

|      |                                |     |                               |
|------|--------------------------------|-----|-------------------------------|
| ACC  | AIR COOLED CONDENSER           | KW  | KILOWATTS                     |
| AHU  | AIR HANDLING UNIT              | MCA | MINIMUM CIRCUIT AMPS          |
| APD  | AIR PRESSURE DROP              | MBH | THOUSAND BTU PER HOUR         |
| BTUH | BRITISH THERMAL UNITS PER HOUR | NC  | NOISE CRITERIA                |
| CFM  | CUBIC FEET PER MINUTE          | OA  | OUTSIDE AIR                   |
| CJ   | CONDENSING UNIT                | OSD | OPPOSED BLADE DAMPER          |
| DB   | DRY BULB                       | RA  | RETURN AIR                    |
| DWG  | DRAWING                        | RLA | RATED LOAD AMPS               |
| EAT  | ENTERING AIR TEMPERATURE       | RTU | ROOFTOP UNIT                  |
| EF   | EXHAUST FAN                    | SA  | SUPPLY AIR                    |
| ESP  | EXTERNAL STATIC PRESSURE       | SS  | STAINLESS STEEL               |
| EWT  | ENTERING WATER TEMPERATURE     | FSD | COMBINATION FIRE/SMOKE DAMPER |
| FCU  | FAN COIL UNIT                  | V   | VOLTS                         |
| FD   | FIRE DAMPER                    | VAV | VARIABLE AIR VOLUME           |
| FLA  | FULL LOAD AMPS                 | WB  | WET BULB                      |
| GPM  | GALLONS PER MINUTE             | WG  | WATER GAUGE                   |
| HP   | HEAT PUMP, HORSEPOWER          | WSP | WATER SOURCE HEAT PUMP        |
|      |                                | WPD | WATER PRESSURE DROP           |

MECHANICAL ABBREVIATIONS

|     |                      |
|-----|----------------------|
| ABV | ABOVE                |
| BLW | BELOW                |
| CLG | CEILING              |
| FLR | FLOOR                |
| AFF | ABOVE FINISHED FLOOR |
| FF  | FINISHED FLOOR       |
| EX  | EXISTING             |
| TYP | TYPICAL              |
| VTR | VENT PIPE THRU ROOF  |
| W   | WITH                 |
| DN  | DOWN                 |
| BFP | BACKFLOW PREVENTER   |

PLUMBING ABBREVIATIONS

|         |                          |         |                         |
|---------|--------------------------|---------|-------------------------|
| — CWS — | CONDENSER WATER SUPPLY   | — PCD — | PUMPED CONDENSATE DRAIN |
| — CWR — | CONDENSER WATER RETURN   | — E —   | EXPANSION TANK PIPE     |
| — HPS — | HIGH PRESSURE STEAM      | — HG —  | REFRIGERANT HOT GAS     |
| — HPR — | HIGH PRESSURE RETURN     | — RS —  | REFRIGERANT SUCTION     |
| — LPS — | LOW PRESSURE STEAM       | — RL —  | REFRIGERATION LIQUID    |
| — LPR — | LOW PRESSURE RETURN      | — D —   | CONDENSATE DRAIN        |
| — CHS — | CHILLED WATER SUPPLY     | — FOF — | FUEL OIL FILL           |
| — CHR — | CHILLED WATER RETURN     | — FOR — | FUEL OIL RETURN         |
| — HS —  | HEATING WATER SUPPLY     | — FOS — | FUEL OIL SUPPLY         |
| — HWR — | HEATING WATER RETURN     | — FOV — | FUEL OIL VENT           |
| — HCS — | HOT/CHILLED WATER SUPPLY | — D —   | CONDENSATE DRAIN PIPE   |
| — HCR — | HOT/CHILLED WATER RETURN |         |                         |

|             |                                 |        |                                  |
|-------------|---------------------------------|--------|----------------------------------|
| — CW —      | COLD WATER PIPE                 | — F —  | FIRE PROTECTION / SPRINKLER PIPE |
| — HW —      | HOT WATER PIPE                  | — AV — | ACID VENT PIPE                   |
| — 140' —    | 140°F WATER PIPE                | — AW — | ACID SOIL OR WASTE PIPE          |
| — 140'HWC — | 140°F WATER CIRCULATION PIPE    | — ST — | STORM PIPE                       |
| — HWR —     | HOT WATER CIRCULATION PIPE      | — V —  | VENT PIPE                        |
| — TW —      | TEMPERED WATER PIPE             | — S —  | SOIL OR WASTE PIPE               |
| — TWC —     | TEMPERED WATER CIRCULATION PIPE | — R —  | RADON VENT PIPE                  |

|                      |                    |         |                            |
|----------------------|--------------------|---------|----------------------------|
| — VAC —              | VACUUM PIPE        | — A —   | COMPRESSED AIR             |
| — EVAC —             | EVACUATION PIPE    | — G —   | LOW PRESSURE GAS PIPE      |
| — O <sub>2</sub> —   | OXYGEN PIPE        | — HPG — | LOW PRESSURE GAS PIPE      |
| — N <sub>2</sub> O — | NITROUS OXIDE PIPE | — RO —  | REVERSE OSMOSIS WATER PIPE |
| — MA —               | MEDICAL AIR PIPE   | — DI —  | DEIONIZED WATER PIPE       |

PIPING SYSTEMS

|  |                                                                                                            |  |                                                            |
|--|------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------|
|  | SUPPLY AIR DEVICE                                                                                          |  | DOOR UNDERCUT                                              |
|  | RETURN AIR DEVICE                                                                                          |  | DOOR LOUVER (SIZE AS INDICATED)                            |
|  | EXHAUST AIR DEVICE                                                                                         |  | THERMOSTAT (PNEUMATIC)                                     |
|  | REMOVE EXISTING                                                                                            |  | THERMOSTAT (DOO)                                           |
|  | EXISTING TO REMAIN                                                                                         |  | THERMOSTAT WITH GUARD                                      |
|  | NEW WORK                                                                                                   |  | CARBON DIOXIDE SENSOR                                      |
|  | FLEXIBLE DUCTWORK                                                                                          |  | 2-HOUR OVERRIDE SWITCH FOR ROOF TOP UNIT SERVING THIS ZONE |
|  | SPIRAL DUCTWORK                                                                                            |  | WALL MOUNTED SWITCH WITH PILOT LIGHT                       |
|  | SOUND LINED DUCT                                                                                           |  | ROUND                                                      |
|  | DUCT DROP OR RISE IN DIRECTION SHOWN                                                                       |  | FLAT OVAL                                                  |
|  | FLEXIBLE CONNECTION                                                                                        |  | POINT OF CONNECTION NEW TO EXISTING                        |
|  | ELBOW WITH TURNING VANES                                                                                   |  | LIMIT OF REMOVAL                                           |
|  | OVAL TAP                                                                                                   |  | AIR OUT OF AIR TERMINAL                                    |
|  | FIRE DAMPER (FD)                                                                                           |  | AIR INTO AIR TERMINAL                                      |
|  | SMOKE DAMPER (SD)                                                                                          |  | EXISTING                                                   |
|  | MAY BE MODULATED BETWEEN THE OPEN AND CLOSED POSITIONS TO SERVE AS BOTH A SMOKE DAMPER AND A VOLUME DAMPER |  | DUCT SMOKE DETECTOR                                        |
|  | COMBINATION SMOKE/FIRE DAMPER (SFD)                                                                        |  | HUMIDISTAT                                                 |
|  | VOLUME DAMPER (V.D.)                                                                                       |  | HUMIDISTAT WITH GUARD                                      |
|  | MOTORIZED DAMPER (M.D.)                                                                                    |  | FIRESTAT                                                   |
|  | REMOTE TEMPERATURE SENSOR                                                                                  |  | DRAWING NOTE                                               |
|  | STATIC PRESSURE SENSOR                                                                                     |  |                                                            |

MECHANICAL SYMBOLS

|  |                                         |  |                                            |
|--|-----------------------------------------|--|--------------------------------------------|
|  | FLEXIBLE PIPE CONNECTION                |  | CONTINUATION                               |
|  | CAPPED PIPE                             |  | FLOW SWITCH                                |
|  | PIPE TURNING UP                         |  | RECESSED SPRINKLER HEAD                    |
|  | PIPE TURNING DOWN                       |  | PENDANT SPRINKLER HEAD                     |
|  | HOSE BIBB (HB)                          |  | SIDE WALL SPRINKLER HEADS                  |
|  | BOTTOM TAKE OFF                         |  | SPRINKLER WIGUARD                          |
|  | TOP TAKE OFF                            |  | SAMESE                                     |
|  | POINT OF CONNECTION                     |  | FLOOR SINK                                 |
|  | WALL HYDRANT (WH)                       |  | FUNNEL FLOOR DRAIN                         |
|  | UNION                                   |  | OPEN SITE DRAIN                            |
|  | VERTICAL VALVE                          |  | FLOOR DRAIN                                |
|  | ANGLE STOP VALVE                        |  | FLOOR CLEANOUT                             |
|  | OUTSIDE SCREW AND Yoke VALVE, OS&Y      |  | WALL CLEANOUT                              |
|  | OS&Y w/ TAMPER SWITCH                   |  | POINT OF CONNECTION FOR EXISTING EQUIPMENT |
|  | 3-WAY CONTROL VALVE                     |  | BACK FLOW PREVENTER                        |
|  | 2-WAY CONTROL VALVE                     |  | EXTENT OF DEMOLITION                       |
|  | FLOW MEASURING FITTING                  |  | DOUBLE CHECK VALVE                         |
|  | THERMOMETER                             |  | EXTENT OF DEMOLITION                       |
|  | PRESSURE GAGE WITH NIPPLE AND GAGE COCK |  | NEW TO EXISTING                            |
|  | STRAINER WITH BLOWDOWN VALVE            |  | WASTE RISER DESIGNATION                    |
|  | PRESSURE REDUCING VALVE                 |  | WATER RISER DESIGNATION                    |
|  | BALANCING VALVE                         |  | STORM RISER DESIGNATION                    |
|  | GATE VALVE                              |  | GAS RISER DESIGNATION                      |
|  | GAS COCK                                |  | WASTE VENT RISER DESIGNATION               |
|  | SOLENOID OPERATED VALVE                 |  | DRAWING NOTE                               |
|  | DRAIN VALVE                             |  |                                            |
|  | GAS PRESSURE REGULATOR                  |  |                                            |
|  | BUTTERFLY VALVE                         |  |                                            |
|  | CHECK VALVE                             |  |                                            |
|  | BALL VALVE                              |  |                                            |

|  |                       |  |                          |
|--|-----------------------|--|--------------------------|
|  | VACUUM OUTLET         |  | MEDICAL GAS ALARM PANEL  |
|  | EVACUATION OUTLET     |  | ZONE VALVE               |
|  | OXYGEN OUTLET         |  | LOW PRESSURE ALARM PANEL |
|  | NITROUS OXIDE OUTLET  |  |                          |
|  | MEDICAL AIR OUTLET    |  |                          |
|  | COMPRESSED AIR OUTLET |  |                          |

PIPING SYMBOLS

- MECHANICAL CONTRACTOR SHALL INSTALL CEILING AIR DEVICES IN GRID AS CLOSE AS POSSIBLE TO LOCATION SHOWN ON PLAN. COORDINATE LOCATION WITH LIGHT FIXTURES AND SPRINKLER HEADS.
- THERMOSTAT LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS. MOUNT THERMOSTATS 4'-0" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED.
- SEE ARCHITECTURAL DRAWINGS FOR SUPPORT DETAILS OF ALL ROOF PENETRATIONS.
- INSTALL EACH ITEM OF EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- LOCATION OF EQUIPMENT, PIPING, AND OTHER MECHANICAL WORK IS INDICATED DIAGRAMMATICALLY BY THE DRAWINGS. DETERMINE EXACT LOCATIONS ON THE JOB SITE, SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF OTHER CONTRACTORS.
- MOUNT ALL THERMOSTATS ON EXTERIOR WALLS ON AN INSULATED SUB-BASE, WHERE INDICATED ON EXTERIOR WALLS.
- AFTER INSTALLATION AND START-UP, CONTRACTOR SHALL THOROUGHLY CHECK EACH ITEM OF EQUIPMENT FOR VIBRATION TRANSMISSION TO THE STRUCTURE OR EXCESSIVE NOISE, AND IF EITHER OCCURS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING THE FAULTY SITUATION IMMEDIATELY.
- WHEREVER PIPES, DUCTWORK OR OTHER ITEMS PASS THROUGH FIRE RATED WALLS AND FLOORS, THE CONTRACTOR SHALL ADEQUATELY FIRE STOP THE SPACE BETWEEN THE ITEMS AND THE MASONRY OR THE SPACE BETWEEN THE ITEM AND SLEEVE. FIRE STOP SHALL BE A NON-COMBUSTIBLE, NON-MELTING, APPROVED MATERIAL.
- ALL ROUND RUNOUTS AND FLEXIBLE DUCTWORK TO A SINGLE CEILING DIFFUSER SHALL BE SAME SIZE AS DIFFUSER NECK, UNLESS OTHERWISE INDICATED.
- INSTALL OUTSIDE AIR INTAKES A MINIMUM OF 10'-0" FROM ANY EXHAUST OR PLUMBING VENT.
- PROVIDE TRAPS FOR CONDENSATE DRAIN LINES WHICH ARE NOT INTERNALLY TRAPPED.
- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF MECHANICAL EQUIPMENT'S ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR. CONTRACTOR ORIGINATED MODIFICATIONS TO THE MECHANICAL EQUIPMENT'S ELECTRICAL INSTALLATION, DUE TO DEVIATIONS FROM THE MECHANICAL EQUIPMENT'S "BASIS OF DESIGN" ELECTRICAL DATA, SHALL BE AT A COST TO THE MECHANICAL CONTRACTOR.
- HOLD ALL DUCTWORK RUNNING PARALLEL TO A RATED WALL A MINIMUM OF 6" AWAY FROM THE WALL.
- BALANCE AIR DEVICES TO INDICATED AIRFLOW PRIOR TO SETTING AIR HANDLING UNITS TO PROVIDE POSITIVE PRESSURE.

MECHANICAL GENERAL NOTES

- ALL PLUMBING WORK SHALL CONFORM WITH ALL STATE AND LOCAL CODES, RULES AND REGULATIONS.
- PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ANY PERMITS.
- PLUMBING CONTRACTOR SHALL INFORM SUBCONTRACTOR OF QUANTITY AND LOCATION OF ACCESS PANELS WHERE REQUIRED FOR ACCESS TO VALVES IN CEILINGS AND WALLS. ACCESS PANELS SHALL BE INSTALLED BY THE APPROPRIATE SUBCONTRACTOR.
- FOR ALL SIZES OF WASTE, VENT, HOT AND COLD WATER PIPING TO FIXTURES AND EQUIPMENT, SEE SANITARY WASTE AND WATER RISER DIAGRAMS.
- ALL COLD AND HOT WATER PIPING SHALL BE INSULATED AND ALL PIPING SHALL BE INSTALLED INSIDE OF THE BUILDING INSULATION ENVELOPE.
- ALL SANITARY WASTE PIPING SHALL BE SLOPED AT 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- ALL SLOPES AND INVERTS ELEVATIONS SHALL BE CHECKED BEFORE ANY PIPING IS INSTALLED, IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED.
- MAKE PROPER WASTE, VENT, HOT AND COLD WATER CONNECTIONS TO ALL FIXTURES AND EQUIPMENT, EVEN THOUGH ALL BRANCH MAINS, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
- ALL PLUMBING WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID ANY INTERFERENCE.
- THESE DRAWINGS ARE DIAGRAMMATIC. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS OF THE BUILDING AND EXACT LOCATION OF ALL FIXTURES AND EQUIPMENT.
- ALL PIPE PENETRATIONS BELOW SINKS SHALL BE SEALED.
- ALL EXPOSED PIPING UNDER HANDICAP LAVATORY TO BE INSULATED.
- CONTRACTOR SHALL PROVIDE ADDITIONAL WATER LINE DROPS IN WALL WHEN HORIZONTAL RUN IN WALL CONFLICTS WITH VENT PIPE IN WALL.
- PLUMBING CONTRACTOR SHALL DISINFECT POTABLE WATER SYSTEM PER SECTION 611 IN THE 1995 INTERNATIONAL PLUMBING CODE.
- SHUTOFF VALVES SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:  
A. ON THE FIXTURE SUPPLY TO EACH PLUMBING FIXTURE OTHER THAN BATHTUBS AND SHOWERS.  
B. ON THE SUPPLY PIPE TO EACH SILLCOCK.  
C. ON THE SUPPLY PIPE TO EACH APPLIANCE OR MECHANICAL EQUIPMENT.

PIPING GENERAL NOTES

| LINETYPE LEGEND |                    |
|-----------------|--------------------|
|                 | EXISTING TO REMAIN |
|                 | DEMOLITION         |
|                 | NEW WORK           |

NOTE:  
THIS IS A STANDARD LEGEND AND ABBREVIATION LIST  
SOME ITEMS INDICATED MAY NOT APPEAR ON THE  
ACCOMPANYING DRAWINGS.

PER IECC 2021 ALL DUCTS SHALL BE LEAKAGE TESTED, NO  
EXCEPTIONS.

COMcheck Software Version COMcheckWeb  
Mechanical Compliance Certificate

Project Information

|                |                        |
|----------------|------------------------|
| Energy Code:   | 2021 IECC              |
| Project Title: | Millington Residential |
| Location:      | Millington, Maryland   |
| Climate Zone:  | 4a                     |
| Project Type:  | New Construction       |

Construction Site: Owner/Agent: Designer/Contractor:

Mechanical Systems List

Quantity System Type & Description

- HVAC System (Unknown):  
Split System Heat Pump  
Heating Mode: Capacity = 1 kBtu/h,  
Proposed Efficiency = 8.50 HSPF2, Required Efficiency = 7.50 HSPF2  
Cooling Mode: Capacity = 1 kBtu/h,  
Proposed Efficiency = 15.20 SEER2, Required Efficiency = 14.30 SEER2  
Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00
- Water Heater:  
Electric Storage Water Heater, Capacity: 38 gallons  
No minimum efficiency requirement applies

Mechanical Compliance Statement

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 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Nick Bowley - PE  
Name - Title  
Signature  
Date 7/24/24

Millington  
Senior Village

Residential Buildings

172 Sassafras Street  
Millington, MD 21651

PRESENT PRESENT COMPANY

PROJECT DIRECTORY

DEVELOPER

Home Partnership  
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626 TOWNE CENTER DRIVE, SUITE 102  
JOPPA, MD 21085  
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CIVIL ENGINEER

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BELCAMP, MD 21017  
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ARCHITECT

Present Company  
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TEL 410.366.9384

MEP ENGINEER

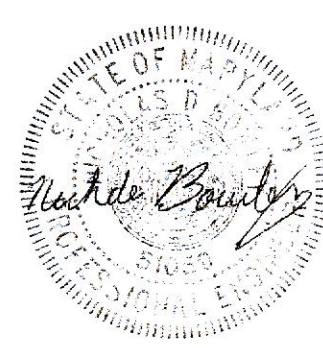
Bowley Jones  
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SEVERN, MARYLAND, 21144  
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ENERGY CONSULTANT

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GENERAL CONTRACTOR

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EASTON, MD 21601  
TEL 410.822.9000



Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 51059, Expiration Date: 06-01-2027.

REVISIONS

DATE NO. ISSU

SUBMISSION

100% Construction  
Documents  
PERMIT SET REISSUE  
June 22, 2026

DRAWING NAME / NO. SCALE: 1/4" = 1'-0"

MECHANICAL  
LEGEND

M001