><br><input type="checkbox"/> External Heater Adapter.....CN24RELAY-KIT-CM3<br><input type="checkbox"/> Downflow Conversion Kit.....DFK-3 |
| <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Dual set point functionality</li> <li>Increased static capabilities</li> <li>Extra set of contacts included on fan relays if energizing economizer is needed</li> <li>Concealed air handler can be operated in a vertical or horizontal left airflow position</li> <li>Designed specifically for use with CITY MULTI® outdoor units</li> <li>Ideal for installations in closets, attics, or equipment rooms where space is limited</li> <li>Choice of three fan speeds for optimum comfort</li> <li>Highly efficient DC motor and a forward curved blower ensures quiet, consistent fan operation</li> <li>Plug-in connection for auxiliary heat with optional relay kit</li> <li>Control board includes a condensate overflow switch connection</li> <li>Pre-painted heavy-gauge steel cabinets with 1" insulation feature an R-4.2 insulation value</li> </ul> | <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Single phase</li> <li>Dual set point functionality</li> <li>DC Motor</li> <li>Static Pressure Features</li> <li>Adjustable up to 1"</li> <li>No change in static pressure with voltage change</li> <li>Side access control panel</li> <li>Flexibility in duct configuration</li> <li>Choice of fan speed</li> </ul>  |
| Notes:   | <b>OPTIONS</b><br><input type="checkbox"/> Joint Adapter (Port Connector).....CMY-R160C-J<br><input type="checkbox"/> Drain pump.....PAC-KE05DM-F<br><input type="checkbox"/> External Heater Adapter.....CN24RELAY-KIT-CM3<br><input type="checkbox"/> Filter Box (With 4" MERV 13 filter).....FBH4-4<br>* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:<br>Cooling   Indoor: 80° F (27° C) DB / 67° F (19° C) WB, Outdoor 95° F (35° C) DB<br>Heating   Indoor: 70° F (21° C) DB, Outdoor 47° F (8° C) DB / 43° F (6° C) WB   |
| Specifications are subject to change without notice.<br>© 2013 Mitsubishi Electric US, Inc.  |   |

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| <b>CITY MULTI</b> Model: <b>PEFY-P72NMHSU-E</b> <b>MITSUBISHI ELECTRIC</b>  |  |
| Job Name: Charles Washington Hall   | Date:  |
| Schedule Reference:   | Date: 3/5/15   |
| <b>AHU-2,3,4</b><br>  | <b>SPECIFICATIONS</b><br><b>Capacity*</b><br>Cooling.....72,000 Btu/h<br>Heating.....80,000 Btu/h<br><b>Power</b><br>Power Source.....208 / 230V, 1-phase, 60 Hz<br><b>Power Consumption</b><br>Cooling.....0.63 kW<br>Heating.....0.63 kW<br><b>Current</b><br>Cooling.....3.67/3.32A<br>Heating.....3.67/3.32A<br>Minimum Circuit Ampacity (MCA).....7.7 A<br>Maximum Overcurrent Protection (MOCP) Fuse.....15 A<br><b>External Finish</b> .....Galvanized-steel Sheet<br><b>External Dimensions</b><br>Inches.....18-9/16 H x 49-1/4 W x 44-1/8 D<br>mm.....470 H x 1,250 W x 1,120 D<br><b>Net Weight</b><br>Unit.....214 lbs / 97 kg<br><b>Coil Type</b> .....Cross Fin<br>(Aluminum Plate Fin and Copper Tube)<br><b>Fan</b><br>Type x Quantity.....Sirocco Fan x 2<br>Airflow Rate (Low-Mid-High).....1,766 - 2,154 - 2,542 CFM<br>External Static Pressure.....0.20-0.40-0.60-0.80-1.00 "WG<br>(External static pressure is factory set to 0.60"WG)<br>Motor Type.....DC Brushless Motor<br><b>Refrigerant Piping Dimensions</b><br>Liquid (High Pressure).....3/8" / 9.52 mm (Brazed)<br>Gas (Low Pressure).....3/4" / 19.05 mm (Brazed)<br><b>Drainpipe Dimension</b> .....O.D. 1-1/4" / 32 mm<br><b>Sound Pressure Levels (Low-Mid-High)</b><br>Low-Mid-High.....36-39-43dB(A)<br>* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:<br>Cooling   Indoor: 80° F (27° C) DB / 67° F (19° C) WB, Outdoor 95° F (35° C) DB<br>Heating   Indoor: 70° F (21° C) DB, Outdoor 47° F (8° C) DB / 43° F (6° C) WB |
| <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Single phase</li> <li>Dual set point functionality</li> <li>DC Motor</li> <li>Static Pressure Features</li> <li>Adjustable up to 1"</li> <li>No change in static pressure with voltage change</li> <li>Side access control panel</li> <li>Flexibility in duct configuration</li> <li>Choice of fan speed</li> </ul> | <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Dual set point functionality</li> <li>Increased static capabilities</li> <li>Extra set of contacts included on fan relays if energizing economizer is needed</li> <li>Concealed air handler can be operated in a vertical or horizontal left airflow position</li> <li>Designed specifically for use with CITY MULTI® outdoor units</li> <li>Ideal for installations in closets, attics, or equipment rooms where space is limited</li> <li>Choice of three fan speeds for optimum comfort</li> <li>Highly efficient DC motor and a forward curved blower ensures quiet, consistent fan operation</li> <li>Plug-in connection for auxiliary heat with optional relay kit</li> <li>Control board includes a condensate overflow switch connection</li> <li>Pre-painted heavy-gauge steel cabinets with 1" insulation feature an R-4.2 insulation value</li> </ul>   |
| Notes:  | <b>OPTIONS</b><br><input type="checkbox"/> External Heater Adapter.....CN24RELAY-KIT-CM3<br><input type="checkbox"/> Downflow Conversion Kit.....DFK-3   |
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| <b>CITY MULTI</b> Model: <b>PV FY-P54E00B</b> <b>MITSUBISHI ELECTRIC</b><br>Manufactured for MITSUBISHI ELECTRIC US, INC.  |  |
| Job Name: Charles Washington Hall  | Date:  |
| Schedule Reference:  | Date: 3/5/15   |
| <b>AHU-5A,5B,6</b><br>  | <b>SPECIFICATIONS</b><br><b>Capacity*</b><br>Cooling.....54,000 Btu/h<br>Heating.....60,000 Btu/h<br><b>Power</b><br>Power Source.....1-phase, 208 / 230V, 60Hz<br><b>Power Consumption</b><br>Cooling.....0.32 / 0.32 kW<br>Heating.....0.32 / 0.32 kW<br><b>Current</b><br>Cooling.....1.63 / 1.48 A<br>Heating.....1.63 / 1.48 A<br>Minimum Circuit Ampacity (MCA).....2.04 A<br>Maximum Overcurrent Protection (MOCP) Fuse.....15 A<br><b>External Finish</b> .....Pre-painted heavy-gauge steel<br><b>External Dimensions</b><br>Inches.....58-3/4 H x 24-1/2 W x 21-3/4 D<br>mm.....1,492 H x 622 W x 552 D<br><b>Net Weight</b><br>Unit.....168 lbs. / 76 kg<br><b>Coil Type</b> .....Cross Fin<br>(Aluminum Plate Fin and Copper Tube)<br><b>Fan</b><br>Type x Quantity.....Forward Curved Blower x 1<br><b>Airflow Rate (Low - Mid - High)</b> .....1,224 - 1,519 - 1,565 CFM<br><b>External Static Pressure</b><br>In. WG.....0.30 / 0.50 / 0.80 (Selectable)<br><b>Motor Type</b> .....High Efficiency DC (ECM)<br><b>Refrigerant Piping Dimensions</b><br>Liquid (High Pressure).....3/8" / 9.52 mm (Brazed)<br>Gas (Low Pressure).....5/8" / 15.88 mm (Brazed)<br><b>Drain Connections</b><br>Primary and Secondary.....FPT 3/4" / 19.05 mm<br><b>Sound Data (Low - Mid - High)</b><br>(measured at medium static setting)<br>Sound Pressure Levels.....40 - 42 - 42 dB(A)<br>Sound Power Levels.....54 - 56 - 57 dB(A)<br>* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:<br>Cooling   Indoor: 80° F (27° C) DB / 67° F (19° C) WB<br>Cooling   Outdoor: 95° F (35° C) DB<br>Heating   Indoor: 70° F (21° C) DB<br>Heating   Outdoor: 47° F (8° C) DB / 43° F (6° C) WB<br><b>OPTIONS</b><br><input type="checkbox"/> External Heater Adapter.....CN24RELAY-KIT-CM3<br><input type="checkbox"/> Downflow Conversion Kit.....DFK-3 |
| <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Dual set point functionality</li> <li>Increased static capabilities</li> <li>Extra set of contacts included on fan relays if energizing economizer is needed</li> <li>Concealed air handler can be operated in a vertical or horizontal left airflow position</li> <li>Designed specifically for use with CITY MULTI® outdoor units</li> <li>Ideal for installations in closets, attics, or equipment rooms where space is limited</li> <li>Choice of three fan speeds for optimum comfort</li> <li>Highly efficient DC motor and a forward curved blower ensures quiet, consistent fan operation</li> <li>Plug-in connection for auxiliary heat with optional relay kit</li> <li>Control board includes a condensate overflow switch connection</li> <li>Pre-painted heavy-gauge steel cabinets with 1" insulation feature an R-4.2 insulation value</li> </ul> | <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Dual set point functionality</li> <li>Increased static capabilities</li> <li>Extra set of contacts included on fan relays if energizing economizer is needed</li> <li>Concealed air handler can be operated in a vertical or horizontal left airflow position</li> <li>Designed specifically for use with CITY MULTI® outdoor units</li> <li>Ideal for installations in closets, attics, or equipment rooms where space is limited</li> <li>Choice of three fan speeds for optimum comfort</li> <li>Highly efficient DC motor and a forward curved blower ensures quiet, consistent fan operation</li> <li>Plug-in connection for auxiliary heat with optional relay kit</li> <li>Control board includes a condensate overflow switch connection</li> <li>Pre-painted heavy-gauge steel cabinets with 1" insulation feature an R-4.2 insulation value</li> </ul>   |
| Notes:   | <b>OPTIONS</b><br><input type="checkbox"/> External Heater Adapter.....CN24RELAY-KIT-CM3<br><input type="checkbox"/> Downflow Conversion Kit.....DFK-3   |
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PROVIDE & INSTALL COMPLETE THE S.S. EXHAUST HOOD AS FOLLOWS:

**Item 2 - EXHAUST HOOD (1 REQ'D)**

- Captive-Aire
- 5424ND-2-PSP-F - 12ft 0" Long Exhaust-Only Wall Canopy Hood with Front Perforated Supply Plenum with Built-in 3" Back Standoff
- 430 SS Where Exposed
- Fire Cabinet on the Right Side (Additional charges may apply for cabinet if not sold with fire system)
- FILTER - 16" tall x 16" wide Kleen-Gard Stainless Steel Baffle Filter with Handles and Bottom Hanging Hook, UL Classified
- FILTER - 16" tall x 20" wide Kleen-Gard Stainless Steel Baffle Filter with Handles and Bottom Hanging Hook, UL Classified
- Incandescent Light Fixture-High Temp Assembly, Includes Clear Thermal and Shock Resistant Globe (L55 Fixture), Bulbs By Others
- EXHAUST RISER - Factory installed 10" X 25"
- SUPPLY RISER - 14" Square to 12" Round Supply Collar with 12" Round Volume Damper.
- Nailor 1090 Series.
- 1/2 Pint Grease Cup New Style, Flanged Slotted
- INSULATION FOR BACK OF HOOD
- Electrical Package Installation in Utility Cabinet by Plant.

- 1 ea ANSUL-3.0/3.0 Ansul 6 gallon Fire System in Utility Cabinet (includes pre-piped hood(s) with detection, tank(s), release mechanism, microswitches and pull station).
- Includes piping for hood: 1.
- GAS VALVE - 2" Mechanical Shutoff Valve (Ansul)(28-55610); SUPPLIED BY DISTRIBUTOR
- 1 ea NCA16FA Belt Drive Centrifugal Upblast Exhaust Fan with 18.75" wheel Exhaust Fan handles 2700 CFM @ -1.000" wc ESP, Fan runs at 1020 RPM. Exhaust Motor: 1.000 HP, 1 Phase 230 V, 60Hz, 6.8 FLA, ODP (Open Drip Proof) - Grease Cup for kitchen-duty centrifugal exhaust fans, Box Dimensions 15-3/4 L X 5-1/16 W X 3-3/4 H (18 GA.) (Includes Down Spout)
- 1 ea A1-G10 Untempered Supply Unit with 10" Blower in Size #1 Housing Supply Fan handles 2160 CFM @ 0.375" wc ESP, Fan runs at 752 RPM. Supply Motor: 0.750 HP, 1 Phase 230 V, 60Hz, 5.4 FLA, ODP (Open Drip Proof) Down Discharge - Air Flow Right -> Left - Sloped Filtered Intake for Size #1 Modular Untempered Supply Unit. 21.813" Wide x 44.375" Long x 23.375" High. Includes 2" MV EZ Kleen Metal Mesh Filters.
- 1 ea Curb CRB26.5x20E On Fan # 1 4.000:12.000 Pitch - HINGE KIT - Standard Hinge kit for exhaust fan roof curbs. Includes Hardware to attach hinge to curb and hinge to base. Ships Loose. Used on Fans with wheels 20 inches or smaller. 12 GA Galvanized.
- Vented Base for Curb
- 1 ea Curb CRB21X20 On Fan # 2 4.000:12.000 Pitch
- 1 ea 211110KT 220V/1PH, W/ 1 Exhaust Fan, 1 Supply Fan, Exhaust in Fire, Lights out in Fire, Fan On/Off Thermostatically Controlled. Includes1 Duct Thermostat
- 1 ea - IN-LINE DUCT HEATER. BTU Model MR-1624-21-1@240V. 35 Degree Temp Rise at 2200 CFM
- 1 ea - FIELD WRAPPER 18.00" High Front, Left, Right - BACKSPLASH 80.00" High X 156.00" Long 430 SS (Includes End Caps & Divider Bars)

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| <b>CITY MULTI</b> Model: <b>PEFY-P24NMAU-E3</b> <b>MITSUBISHI ELECTRIC</b>   |   |
| Job Name:  | Date:   |
| Schedule Reference:  | Date:   |
| <b>AHU-7</b><br>  | <b>SPECIFICATIONS</b><br><b>Capacity*</b><br>Cooling.....24,000 Btu/h<br>Heating.....27,000 Btu/h<br><b>Power</b><br>Power Source.....208 / 230V, 1-phase, 60Hz<br><b>Power Consumption</b><br>Cooling.....0.17 kW<br>Heating.....0.15 kW<br><b>Current</b><br>Cooling.....1.31 A<br>Heating.....1.20 A<br>Minimum Circuit Ampacity (MCA).....2.73 A<br>Maximum Overcurrent Protection (MOCP) Fuse.....15 A<br><b>External Finish</b> .....Galvanized-steel Sheet<br><b>External Dimensions</b><br>Inches.....9-7/8 H x 43-5/16 W x 28-7/8 D<br>mm.....250 H x 1,100 W x 732 D<br><b>Net Weight</b><br>Unit.....67 lbs. / 30 kg<br><b>Coil Type</b> .....Cross Fin<br>(Aluminum Plate Fin and Copper Tube)<br><b>Fan</b><br>Type x Quantity.....Sirocco Fan x 2<br>Airflow Rate (Low-Mid-High).....618 - 742 - 883 CFM<br>External Static Pressure.....0.14 - 0.20 - 0.28 - 0.40 - 0.60"WG<br>Motor Type.....DC Motor<br><b>Air Filter</b> .....Polypropylene Honeycomb<br><b>Refrigerant Piping Dimensions</b><br>Liquid (High Pressure).....3/8" / 9.52 mm (Brazed)<br>Gas (Low Pressure).....5/8" / 15.88 mm (Brazed)<br><b>Drainpipe Dimension</b> .....O.D. 1-1/4" / 32 mm<br><b>Sound Pressure Levels</b><br>Low-Mid-High.....30 - 34 - 39 dB(A)<br>* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:<br>Cooling   Indoor: 80° F (27° C) DB / 67° F (19° C) WB<br>Cooling   Outdoor: 95° F (35° C) DB<br>Heating   Indoor: 70° F (21° C) DB<br>Heating   Outdoor: 47° F (8° C) DB / 43° F (6° C) WB<br><b>OPTIONS</b><br><input type="checkbox"/> External Heater Adapter.....CN24RELAY-KIT-CM3<br><input type="checkbox"/> Filter Box (Includes 2" MERV 13 filter).....FBM2-3 |
| <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Dual set point functionality</li> <li>Multiple fan speed settings</li> <li>Auto fan mode</li> <li>9-7/8" (250mm) high for low ceiling heights</li> <li>Built-in condensate lift, lifts to 27-9/16" (700 mm)</li> <li>Ducted fan coil supporting multiple configurations for flexible installation</li> </ul> | <b>GENERAL FEATURES</b><br><ul style="list-style-type: none"> <li>Single phase</li> <li>Dual set point functionality</li> <li>DC Motor</li> <li>Static Pressure Features</li> <li>Adjustable up to 1"</li> <li>No change in static pressure with voltage change</li> <li>Side access control panel</li> <li>Flexibility in duct configuration</li> <li>Choice of fan speed</li> </ul>   |
| Notes:   | <b>OPTIONS</b><br><input type="checkbox"/> External Heater Adapter.....CN24RELAY-KIT-CM3<br><input type="checkbox"/> Filter Box (Includes 2" MERV 13 filter).....FBM2-3   |
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