SPECIFICATIONS

For

CENTRAL PACKAGED SPLIT SYSTEM ELECTRIC HEAT PUMPS (with ductwork)

AND

WORK SUMMARY MASONRY WALL REPAIRS / INFILL AND BRACKET MOUNTING SPECIFICATIONS

PARKFAIRFAX CONDOMINIUM UNIT OWNERS ASSOCIATION

3360 GUNSTON ROAD

ALEXANDRIA, VA 22302

Adopted June 19, 2013

The Specifications for Central Packaged Split System Electric Heat Pumps was first adopted by the Parkfairfax Condominium Board of Directors on May 17, 2010. The Specifications were originally written by the Ted Ross Consulting Company and have gone through a through revision in this document.

The WORK SUMMARY MASONRY WALL REPAIRS / INFILL AND BRACKET MOUNTING SPECIFICATIONS were written by Structural Rehabilitation Group (SRG) under PROJECT # R10004.10 adopted in March 2010.

Date Revised	Revisions Included
June 19, 2013	Changes included the addition of specs for the installation of ground unit compressors in front of the unit; application processes defined;
January 20, 2016	Changes included providing for method to install ground mounted compressors at certain units.
September 23, 2019	Changes to include 6 new addresses to allow for ground installation w/exterior mounted line sets for 3rd level units.

Homeowner Information Package

Specifications for

Installation of Central Packaged Split System

Electric Heat Pumps

NOTE: Although the specifications call for the contractor to assume certain responsibilities related to the actual installation of the system, the Unit Owner ("Owner") will be held responsible by the Parkfairfax Unit Owners Association ("Association") for all requirements outlined in the specifications.

I. General

This information package describes the Owner's responsibilities for the replacement of existing through-the-wall PTAC units with central packaged split system electric heat pumps that utilize one remote outdoor compressor unit with ductwork inside the condominium unit.

II. Choosing Your System

1. General

- Multiple manufacturers offer systems and equipment that is suitable for installation at Parkfairfax. These include but are not limited to:

  Carrier Model 38QRR (2nd and 3rd level units limited to 2 ton maximum capacity)

- One Outdoor compressor unit shall be installed per assessed condominium unit.
  - Owners of combination units (two or more combined units with multiple assessments) with one or more ground level and one or more upper level condominium unit(s) may place all compressor units on the ground level if more than one compressor unit is required. Should the combination unit subsequently be divided back to separate condominium units, the Owner shall relocate the compressor unit serving the upper level condominium unit to an appropriate location as required by this specification.

2. Outdoor Compressor Specifications

- The outdoor compressor unit shall be horizontal fan discharge.
- The outdoor compressor unit shall have a maximum standard sound rating of 72dB.
- Size:
  - Ground mounted compressor unit dimensions shall be no greater than 46" wide x 30" deep x 40" high and weigh no more than 250 lbs. Please note depth includes the clearance distance from the building.

- Wall mounted compressor unit dimensions shall be no greater than 36" wide x 20" deep x 36" high and weigh no more than 150 lbs. Please note depth includes the clearance distance from the building.

- **Exterior Finish:**
  - The manufacture's casing shall be fabricated of galvanized steel, bonderized, finished with an applied, thermally fused acrylic or polyester powder coating for corrosion protection.
  - The compressor unit must be painted to match the color of the building's brick.
  - In the instances where the compressor has a plastic grill, the grill must also be painted to match the building's brick.
  - Paints formulated for use on metal and plastic and in the appropriate colors are available for purchase through the Association.
  - The Owner is responsible for the ongoing maintenance of the compressor's paint job.

III. Choosing Your Contractor

- All work involved in the installation of the heat pump system (mechanical, electrical, masonry and carpentry) shall be performed by licensed, bonded and insured contractors.
- Contractor(s) must provide the Owner with copies of a valid contractor license and proof of insurance as part of the Non-Routine Change Application Process.
- Contractor(s) must also agree to the technical installation specifications outlined in the Contractor's Information Package. Any installation that does not meet these specifications shall be corrected or removed at the Owner's expense.

IV. City of Alexandria Permits and Inspections

- The Owner shall be responsible for ensuring all applicable City of Alexandria permits are obtained. Depending upon the scope of work, required permits may include mechanical, electrical, building and plumbing.
- Copies of the approved permits are required to be submitted to the Association as part of the Non-Routine Change Application Process.

V. The Application Process

1. General

- All Owners seeking approval from the Association to install a central packaged split electric heat pump system in their unit must follow the procedures outlined in *Administrative Resolution #2, "Design Review Procedures and Guidelines Relating to Units or Common Elements" (AR #2).* A copy of this Resolution can be obtained at the Association Management Office or online at the Association's website, www.parkfairfax.info.
- No changes to the exterior of a unit, or to the common elements, limited common elements, and/or reserved common elements may be made without written application to and approval by the Board of Directors, Covenants Committee, or General Manager as appropriate, except as noted in this Specification.

- Application forms, specifications as well as diagrams describing acceptable exterior unit placement can all be obtained at the Association Management Office or online at the Association's website, www.parkfairfax.info.

2. The Application Package

- A complete application package for the installation of a central packaged electric heat pump system must include the following elements:
  - A completed Non-Routine Change Application.
  - A signed and notarized Parkfairfax indemnification agreement.
  - Installation contractor(s) information including copies of valid professional license(s) and proof of insurance.
  - Name of the masonry contractor from the Association's approved masonry contractor list.
  - Copies of applicable City of Alexandria permits.
  - Description of the central packaged electric heat pump system including manufacturer and model number.
  - A picture and description including dimensions of the exterior appearance of the outdoor compressor unit.
  - A diagram or photograph of the outside of the building with an indication of the proposed location of the compressor unit and any condensate line(s).
    - For ground mounted units also include the dimensions of the pad on which the compressor unit will be set. The foot print of the mounting pad shall not extend more than 2 inches beyond the footprint of any side of the compressor unit. For example, if the footprint of the compressor unit is 35" x 12" the mounting pad shall be no larger than 39" x 16".
    - For wall mounted units also include the type and dimensions of the mounting brackets.
  - The $300 "snowbird" installation fee.
    - Snowbirds are rooftop devices that help prevent snow slides, the dangerous movement of snow and ice, by allowing it to melt completely or drop off in small amounts.
    - An Owner is exempt from the "snowbird" fee when the compressor unit is installed at the gabled end of the building.

3. Submission of Application Package

- Prior to submission of the application, the Owner, Contractor and Association personnel (Parkfairfax Maintenance or Assistant Maintenance Director) **must** meet at the condominium unit where the work is to be performed to review the proposed installation and resolve any questions/issues.
- The Owner should submit a complete Application Package as described above to the Covenants Director at **least 10 working days** prior to a scheduled Covenants Committee meeting. This provides sufficient time for technical review in order for the application to be considered at the next Committee meeting. Covenants Committee meetings are normally held the second Tuesday of each month.

- Upon receipt of the Application Package, it will be reviewed for completeness by the Covenants Director. The Owner will be requested to supply any missing items in order for the application to continue to be processed. Once the package is determined to be complete, it will be submitted to the Maintenance Director or his designee to be reviewed for technical compliance with the Association specifications. If the application meets all specifications it will be forwarded to the Covenants Committee for consideration at its next scheduled meeting.
- The Covenants Director will inform the Owner of the Committee's decision in writing within 10 working days of the meeting**. Work may commence on the installation of the system only after a written letter of approval has been issued by the Covenants Director.**

VI. The Installation Process

1. Locating the Outdoor Compressor Unit

- The Association preference is that, where possible, outdoor compressor units shall be ground mounted in lieu of a wall mount. Units can be installed on front, rear and/or side elevations depending on the specific building type. In the event a ground location is not available, the Association has identified primary and secondary locations for wall mounted compressor units. The Maintenance Director or the Assistant Maintenance Director can assist the Owner in identifying possible wall mount locations and/or a copy of the Association's pre-approved wall mount location(s) for the Owner's building type can be obtained from the Management office.
  - Ground mounted compressor units located along the front building elevation shall be placed adjacent to the façade within 10 feet of the front door (measured along the façade) and shall not visually obstruct any window.
  - Ground mounted compressor units for 3104 Wellington, 3106 Ravensworth, 3623 Greenway, 3604 Valley, and 1622 Ripon may be located along the rear of the building adjacent to the façade of the laundry room beneath their residence. The unit shall be located along the rear-facing wall of the building and shall be placed such that the unit is immediately adjacent to the ground-level residence that shares an interior wall with the laundry room. Only for these specific installations, all lines shall exit the building through a single penetration through common element building space - areas that may not be altered for any other project or installation - as described in Section III.5 of the contractor information portion of the specifications, subject to review and approval by Association staff in advance of the application.
  - Ground mounted units for 1575 MT Eagle, 3714 Gunston Road, 3282 Martha Custis, 3524 Martha Custis, 3470 Martha Custis and 3592 Martha Custis may be located along the rear of the building adjacent to the façade of the laundry room 2 stories beneath their residence. The unit shall be located along the rear-facing wall of the building and shall be placed such that the unit is immediately adjacent to the ground-level residence that shares an interior wall with the laundry room. Only for these specific installations will the line set be allowed to be installed within a HVAC Line Set Cover mounted directly to the building allowing for the run to extend up to and enter the 3rd level units through a single penetration. The same general specifications in section 4 regarding electrical and condensate lines will apply here as well.
  - Wall mounted compressor units shall be mounted to the exterior wall at a minimum of 8 feet off the ground and in accordance with the approved Masonry Wall Repairs/Infill and Bracket Mount Specifications.

- The Owner is responsible for contacting "Miss Utility" or other utility locating service to confirm the locations of public and Parkfairfax owned underground utilities in the vicinity of the proposed outdoor compressor unit location.
- Ground mounted compressor units shall not be located over underground utilities or gutter drains.
- In the event that the utilities are incorrectly marked or the contractor installs the unit too close to utility or gutter drain locations, the Owner is responsible for any costs associated with moving the outdoor compressor unit if required for future access to the underground utilities or gutter drainage systems.

NOTE: The mounting pad must be located at least 8 inches from any gutter drains and access to the drain must not be restricted due to placement of the pad and compressor unit.

- The footprint of the mounting pad shall not extend more than 2 inches beyond the footprint of any side of the compressor unit. (See Section V, The Application Process; Subsection 2, The Application Package)
- The Owner, contractor and Association personnel are required to meet at the condominium unit where the work is to be performed to confirm that the proposed location for the outdoor compressor unit meets all outlined specifications. (See Section V, The Application Process; Subsection 3, Submission of Application Package)

2. Removal of Existing Through-the-Wall PTAC Units

- Existing electric baseboard heating units may remain for reuse with the new central packaged split system electric heat pump system. However, all through-the-wall PTAC units shall be removed. A system consisting of both a central heat pump system and through-the-wall PTAC units will not be allowed.
- The Owner agrees to remove and properly dispose of all existing through-the-wall PTAC units within 90 days of installation of the new system.
- If the outdoor compressor unit is to be installed in front of an existing through-the-wall PTAC unit, the wall opening shall be repaired prior to installation of the outdoor compressor unit.

- **Masonry Repair**
  - The masonry work shall include closing the existing through-the-wall PTAC units' wall penetrations and removal of all debris produced in this work.
  - All penetrations shall be enclosed with approved masonry materials, designed to match the existing brick work on the building.
  - The Association shall provide the Owner with a list of pre-approved masonry contractors for this work.
  - All arrangements for masonry work shall be between the Owner and selected masonry contractor.
  - If the building is painted or whitewashed brick, the Owner shall paint the masonry repair sites to match.

3. Installation of Outdoor Compressor Units

- **Ground Mounted Units**

  - Outdoor ground mounted compressor units shall be installed on pads made of concrete or other suitable material as recommended by the equipment manufacturer. Manufacturer provided mounting pads are preferred.
  - **The long axis of the compressor unit shall be installed parallel to the exterior wall** of the building.

  - The footprint of the mounting pad shall not extend more than 2 inches beyond the footprint of any side of the compressor unit. For example, if the footprint of the compressor unit is 35" x 12", the mounting pad shall be no larger than 39" x 16".
  - The compressor unit must be bolted to the mounting pad to secure the unit from movement following installation.
  - During winter months large amounts of snow can slide off the roof of the building and damage ground mounted compressor units. To prevent falling snow from causing damage, the Owner is required to have Parkfairfax install "snowbirds" on the roof in the area directly over the outdoor compressor unit. Snowbirds are not required for compressor units installed on the gabled ends of buildings. The Owner is required to submit a check to the Association to cover the cost of installation as part of the Application Package. (See Section V; Subsection 3)

- **Wall Mounted Units**

  - Outdoor compressor units serving second and third story condominium units where ground mounting is not feasible, shall be mounted to the exterior wall using brackets supplied by the system manufacturer and installed per the requirements outlined in the *Work Summary: Masonry Wall Repairs/Infill and Bracket Mount Specifications for Parkfairfax Condominium*. (included in this document in the next section)

NOTE: Contractor fabricated wall mounting brackets **<u>are not</u>** acceptable.

  - During winter months large amounts of snow can slide off the roof of the building and damage ground mounted compressor units. To prevent falling snow from causing damage, the Owner is required to have Parkfairfax install "snowbirds" on the roof in the area directly over the outdoor compressor unit. Snowbirds are not required for compressor units installed on the gabled ends of buildings. The Owner is required to submit a check to the Association to cover the cost of installation as part of the Application Package. (See Section V; Subsection 3

4. Installation of Condensate Drain Line and Electrical Wiring

- **General**
  - All refrigerant piping and electrical wires and conduits shall enter the building through a single hole sleeved to maximum penetration with SCH 40 PVC no larger than 6 inches in diameter. The hole should be located directly behind the outside compressor such that it is not readily visible or concealed by a line hide wall cover/inlet not to extend more than 10" form the compressor unit, and at least 8 inches from downspouts or other fixtures.
  - The hole for access is to be core drilled or created using a masonry hole-saw. The Contractor is **not** to use a hammer drill or hammer and chisel to make the hole.
  - In instances where line hide is not used, a rain shield shall be used to help guard against rain and moisture intrusion to the building.
  - All refrigerant and condensate piping and electrical/control wiring shall be routed to interior fan units within the interior boundaries of the condominium unit.
- **Condensate Drain Line Installation**
  - The preferred method is to route the condensate drain line entirely within the condominium unit and connect it to a sanitary sewer drain within the condominium unit via an open site drain.
    - The Contractor shall provide a method to periodically clean out the condensate drain piping.
    - If a gravity flow condensate drain line cannot be installed, the Contractor shall install a condensate pump equipped with a safety float switch which de-energizes the heat pump if a malfunction or condensate backup occurs.
  - With prior written approval, the condensate drain line may be routed within the interior of the condominium unit, exiting through the exterior wall of the condominium unit as close as possible to the nearest available rear rain gutter downspout by the shortest possible route.
  - The application package must clearly show the condensate drain exit point through the exterior wall and distance to the nearest downspout. The Association shall make a determination if the proposed installation is acceptable. To minimize the length of horizontal run, and avoid interfering with hatchwell covers, doorways and concern with elevations, the Association may opt to pre-approve an alternate condensate drain line path and will consider doing so on a case by case basis.
  - The Owner shall maintain the condensate drain line as required by the Association.
- **Refrigerant Piping**
  - Refrigerant piping shall be Type L Copper tube with soldered/sill floss connection when piping is installed within a concealed area.
  - Insulate refrigerant suction piping with preformed unicellular foam insulation. All exterior mounted exposed insulation shall be protected from UV degradation.
- **Electrical**
  - The electrical work shall include the modification of existing and/or installation of new circuits for the heat pump system and, if necessary, the condensates pump; disconnection at the main panel of circuits for the through-the-wall PTAC units and baseboard heaters to be removed.

- It is the responsibility of the Owner and Contractor to evaluate the circuiting of the existing through-the-wall PTAC units and baseboard heaters and design modifications to the condominium unit's electrical system to power the new heat pump system and any baseboard heaters that remain without overloading individual circuits or increasing the total load beyond the maximum rating of the service panel.
- The heat pump systems disconnect switch and associated conduit and wiring for the outdoor compressor unit shall be wall mounted adjacent to the outdoor compressor unit while maintaining the minimum 36 inches in front of the switch that is mandated by code. The electrical conduit connecting to the disconnect switch and compressor unit shall be as short as possible and installed in a neat and workmanlike manner. . All exterior wiring to be in watertight conduit.
- Existing power wire and circuit breaker serving an existing PTAC unit that is to be removed may be used for the new system if properly sized.
- Power wiring for branch circuits serving air conditioning and heating equipment to be removed may be abandoned in place provided the termination wiring is disconnected from the circuit breaker and removed from the service panel.
- All new wiring shall be copper conductors.
- All exterior wiring shall be in liquid tight conduit.
- Upon completion of the installation, the total electrical load on the service panel shall not be increased beyond the service panel's rated maximum electrical load.
- Existing power wire and circuit breaker serving an existing PTAC unit that is to be removed may be used for the new system if properly sized.
- Power wiring for branch circuits serving air conditioning and heating equipment to be removed may be abandoned in place provided the termination wiring is disconnected from the circuit breaker and removed from the service panel.
- All new wiring shall be copper conductors.
- All exterior wiring shall be in liquid tight conduit.
- Upon completion of the installation, the total electrical load on the service panel shall not be increased beyond the service panel's rated maximum electrical load.

5. Interior HVAC Components

- With the exception of ductwork, all interior components shall be installed within the boundaries of the condominium unit. No system components shall be run within limited common element attics, crawl spaces, or common element pipe chases.
  - In a condominium unit adjoining a limited common element attic, ductwork up to 13 inches in diameter, including any insulation, may be installed in the attic.
  - Ductwork installed within the attic must be squirrel proof (metal) and not an impediment to routine maintenance or normal movement along the catwalk within the attic space.
  - The routing of the attic ductwork must be approved routing must be approved as part of the required meeting of the Owner, Contractor and Association personnel prior to any work being performed.

6. Outdoor Component Camouflage

- All outdoor compressor units, wall mounting brackets, electrical disconnect boxes, conduits, line hides, hoods and condensate lines shall be painted by the Owner or his designee to match the color of the brick of the building within 30 days of completion of the installation of the system.
  - The Owner may request Association approval to have up to 120 days in which to paint, due to seasonal considerations.
  - The Owner shall purchase from the Association the appropriate paint.
  - The Owner shall be required to maintain the paint and repaint the components as required.
- Ground mounted compressor units located along the front or the side building elevations must be camouflaged with vegetation as permitted by the guidelines of AR#2. Exceptions to this requirement must be pre-approved by the Association.
  - Such plants are often referred to as "foundation plantings". Only evergreen, drought-tolerant plants such as yew, nandina, and spirea, euynomus varieties, some laurels, wigeleas, and daphnes are examples. Evergreen natives include inkberry holly (Ilex glabra), Southern Bayberry or Wasmyrtle (Myrica cerifera) are preferred.
  - Shrubs and plants used to camouflage the compressor located on the ground should be planted as such to provide sufficient unit ventilation.
  - Per AR #2, the Owner must apply for approval of the plantings installed to camouflage the compressor unit within 30 days of installation.

FINAL HVAC INSTALLATION CHECKLIST

When the Central Packaged Split HVAC System has been installed, the Owner, the Contractor and Parkfairfax personnel shall meet on the installation site to ensure all requirements for the installation have been met. Once Parkfairfax personnel and the Owner agree that the installation is complete, they will both sign this document and Parkfairfax shall issue a letter of completion.

ADDRESS_____

DATE _____

INSPECTED BY _____

_____ 1. Is only one outdoor compressor unit installed per assessed condominium unit? Sec. II. 1

_____ 2. Is the exterior compressor unit painted properly? Sec. II. 2

_____ 3. Does outdoor unit have a horizontal air flow? Sec. II. 2

_____ 4. Does outdoor unit conform to size and weight specifications? Sec. II. 2

_____ 5. If exterior unit is at ground level, does it have a proper mounting pad (type/size) and is the unit bolted to the pad? Sec. II. 2

_____ 6. Has City Of Alexandria Code Enforcement given Final Inspection approval? Sec. IV

FINAL HVAC INSTALLATION CHECKLIST
_____ 7. Is there evidence of locates being done for outdoor ground unit? Sec. VI. 1
_____ 8. Have all PTAC units been removed and masonry work completed? Sec. VI. 2
_____ 9. Have Snowbirds been installed over exterior units that are not located on the gabled end of the building? Sec. VI. 3
_____ 10. If exterior unit is wall mounted are proper support brackets and anchors used? Sec. VI. 3
_____ 11. Is condensate line routed and supported properly? Sec. VI. 4
_____ 12. Is all piping and electrical passing thru a sleeved opening no greater than 6" and located behind the outdoor unit or in line hide at least 12" from any support bolts? Sec. VI. 4
_____ 13. Is all external wiring located inside water tight conduit and of correct type and size? Sec. VI. 4
_____ 14. If wall mounted, are the brackets painted properly? Sec. VI. 4
_____ 15. Is the exterior electrical disconnect box mounted properly? Sec. VI. 4
_____ 16. Is electrical disconnect box painted properly? Sec. VI. 4
_____ 17. Are all electrical conduits painted properly? Sec. VI. 4
_____ 18. Are all visible exterior refrigerant lines painted properly? Sec. VI. 4
_____ 19. Is the exterior condensate line painted properly? Sec. VI. 4
_____ 20. If the duct work was installed in the limited common element attic spaces, does it meet the requirements specified in Sec. VI. 5?
_____ 21. If outdoor unit is ground level and facing the street is it camouflaged/or are there plans for camouflage? Sec. VI. 6
Parkfairfax personnel signature stating approval of acceptance for a completed installation.

FINAL HVAC INSTALLATION CHECKLIST

Owner signature stating approval of acceptance for a completed installation.

Contractor Information Package

Specifications for

Installation of Central Packaged Split System

Electric Heat Pumps

NOTE: Although the specifications call for the contractor to assume certain responsibilities related to the actual installation of the system, the Unit Owner ("Owner") will be held responsible by the Parkfairfax Unit Owners Association ("Association") for all requirements outlined in the specifications.

I. General

This information package describes the Contractor's responsibilities for the replacement of existing through-the-wall PTAC units with central packaged split system electric heat pumps that utilize one remote outdoor compressor unit and one or more indoor fain coil units.

The graphic below shows an example of a system with one outdoor unit and multiple indoor fan units.

II. The System

1. Outdoor Compressor Specifications

- The outdoor compressor unit shall be horizontal fan discharge.
- The outdoor compressor unit shall have a maximum standard sound rating of 72dB.
- **Size:**
  - Ground mounted compressor unit dimensions shall be no greater than 46" wide x 30" deep x 40" high and weigh no more than 250 lbs. Please note depth includes the clearance distance from the building.
  - Wall mounted compressor unit dimensions shall be no greater than 36" wide x 20" deep x 36" high and weigh no more than 150 lbs. Please note depth includes the clearance distance from the building.
- **Exterior Finish:**
  - The manufacture's casing shall be fabricated of galvanized steel, bonderized, finished with an applied, thermally fused acrylic or polyester powder coating for corrosion protection.
  - The compressor unit must be painted to match the color of the building's brick.
  - In the instances where the compressor has a plastic grill, the grill must also be painted to match the building's brick.
  - Paints formulated for use on metal and plastic and in the appropriate colors are available for purchase through the Association.
  - The Owner is responsible for the ongoing maintenance of the compressor's paint job.

2. Licenses and Permits

- All work involved in the installation of the heat pump system (mechanical, electrical, masonry and carpentry) shall be performed by licensed, bonded and insured contractors.
- Contractor(s) must provide the Owner with copies of valid contractor licenses and proof of insurance as part of the Non-Routine Change Application Process.
- Contractor(s) must also agree to the technical installation specifications outlined in the Contractor's Information Package. Any installation that does not meet these specifications shall be removed at the Owner's expense.
- All applicable City of Alexandria permits must be obtained. Depending upon the scope of work, required permits may include mechanical, electrical, building and plumbing.
- Copies of the approved permits are required to be submitted to the Association as part of the Non-Routine Change Application Process.

III. The Installation Process

1. Locating the Outdoor Compressor Unit

- The Association preference is that, where possible, outdoor compressor units shall be ground mounted in lieu of a wall mount. Units can be installed on front, rear and/or side elevations depending on the specific building type. In the event a ground location is not available, the Association has identified primary and secondary locations for wall mounted compressor units. The Maintenance Director or the Assistant Maintenance Director can assist the Owner in identifying possible wall mount locations and/or a copy of the Association's pre-approved wall mount location(s) for the Owner's building type can be obtained from the Management office.
  - Ground mounted compressor units located along the front building elevation shall be placed adjacent to the façade within 10 feet of the front door (measured along the façade) and shall not visually obstruct any window.
  - Ground mounted compressor units for 3104 Wellington, 3106 Ravensworth, 3623 Greenway, 3604 Valley, and 1622 Ripon may be located along the rear of the building adjacent to the façade of the laundry room beneath their residence. The unit shall be located along the rear-facing wall of the building and shall be placed such that the unit is immediately adjacent to the ground-level residence that shares an interior wall with the laundry room. Only for these specific installations, all lines shall exit the building through a single penetration through common element building space - areas that may not be altered for any other project or installation - as described in Section III.5 of the contractor information portion of the specifications, subject to review and approval by Association staff in advance of the application.
  - Ground mounted units for 1575 MT Eagle, 3714 Gunston Road, 3282 Martha Custis, 3524 Martha Custis, 3470 Martha Custis and 3592 Martha Custis may be located along the rear of the building adjacent to the façade of the laundry room 2 stories beneath their residence. The unit shall be located along the rear-facing wall of the building and shall be placed such that the unit is immediately adjacent to the ground-level residence that shares an interior wall with the laundry room. Only for these specific installations will the line set be allowed to be installed within a HVAC Line Set Cover mounted directly to the building allowing for the run to extend up

to and enter the 3rd level units through a single penetration. The same general specifications in section 4 regarding electrical and condensate lines will apply here as well.

- Wall mounted compressor units shall be mounted to the exterior wall at a minimum of 8 feet off the ground and in accordance with the approved Masonry Wall Repairs/Infill and Bracket Mount Specifications.

- The Owner is responsible for contacting "Miss Utility" or other utility locating service to confirm the locations of public and Parkfairfax owned underground utilities in the vicinity of the proposed outdoor compressor unit location.
- Ground mounted compressor units shall not be located over underground utilities or gutter drains.
- In the event that the utilities are incorrectly marked or the contractor installs the unit too close to utility or gutter drain locations, the Owner is responsible for any costs associated with moving the outdoor compressor unit if required for future access to the underground utilities or gutter drainage systems.

NOTE: The mounting pad must be located at least 8 inches from any gutter drains and access to the drain must not be restricted due to placement of the pad and compressor unit.

- The footprint of the mounting pad shall not extend more than 2 inches beyond the footprint of any side of the compressor unit.
- The Owner, Contractor and Association personnel are required to meet at the condominium unit where the work is to be performed to confirm that the proposed location for the outdoor compressor unit meets all outlined specifications.

2. Removal of Existing Through-the-Wall PTAC Units

- Existing electric baseboard heating units may remain for reuse with the new central packaged split system electric heat pump system. However, all through-the-wall PTAC units shall be removed. A system consisting of both a central heat pump system and through-the-wall PTAC units will not be allowed.
- The Owner agrees to remove and properly dispose of all existing through-the-wall PTAC units within 90 days of installation of the new system.
- If the outdoor compressor unit is to be installed in front of an existing through-the-wall PTAC unit, the wall opening shall be repaired prior to installation of the outdoor compressor unit.

3. Installation of Outdoor Compressor Units

- **Ground Mounted Units**

  - Outdoor ground mounted compressor units shall be installed on pads made of concrete or other suitable material as recommended by the equipment manufacturer. Manufacturer provided mounting pads are preferred.
  - **The long axis of the compressor unit shall be installed parallel to the exterior wall of** the building.

- The footprint of the mounting pad shall not extend more than 2 inches beyond the footprint of any side of the compressor unit. For example, if the footprint of the compressor unit is 35" x 12", the mounting pad shall be no larger than 39" x 16".
- The compressor unit must be bolted to the mounting pad to secure the unit from movement following installation.

- **Wall Mounted Units**
  - Outdoor compressor units serving second and third story condominium units where ground mounting is not feasible, shall be mounted to the exterior wall using brackets supplied by the system manufacturer and installed per the requirements outlined in the *Work Summary: Masonry Wall Repairs/Infill and Bracket Mount Specifications for Parkfairfax Condominium*. (included in this document in the next section)

NOTE: Contractor fabricated wall mounting brackets **are not** acceptable.

4. Installation of Condensate Drain Line, Refrigerant Piping and Electrical Wiring

- **General**
  - All refrigerant piping and electrical wires and conduits shall enter the building through a single hole sleeved to maximum penetration with SCH 40 PVC no larger than 6 inches in diameter. The hole should be located directly behind the outside compressor such that it is not readily visible or concealed by a line hide wall cover/inlet not to extend more than 10" form the compressor unit, and at least 8 inches from downspouts or other fixtures. All exterior wiring to be in watertight conduit.
  - The hole for access is to be core drilled or created using a masonry hole-saw. The Contractor is **not** to use a hammer drill or hammer and chisel to make the hole.
  - In instances where line hide is not used, a rain shield shall be used to help guard against rain and moisture intrusion to the building.
  - All refrigerant and condensate piping and electrical/control wiring shall be routed to interior fan units within the interior boundaries of the condominium unit.

- **Condensate Drain Line Installation**
  - The preferred method is to route the condensate drain line entirely within the condominium unit and connect it to a sanitary sewer drain within the condominium unit via an open site drain.

- The Contractor shall provide a method to periodically clean out the condensate drain piping.
- If a gravity flow condensate drain line cannot be installed, the Contractor shall install a condensate pump equipped with a safety float switch which de-energizes the heat pump if a malfunction or condensate backup occurs.

➢ With prior written approval, the condensate drain line may be routed within the interior of the condominium unit, exiting through the exterior wall of the condominium unit as close as possible to the nearest available rear rain gutter downspout by the shortest possible route.

- Only one condensate line is allowed to run through a brick penetration.
- The condensate line shall be run tight to the exterior of the downspout to the ground surface and shall discharge to the storm drain pipe or splash block at the bottom of the down spout.
- The drain tube shall be Schedule 40PVC and shall not exceed ¾" inside diameter.

➢ The application package must clearly show the condensate drain exit point through the exterior wall and distance to the nearest downspout. The Association shall make a determination if the proposed installation is acceptable. To minimize the length of horizontal run, and avoid interfering with hatchwell covers, doorways and concern with elevations, the Association may opt to pre-approve an alternate condensate drain line path and will consider doing so on a case by case basis.

➢ The Owner shall maintain the condensate drain line as required by the Association.

- **Refrigerant Piping**

➢ Refrigerant piping shall be Type L Copper tube with soldered/sill floss connection when piping is installed within a concealed area.

➢ Insulate refrigerant suction piping with preformed unicellular foam insulation. All exterior mounted exposed insulation shall be protected from UV degradation.

- **Electrical**

➢ The electrical work shall include the modification of existing and/or installation of new circuits for the heat pump system and, if necessary, the condensate pump; disconnection at the main panel of circuits for the through-the-wall PTAC units and baseboard heaters to be removed.

➢ It is the responsibility of the Owner and Contractor to evaluate the circuiting of the existing through-the-wall PTAC units and baseboard heaters and design modifications to the condominium unit's electrical system to power the new heat pump system and any baseboard heaters that remain without overloading individual circuits or increasing the total load beyond the maximum rating of the service panel.

➢ The heat pump system's disconnect switch and associated conduit and wiring for the outdoor compressor unit shall be wall mounted adjacent to the outdoor compressor unit while maintaining the minimum 36 inches in front of the switch that is mandated by code. The electrical conduit connecting to the disconnect switch and compressor unit shall be as short as possible and installed in a neat and workmanlike manner.

➢ Existing power wire and circuit breaker serving an existing PTAC unit that is to be removed may be used for the new system if properly sized.

- Power wiring for branch circuits serving air conditioning and heating equipment to be removed may be abandoned in place provided the termination wiring is disconnected from the circuit breaker and removed from the service panel.
- All new wiring shall be copper conductors.
- All exterior wiring shall be in liquid tight conduit.
- Upon completion of the installation, the total electrical load on the service panel shall not be increased beyond the service panel's rated maximum electrical load.

5. Interior HVAC System Components

- With the exception of ductwork, all interior components shall be installed within the boundaries of the condominium unit. No system components shall be run within limited common element attics, crawl spaces, or common element pipe chases.
  - In a condominium unit adjoining a limited common element attic, ductwork up to 13 inches in diameter, including any insulation, may be installed in the attic.
  - Ductwork installed within the attic must be squirrel proof (metal) and not an impediment to routine maintenance or normal movement along the catwalk within the attic space.
  - The routing of the attic ductwork must be approved routing must be approved as part of the required meeting of the Owner, Contractor and Association personnel prior to any work being performed.

CONTRACTOR INSTALLATION CHECKLIST

Contractors use this list and the *Final HVAC Installation Checklist* to ensure the proper installation of the Central Packaged Split HVAC System. Installations that do not meet all the specifications detailed in this document are required to be mitigated at owner's/contractor's expense. Additionally, incorrect installation methods may result in the removal of the system.

_____ 1. Have all suction lines been properly insulated with performed unicellular foam insulation?
_____ 2. Is all exterior mounted exposed insulation protected from UV degradation?
_____ 3. Are condensate lines the approved material type and routed properly?
_____ 4. Is all new wiring a copper conductor?
_____ 5. Has Contractor provided a method for Owner to clean out condensate lines periodically?
_____ 6. All installed condensate pumps are equipped with a safety float switch which de-energizes the associated heat pump unit upon occurrence of a malfunction of the pump or if condensate backup occurs?
_____ 7. All abandoned wiring for old A/C and heating units been disconnected from main electrical panel?
_____ 8. Is the external electrical disconnect mounted adjacent to the exterior compressor unit while maintaining a minimum clearance in front of the switch??
_____ 9. Is the conduit installed from the disconnect switch to the exterior compressor unit in the shortest distance possible?
_____ 10. If the duct work was installed in the limited common element attic spaces, does it meet the requirements specified in Sec. III. 5?

WORK SUMMARY MASONRY WALL REPAIRS / INFILL AND BRACKET MOUNTING SPECIFICATIONS PARKFAIRFAX CONDOMINIUM ALEXANDRIA, VA 22302

SRG PROJECT # R10004.10

1. GENERAL

1.1. DESCRIPTION OF WORK

The Contractor shall provide all supervision, labor, equipment, materials, tools, etc. necessary to perform all of the work included in this Work Summary. The scope of work outlined below is for the removal of the existing through-wall air conditioning units, repairing the wall penetration and all damaged brick and mortar in each area while providing a sleeved penetration for new mechanical conduits and installing a wall mounted air conditioning unit brackets: Refer to *Specifications for Central Packaged Split System Electrical Heat Pum*p for items not included in this work summary.

1. Removal of existing air conditioning unit and all associated hardware (reference guide specifications for unit removal).
2. Repair / infill masonry wall using a brick and mortar colored approved by the Association. Infill shall be toothed into adjacent masonry wall (all wythes).
3. Repair / replace / repoint all cracked brick masonry and mortar joints within 36 inches of proposed bracket locations.
4. Locate and install a sleeved penetration for wall mounted units. (Reference attached SK5 for additional information).
5. Install new wall mounted air conditioning brackets and locally reinforce existing floor framing (as noted). (Reference attached SK1 through SK5 for additional information).
6. Weatherproof and seal annular space between wall sleeve and new piping and conduit.
7. Properly support and secure all conduit and utility lines with appropriate support devices spaced no more than 4’-0” o.c. (reference guide specification).

1.2. INTENT OF THE WORK SUMMARY

The intent of the Work Summary is to describe the materials and general construction required for the performance of the work.

1. When clarification is required or there is a discrepancy between referenced Specification and Standards, this Work Summary, and/or the drawings, the Association and/or Engineer shall form the decision.

2. Where alternate systems / components are proposed, the most stringent requirements from all the competitive / comparable systems and industry standards shall apply.

2. PRODUCTS

2.1. MASONRY

2.1.1. Brick

1. Size and color to match existing and approved by the Association.
   a. Red Brick: Raleigh Court Brick (oversize, not standard) #6035004900 – General Shale – Manassas, VA
   b. Approved listing of additional brick available at Covenant's office.
2. ASTM C62
3. Grade SW, Type FBS
4. Initial rate of absorption: Less than 30g/30 sq. inches per minute when tested per ASTM C67.

2.1.2. Mortar

SPEC-MIX Portland lime and sand (Type N), pre-blended colored mortar mix color 224

1. Portland Cement: ASTM C150
2. Hydrated Lime: ASTM C207
3. Sand: ASTM C144

2.2. MASONRY REINFORCEMENT

Masonry Joint Reinforcement for Multiwythe Masonry

1. Ladder type with 1 side rod at each face of masonry unit more than 4 inches in width.

2.3. ANCHORS AND FASTENERS

2.3.1. Bracket Mounting Anchors

1. Powers Fasteners (manufacturer): Hollow-Set Dropin; tool-set expansion type, pre-assembled tapered slotted expansion sleeve of Zamac alloy with threaded steel expansion cone, into which machine bolt is inserted and tightened.
   a. Expansion Cone: Type 304 stainless steel
   b. Threaded rod Type 304 stainless steel, passivated
   c. Washers and nuts Type 304 stainless steel conforming to ASTM F 593 and ASTM F 594

2.3.2. Miscellaneous Anchors and Connectors

1. Power Fasteners (manufacturer): Wedge-Bolt+; one piece carbon steel screw anchor with finished hex head with integral washer, double lead thread, chamfered tip, ratchet teeth on underside of head to be installed in hole pre-drilled using Wedge bit; head stamped and diameter and length. Approved for cracked and un-cracked concrete. Plated in accordance with ASTM B 633, SC1, Type III.
2. Simpson Strong Tie (manufacturer)
    a. HGAM10 Hurricane Tie
    b. Strong Drive Screws (SDS)
    c. Titen Screws (Hex Head)

2.4. DIMENSION LUMBER FRAMING

1. Blocking and Shims: Spruce Pine Fir #2 or better (visually graded)

2.5. WALL SLEEVE

For refrigerant, condensate and electrical lines

1. PVC: Schedule 40 according to ASTM D1785 and ASTM D2665.
2. Diameter/Size: Full width of masonry wall with smallest diameter possible to provide adequate clearance for mechanical unit lines (not to exceed six (6) inches.

2.6. SEALANTS

Sealants to comply with ASTM C-920 and as follows unless otherwise indicated in this Specification.

2.6.1. Multi-component Nonsag Polyurethane Sealant for Vertical and Horizontal Non-Traffic Conditions:

1. Acceptable Products:
    a. Tremco
    b. Dymeric 240/240FC
2. Type and Grade: M and NS
3. Class: 50
4. Uses Related to Joint Substrates: M, A and O

2.6.2. Backer Rod

Closed cell polyethylene foam, non out-gassing, compatible with sealant; sized and shaped to control depth of sealant; and to recover and maintain size when compressed 50%.

2.6.3. Joint Cleaners and Primers

As recommended by Sealant Manufacturer for each different substrate encountered.

2.6.4. Bond Breaker Tape

Pressure-sensitive adhesive polyethylene tape

2.7. THERMAL INSULATION

Self-Supported, Spray-Applied, Cellulosic Insulation: ASTM C 1149, Type I:

1. Acceptable Products:
   a. Hilti;
   b. CF 116 Filler Foam

2.8. ACCESSORIES

1. Masking Tape: Pressure-sensitive non-residue adhesive paper tape. Tape shall leave as little residue/adhesive as possible on surfaces once tape is removed.
2. Dust control provision to protect units/building interior from dust intrusion.
3. Residue free tape for window and door joints, wall openings, etc. to be installed inside and out along window and doorframe joints.
4. Air register/mechanical intake/vent filter media as appropriate for covering all air intakes, vents, louvers, mechanical units, etc. to prevent dust intrusion to other areas, units, stairwells, or hallways during the project. Filter media to be replaced as necessary to prevent restricted airflow and/or dust intrusion.
5. Solvent Resistant Polyethylene (plastic sheet): For protection from over spray, cleaning, dust/debris control, etc.

3. EXECUTION

3.1. MASONRY REPAIR

3.1.1. Installation, General

1. Use full-size units of size to match existing without cutting if possible. If cutting is required to provide a continuous and uniform running bond pattern to match or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges.
   a. Allow units to dry before laying unless wetting of units is specified.
   b. Install cut units with cut surfaces and, where possible, cut edges concealed.
   c. At infill locations, tooth brick into adjacent masonry walls where possible (all wythes).

2. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
3. Comply with construction tolerances including cold-weather and hot-weather construction requirements of ACI 530.1/ASCE 6/TMS 602 and the following:
    a. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
    b. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.

3.1.2. Laying Masonry Walls

1. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
2. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
3. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry; to control initial rate of absorption (IRA) in conformance with ACI 530.1.

3.1.3. Mortar Bedding and Jointing

1. Lay solid masonry units with completely filled bed, head joints, and collar joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
    a. Flush and wet brick and joint surfaces thoroughly before applying mortar.
    b. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

3.1.4. Composite Masonry

1. Bond wythes of composite masonry together with a solid collar joint by parging face of first inner wythe that is laid and shoving units of other wythe into place.

3.1.5. Re-point Cracked Mortar Joints

1. Perform pointing repairs with pre-hydrated mortar conforming/proportioned to ASTM C270 per ACI 530 (alternative reference M1-88 per BIA 8A).
2. Re-point all cracks with three (3) feet of the future bracket locations.

3. Re-point in three (3) even lifts and strike the mortar to provide solid void free and well consolidate joint.

3.2. FLOOR FRAMING, BRACKET AND ANCHOR INSTALLATION

3.2.1. Examination

1. Expose/identify floor framing material and orientation.
2. Do not begin bracket installation until anchor substrates and floor framing have been properly identified/prepared (reference SK1 – SK3 for local floor reinforcement/preparation).

3.2.2. Floor Framing Modifications

1. Mechanically fasten all wood blocking and shims as detailed in sketches SK1 – SK3.
2. Install anchors and prefabrication connectors in accordance with manufacturer's instructions and recommendations and as required by applicable code.
3. Restore ceiling/floor finishes.

3.2.3. Bracket and Anchor Installation

1. Clean wall surfaces thoroughly prior to installation.
2. Assemble prefabricated bracket per manufacturer's instructions. Identify and mark bracket anchor locations per manufacturer's template and conforming to specification sketches SK1 – SK5.
3. Prepare anchor substrate surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
4. Install anchors in accordance with manufacturer's instructions and recommendations and as required by applicable code.
5. Apply anchor items neatly, with brackets mounted plumb and anchors installed level unless otherwise indicated.

3.3. WALL PENETRATIONS AND INSULATION (AT SLEEVED MASONRY PENETRATION)

3.3.1. Install sleeves at all new masonry penetrations.

1. PVC Sleeves: Sleeves shall be located behind the compressor unit or concealed by a line hide wall cover/inlet not to extend more than 10" from unit and a minimum 12" from all bracket anchors. Slope sleeves 1/8 inch per foot (Min.) toward the exterior sleeve should be to maximum penetration with SCH 40 PVC no larger than six inches in diameter (see work summery page). Cluster refrigerant and electrical lines into a single penetration and sleeve.
    a. New Masonry: As construction progresses, build in PVC sleeves at location(s) in wall coordinated with Association / Mechanical Contractor and/or Engineer. Fill in solidly with masonry around built-in items.
    b. Existing Masonry: Core drill existing masonry wall with the diameter matching the outside diameter of sleeve (repair all damaged masonry and mortar joints).

3.3.2. Prior to placing insulation, properly prepare substrate as required by insulation manufacturer:

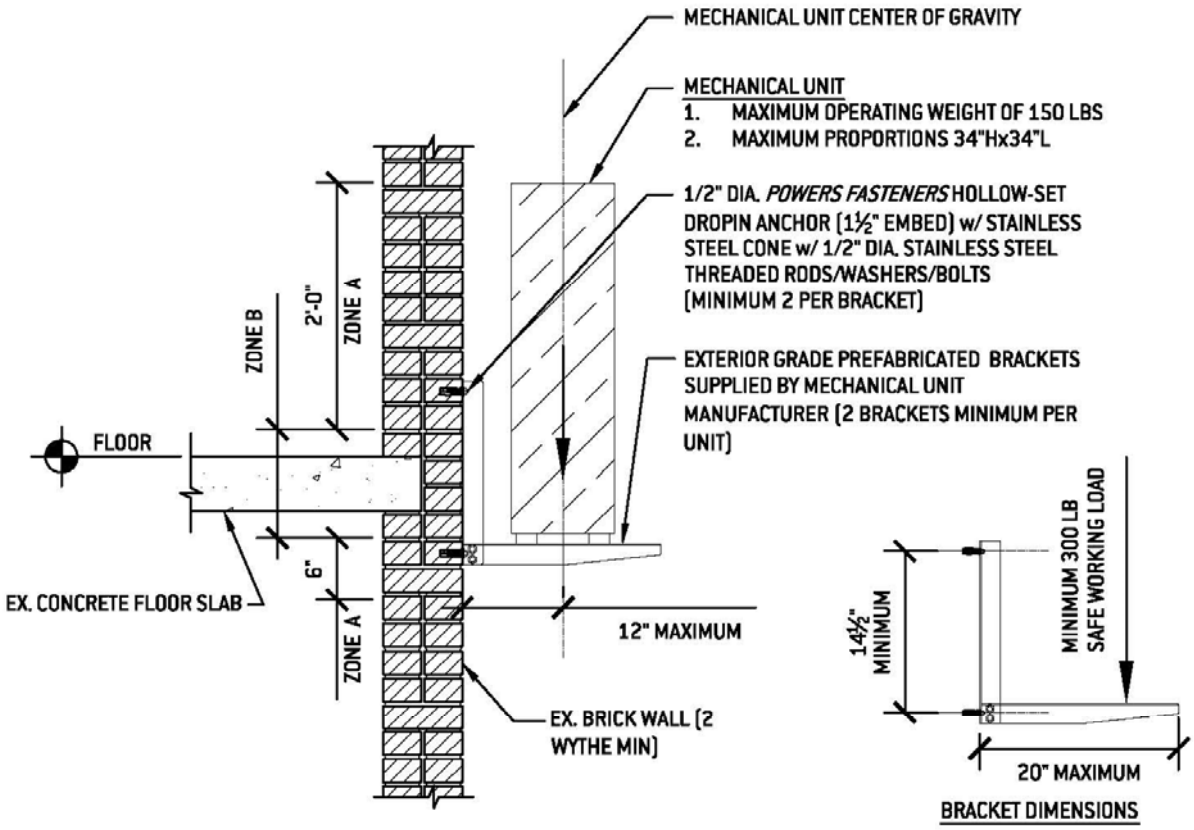
1. Clean all surfaces down to solid material and remove all dust, foreign materials, etc. that could possibly interfere with the bonding of the insulation to the substrate.
2. Install insulation according to manufacturer's requirements and recommended practices, including application temperatures.
3. Install exterior sealant / electrician's putty to seal exterior of penetration to prevent water intrusion. SEALANT WORK (AT SLEEVED MASONRY PENETRATION)

3.3.3. Prior to placing sealant, properly prepare joints and surfaces, as required by the Sealant Manufacturer:

1. Totally clean, grind, cut, brush, etc. all surfaces down to solid material and remove all dust, old sealants, foreign materials, etc. that could possibly interfere with the bonding of the sealant to the building substrate material.
2. Where required by the Sealant Manufacturer, carefully prime surfaces that are to be bonded to the sealant.
3. As required, place closed cell backer rod or bond breaker tape to control sealant depth and to prevent three-point bonding of the sealant in joints. Use a blunt instrument when installing backer rod to avoid puncturing. When backer rod is punctured, allow gasses to completely escape before sealing joint.
4. As needed, apply tape along the edges of joints so as to prevent sealant from bonding to exposed surfaces.
5. Mix components where required in accordance with Manufacturer's recommendations.

6. Apply sealant in accordance with the Sealant Manufacturer requirements and recommended practices, including application temperatures.
7. Properly fill horizontal and vertical joints, openings, etc. to prevent water from being retained on the finished sealant. Install sealant using pressure gun with a nozzle cut to fit joint width.
8. Deposit sealant in uniform, continuous bead.
9. Carefully tool the exposed sealant surface to form a concave profile within Manufacturer's recommended setting time, to help assure proper bond and to provide a smooth, aesthetic appearance.
10. Where used, remove tape placed along joint edges immediately after tooling.

END OF SECTION



SK 1

BRACKET MOUNTING - CONCRETE FLOOR FRAMING

Scale: 3/4" = 1'-0"

NOTES:

1. ZONE A INDICATES ACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
2. ZONE B INDICATES UNACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
3. ANCHORS SHALL BE INSTALLED PER MANUFACTURERS GUIDELINES
4. ANCHORS SHALL HAVE MINIMUM SPACING OF 12" O.C. AND SHALL BE INSTALLED A MINIMUM OF 12" AWAY FROM WALL PENETRATIONS
5. BOLTS/WASHERS SHALL BE INSTALLED FINGER TIGHT (DO NOT PRETENSION)- STRIP THREADS.
6. REFER TO GUIDE SPECIFICATIONS FOR ADDITIONAL INFORMATION; IE. UNIT WALL PENETRATIONS, BRICK REPAIR, AND ADDITIONAL ANCHOR INSTALLATION CRITERIA, ETC.

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structural rehabilitation group

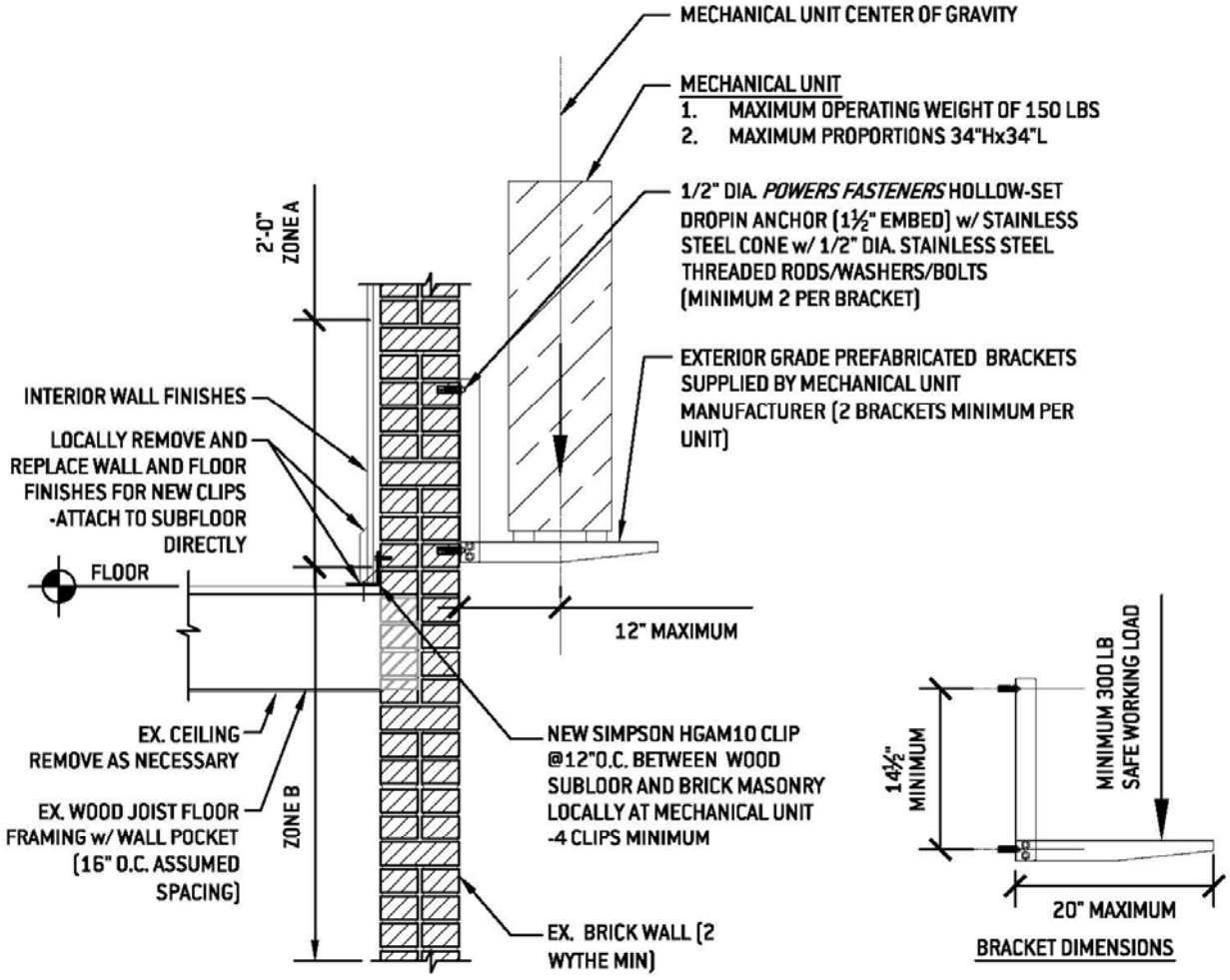
Project:
Mounting Specifications for Heat Pumps
Parkfairfax Unit Owners Association
Alexandria, VA 22301

Drawing Title:
Section at Wall Mounted Units
-Concrete Floor Framing

Date: April 9, 2010 Scale: N.T.S.

SK1

R10004.00



ALT SK2

BRACKET MOUNTING -WOOD FLOOR FRAMING (BEARING) - ALTERNATE

Scale: 3/4" = 1'-0"

NOTES:

1. ZONE A INDICATES ACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
2. ZONE B INDICATES UNACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
3. ANCHORS SHALL BE INSTALLED PER MANUFACTURERS GUIDELINES
4. ANCHORS SHALL HAVE MINIMUM SPACING OF 12" O.C. AND SHALL BE INSTALLED A MINIMUM OF 12" AWAY FROM WALL PENETRATIONS
5. BOLTS/WASHERS SHALL BE INSTALLED FINGER TIGHT (DO NOT PRETENSION)- STRIP THREADS.
6. REFER TO GUIDE SPECIFICATIONS FOR ADDITIONAL INFORMATION; IE. UNIT WALL PENETRATIONS, BRICK REPAIR, AND ADDITIONAL ANCHOR INSTALLATION CRITERIA, ETC.
7. RESTORE INTERIOR FINISHES

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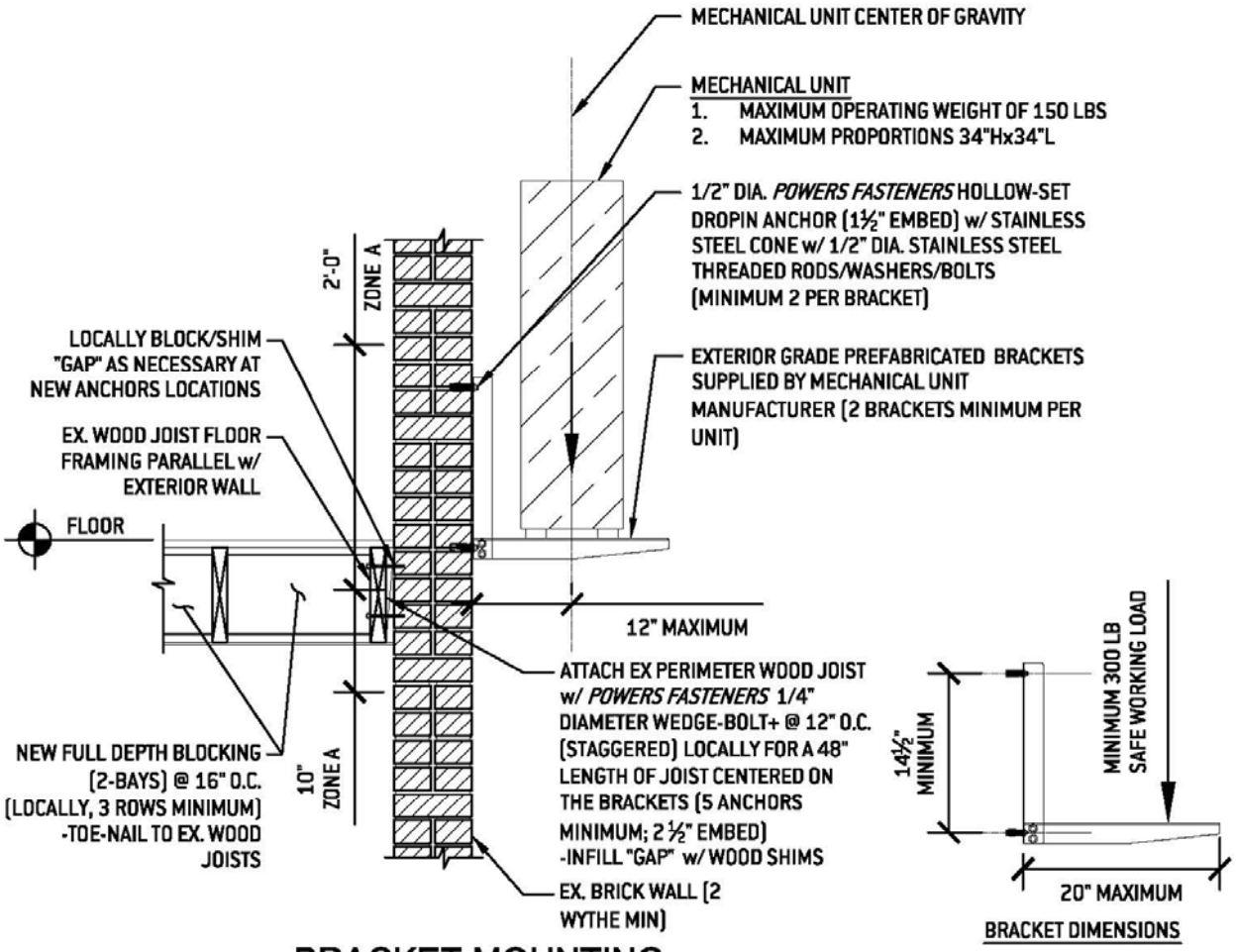
Parkfairfax Unit Owners Association
Alexandria, VA 22301

Drawing Title:
Section at Wall Mounted Units
-Wood Floor Framing (perpendicular)

Date: April 9, 2010 Scale: N.T.S.

ALT SK2

R10004.00



SK 3

BRACKET MOUNTING -WOOD FLOOR FRAMING (PARALLEL)

Scale: 3/4" = 1'-0"

NOTES:

1. ZONE A INDICATES ACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
2. ZONE B INDICATES UNACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
3. ANCHORS SHALL BE INSTALLED PER MANUFACTURERS GUIDELINES
4. ANCHORS SHALL HAVE MINIMUM SPACING OF 12" O.C. AND SHALL BE INSTALLED A MINIMUM OF 12" AWAY FROM WALL PENETRATIONS
5. BOLTS/WASHERS SHALL BE INSTALLED FINGER TIGHT (DO NOT PRETENSION)- STRIP THREADS.
6. REFER TO GUIDE SPECIFICATIONS FOR ADDITIONAL INFORMATION; IE. UNIT WALL PENETRATIONS, BRICK REPAIR, AND ADDITIONAL ANCHOR INSTALLATION CRITERIA, ETC.
7. RESTORE INTERIOR FINISHES

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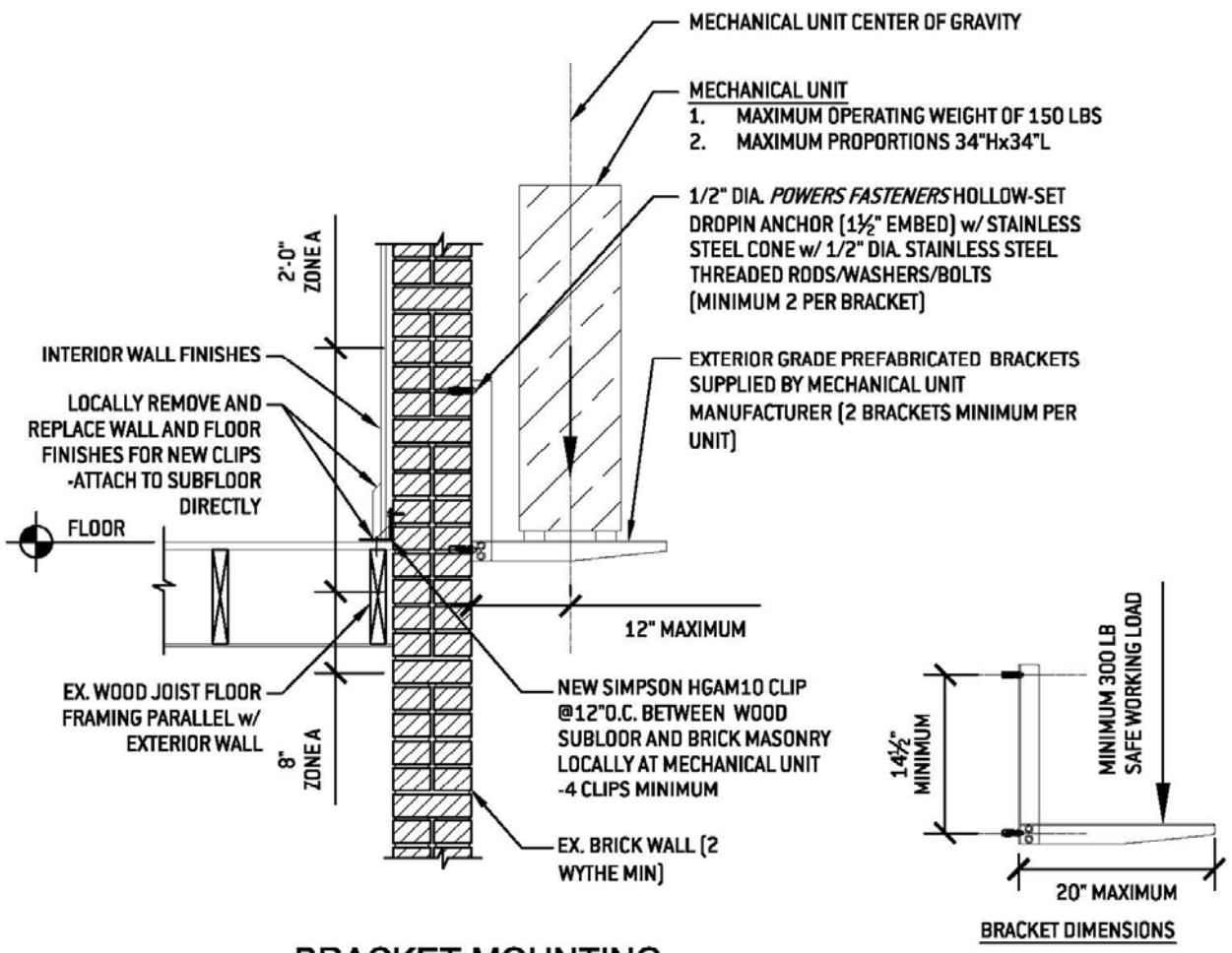
Alexandria, VA 22301

Drawing Title:
Section at Wall Mounted Units
-Wood Floor Framing (parallel)

Date: April 9, 2010 Scale: N.T.S.

SK3

R10004.00



ALT SK3

BRACKET MOUNTING -WOOD FLOOR FRAMING (PARALLEL) - ALTERNATE

Scale: 3/4" = 1'-0"

NOTES:

1. ZONE A INDICATES ACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
2. ZONE B INDICATES UNACCEPTABLE LOCATIONS FOR ANCHOR INSTALLATION
3. ANCHORS SHALL BE INSTALLED PER MANUFACTURERS GUIDELINES
4. ANCHORS SHALL HAVE MINIMUM SPACING OF 12" O.C. AND SHALL BE INSTALLED A MINIMUM OF 12" AWAY FROM WALL PENETRATIONS
5. BOLTS/WASHERS SHALL BE INSTALLED FINGER TIGHT (DO NOT PRETENSION)- STRIP THREADS.
6. REFER TO GUIDE SPECIFICATIONS FOR ADDITIONAL INFORMATION; IE. UNIT WALL PENETRATIONS, BRICK REPAIR, AND ADDITIONAL ANCHOR INSTALLATION CRITERIA, ETC.
7. RESTORE INTERIOR FINISHES

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Project:
Mounting Specifications for Heat Pumps
Parkfairfax Unit Owners Association
Alexandria, VA 22301

Drawing Title:
Section at Wall Mounted Units
-Wood Floor Framing (parallel)

Date: April 9, 2010 Scale: N.T.S.

ALT
SK3
R10004.00

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Alexandria, VA 22301

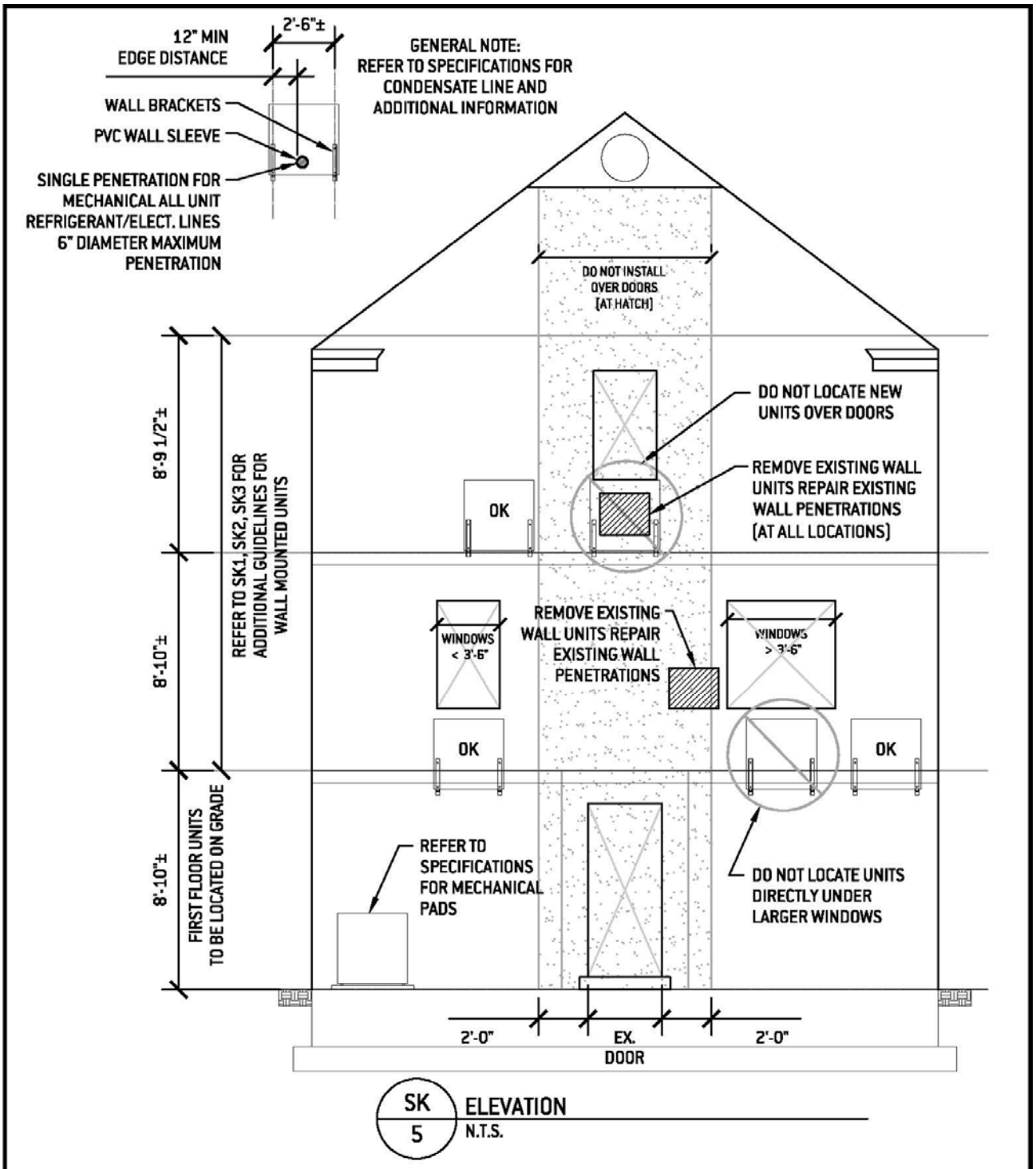
Drawing Title:
Section at Wall Mounted Units
-Wood Floor Framing (parallel)

Date: April 9, 2010

Scale: N.T.S.

SK4

R10004.00



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Project:
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Drawing Title:
Exterior Wall Elevations

Date: April 9, 2010 Scale: N.T.S.

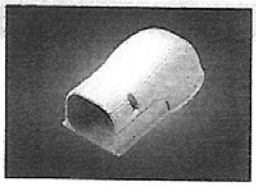
SK5

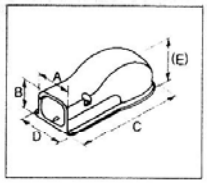
R10004.00

LINE-HIDE Lineset Cover System

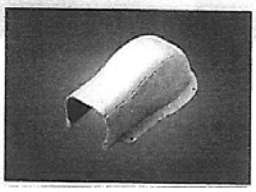
PRODUCT INFORMATION & SPECIFICATIONS

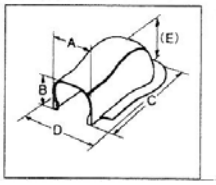
MITSUBISHI ELECTRIC
HVAC Advanced Products Division





Product	Dimensions (in inches) A	B	C	D	E	Weight (ounces)
Wall Cover/Inlet						
NW-60	2-9/16	2-9/16	7-7/8	3-1/16	3-3/16	6.3
NW-75	3-1/4	2-11/16	8-1/4	3-11/16	3-1/4	7.9
NW-100	4-3/16	2-15/16	9-1/8	4-11/16	3-3/4	10.6
NW-140	5-3/4	3-3/8	11-1/4	6-1/4	4-1/8	16.2





Simple Wall Cover						
NY-60	2-9/16	2-9/16	7-7/8	3-1/16	3-3/16	6.3
NY-75	3-1/4	2-11/16	8-1/4	3-11/16	3-1/4	7.9
NY-100	4-3/16	2-15/16	9-1/8	4-11/16	3-3/4	10.6
NY-140	5-3/4	3-3/8	11-1/4	6-1/4	4-1/8	16.2

MITSUBISHI ELECTRIC
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About DiversiTech

DiversiTech Corporation is North America's largest manufacturer of equipment pads and a leading manufacturer and supplier of components and related products for the heating, ventilating, air conditioning, and refrigeration (HVACR) industry.

Headquartered in the Atlanta, GA metropolitan area, DiversiTech manufactures a suite of products which includes a wide range of mechanical, electrical, chemical, and structural parts for HVACR and electrical systems, and swimming pool installations. The company maintains manufacturing and distribution facilities in key U.S. locations, Europe, and in the Far East. DiversiTech has enjoyed a continued history of successful growth and has acquired industry-recognized names including Devco® Enterprises, Wagner® Manufacturing, The Black Pad®, Hef-T-Pad™, and Specialty Chemical.