

DATE: 07/24/2014  
JOB NO: 11216  
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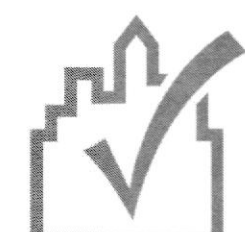
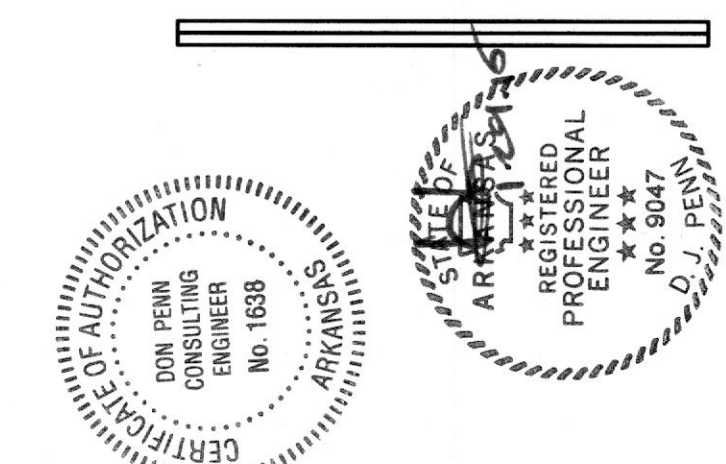


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ACCESS CENTER  
LIFELINE  
11771 Maumelle Blvd  
North Little Rock, AR 72113



COMcheck Software Version 3.9.2  
Mechanical Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: Addition  
Project Title: Access Center LifeLine  
Construction Site: 11771 Maumelle Blvd, North Little Rock, AR 72113  
Owner/Agent: LifeLine  
Designer/Contractor: Iannantuono SDI Design, LLC, 21714 Orwig Road, Freeland, MD 21053, 410-357-4374

Section 2: General Information

Building Location (for weather data): North Little Rock, Arkansas  
Climate Zone: 3a

Section 3: Mechanical Systems List

- Quantity System Type & Description  
1 HVAC System EX PAHU-1 (Single Zone) Heating: 1 each - Central Furnace, Gas, Capacity = 108000 kBtu/h...  
1 HVAC System EX PAHU-2 (Single Zone) Heating: 1 each - Central Furnace, Gas, Capacity = 80000 kBtu/h...  
1 HVAC System FCU-1 (Single Zone) Packaged Terminal Heat Pump...  
1 AHU-1 (Single Zone) Split System Heat Pump...  
1 HVAC System EDH-1 (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 6528 kBtu/h...  
1 HVAC System EDH-2 (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 17065 kBtu/h...  
1 AHU-2 (Single Zone) Split System Heat Pump

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- Heating Mode Capacity = 61800 kBtu/h  
Proposed Efficiency = 3.45 COP/Required Efficiency = 3.20 COP  
Cooling Mode Capacity = 60000 kBtu/h, No Economizer, Economizer exception: Filtration Requirements  
Proposed Efficiency = 11.80 EER/Required Efficiency = 9.50 EER  
Fan System: None  
1 HVAC System EDH-3 (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 8532 kBtu/h...  
1 HVAC System EDH-4 (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 13652 kBtu/h...  
1 HVAC System EDH-5 (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 3413 kBtu/h...  
1 HVAC System EDH-6 (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 3413 kBtu/h...  
1 HVAC System HUH-1 (Single Zone) Heating: 1 each - Unit Heater, Electric, Capacity = 10239 kBtu/h...  
1 Water Heater 1: Gas Storage Water Heater, Capacity: 100 gallons, Input Rating: 75 Btu/h w/ Circulation Pump, Proposed Efficiency: 95.00 EF, Required Efficiency: 0.48 EF

Section 4: Requirements Checklist

- Requirements Specific To: HVAC System EX PAHU-1 :  
1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Ee  
2. Discharge dampers prohibited with fan motors > 25 hp  
3. Integrated economizer is required for this location and system.  
4. Hot gas bypass limited to 25% of total cooling capacity  
Requirements Specific To: HVAC System EX PAHU-2 :  
1. Equipment minimum efficiency: Central Furnace (Gas): 80.00 % Ee  
2. Discharge dampers prohibited with fan motors > 25 hp  
3. Integrated economizer is required for this location and system.  
4. Hot gas bypass limited to 25% of total cooling capacity  
Requirements Specific To: HVAC System FCU-1 :  
1. Equipment minimum efficiency: Heat Pump: 2.81 COP 9.11 EER  
2. Discharge dampers prohibited with fan motors > 25 hp  
Requirements Specific To: AHU-1 :  
1. Equipment minimum efficiency: Heat Pump: 3.20 COP 9.50 EER (9.2 IPLV)  
2. Discharge dampers prohibited with fan motors > 25 hp  
3. Integrated economizer is required for this location and system.  
Requirements Specific To: HVAC System EDH-1 :  
None  
Requirements Specific To: HVAC System EDH-2 :  
None  
Requirements Specific To: AHU-2 :  
1. Equipment minimum efficiency: Heat Pump: 3.20 COP 9.50 EER (9.2 IPLV)

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- 2. Discharge dampers prohibited with fan motors > 25 hp  
3. Integrated economizer is required for this location and system.  
Requirements Specific To: HVAC System EDH-3 :  
None  
Requirements Specific To: HVAC System EDH-4 :  
None  
Requirements Specific To: HVAC System EDH-5 :  
None  
Requirements Specific To: HVAC System EDH-6 :  
None  
Requirements Specific To: HVAC System HUH-1 :  
None  
Requirements Specific To: Water Heater 1 :  
1. Water heating equipment meets minimum efficiency requirements: Gas Storage Water Heater efficiency: 0.48 EF  
2. All piping in circulating system insulated  
3. Hot water storage temperature controls that allow setpoint of 90°F for non-dwelling units and 110°F for dwelling units  
4. Automatic time control of heat tapes and recirculating systems present  
5. Controls will shut off operation of circulating pump between water heater/boiler and storage tanks within 5 minutes after end of heating cycle  
Generic Requirements: Must be met by all systems to which the requirement is applicable:  
1. Plant equipment and system capacity no greater than needed to meet loads  
2. Standby equipment automatically off when primary system is operating  
3. Multiple units controlled to sequence operation as a function of load  
4. Minimum one temperature control device per system  
5. Minimum one humidity control device per installed humidification/dehumidification system  
6. Load calculations per ASHRAE/ACCA Standard 103  
7. Automatic Controls: Setback to 55°F (heat) and 65°F (cool), 7-day clock, 2-hour occupant override, 10-hour backup  
8. Continuously operating zones  
9. Outside-air space for ventilation, system capable of reducing OSA to required minimum  
10. R-5 supply and return air duct insulation in unconditioned spaces  
11. R-8 supply and return air duct insulation outside the building  
12. Insulation between ducts and the building exterior when ducts are part of a building assembly  
13. Ducts located within equipment  
14. Ducts with interior and exterior temperature difference not exceeding 15°F  
15. Mechanical fasteners and sealants used to connect ducts and air distribution equipment  
16. Ducts sealed - longitudinal seams on rigid ducts, transverse seams on all ducts, UL 181A or 181B tapes and mastics  
17. Hot water pipe insulation: 1.5 in. for pipes <= 1.5 in. and 2 in. for pipes > 1.5 in.  
18. Cold water/energy efficient pipe insulation: 1.5 in. for pipes <= 1.5 in. and 1.5 in. for pipes > 1.5 in.  
19. Steam pipe insulation: 1.5 in. for pipes <= 1.5 in. and 3 in. for pipes > 1.5 in.  
20. Piping within HVAC equipment  
21. Fluid temperatures between 55 and 105°F  
22. Fluid not heated or cooled with renewable energy  
23. Piping within room fan-coil (with AHRI440 rating) and unit ventilators (with AHRI840 rating)  
24. Runouts < 4 ft in length  
25. Operation and maintenance manual provided to building owner  
26. Thermostatic controls have 2°F deadband  
27. Thermostats requiring manual changeover between heating and cooling  
28. Special occupancy or special applications where wide temperature ranges are not acceptable and are approved by the authority having jurisdiction  
29. Balancing devices provided in accordance with IMC (2006) 603.17

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- 14. Demand control ventilation (DCV) present for high design occupancy areas (>40 person/1000 ft2 in spaces >500 ft2) and served by systems with any one of 1) an air-side economizer, 2) automatic modulating control of the outdoor air damper, or 3) a design outdoor airflow greater than 2000 cfm  
15. Total cooling capacity without economizers must be less than 30000 kBtu/h. This project lists 129000 kBtu/h capacity without economizers  
16. Motorized, automatic shutoff dampers required on exhaust and outdoor air supply openings  
17. Gravity dampers acceptable in buildings < 3 stories  
18. Exhaust air heat recovery included for systems 5,000 cfm or greater with more than 70% outside air fraction or specifically exempted  
19. Hazardous exhaust systems, commercial kitchen and clothes dryer exhaust systems that the International Mechanical Code prohibits the use of energy recovery systems  
20. Systems serving spaces that are heated and not cooled to less than 60°F  
21. Where more than 60 percent of the outdoor heating energy is provided from site-recovered or site solar energy  
22. Heating systems in climates with less than 3600 HDD  
23. Cooling systems in climates with a 1 percent cooling design wet-bulb temperature less than 64°F  
24. Systems requiring dehumidification that employ energy recovery in series with the cooling coil  
25. Laboratory fume hood exhaust systems that have either a variable air volume system capable of reducing exhaust and makeup air volume to 50 percent or less of design values or a separate make up air supply meeting the following makeup air requirements: a) at least 75 percent of exhaust flow rate, b) heated to no more than 2°F below room setpoint temperature, c) cooled to no lower than 3°F above room setpoint temperature, d) no humidification added, e) no simultaneous heating and cooling

Section 5: 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 2009 IECC requirements in COMcheck Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist:  
Don Penn, PE  
Signature: [Signature]  
Date: JAN 29 2015

Section 6: Post Construction Compliance Statement

- HVAC record drawings of the actual installation, system capacities, calibration information, and performance data for each equipment provided to the owner.  
HVAC O&M documents for all mechanical equipment and system provided to the owner by the mechanical contractor.  
Written HVAC balancing and operations report provided to the owner.  
The above post construction requirements have been completed.

Principal Mechanical Designer-Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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REVISIONS

'A'	ISSUE	DATE
'B'	ISSUE	DATE
'C'	ISSUE	DATE
'D'	ISSUE	DATE
'E'	ISSUE	DATE
'F'	ISSUE	DATE

ComCheck

SHEET NUMBER

M10