FIELD REPORT

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| **Report No.:** | 1 – HVAC Scoping Visit | **Project Name:** | JPM – North Ave (New Rochelle) |
| **Client Rep.:** | JLL | **Project No.:** | JPM-36475 |
| **Company:** | JP Morgan Chase | **Project Contact:** | Lisbeth Soto |
| **Address:** | 270 North Ave<br>New Rochelle, NY 10804 | **CSG Rep.:** | Keri Budzyn |

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| **Date:** | February 2, 2023 |
| **Time of Observation:** | 12:00pm |
| **Weather:** | Partly Sunny, 35°F |
| **Attendees:** | Steven Vaz, David Whitehouse, Daniel Mulvaney, Lisbeth Soto, Facilities Personnel |

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| **Agenda of Survey** | Perform scoping visit of replacement of existing central air handling unit and corresponding condensing unit |

**Observations**

- The existing Chase Bank is served by a large air handling unit (AHU) located in the basement below of the adjacent multi-story building. The AHU was installed in the ceiling of the landlord office and was not readily accessible at the start of the site visit.
- The AHU was installed very tight to the existing deck and ceiling below, and overall access to the unit was very difficult. Due to the extreme limited conditions, a nameplate could not be located. Based on information provided from facilities, it was mentioned the AHU is rated at 30-tons.
- Per the facilities personnel on site, they are not able to properly access and maintain the AHU. This includes changing of filters, replacement of belts, and other maintenance items.
- The AHU is provided with a steam cooling to provide heating to the space. Steam is provided from the base-building central steam plant. Per the facilities staff, there have been multiple instances of insufficient heating to the Chase Bank space because of issues with the base-building steam plant not producing sufficient steam.
- The supply and return ductwork routing from the AHU to the corresponding Chase Bank space could not be located due to the existing conditions of the multi-story basement. Large supply and return ductwork was noted entering the Chase Bank 24/7 vestibule. It is assumed there is a nearby duct chase. A large return duct was also noted in the rear LAO desk behind the teller.
- Supply ductwork was routed above the ceiling throughout the entire Chase Bank to serve lay-in supply diffusers. A large sidewall return grille was installed on the wall of the 24/7 Vestibule. Another sidewall return grille was installed on the back wall of the ATM equipment room facing the teller line.
- The corresponding condensing unit (Trane M# TTA240B300BA, S# G17198748) is located on the roof of the Chase Bank, which is approximately 3 stories above grade. The CU is rated at 20-tons. The condensing unit is in poor condition and is approximately 31 years old.
- The condensing unit was installed on steel dunnage on the roof adjacent to a roof patio. There was no direct roof access from the Chase Bank space. An extension ladder is needed on the top

level of the adjacent parking deck, or a man door is available through a tenant space on the third floor of the adjacent multi-story building.

- The existing rooftop A/C unit and basement AHU are fed from Chase panel MDP. This panel is located in the base building basement electrical room, which is adjacent to the landlord office alluded to above. The rooftop A/C unit is fed from a 125A/3P circuit breaker in MDP. The basement AHU is fed from a 20A/3P circuit breaker in MDP.
- The existing front entry doors are not ADA compliant as they do not have a 10" kickplate or door opener.

**Recommendations**

- The existing air handling unit looks to be at least 20 years and is assumed to have passed its expected lifespan. As a result, the AHU should be removed and replaced.
- The existing configuration does not allow sufficient maintenance access and the AHU should not be a like-for-like replacement. To better provide maintenance access, one option is to negotiate with the landlord to take over the office where the AHU is installed. The existing AHU can be removed in sections and the existing office can be retrofitted into a new mechanical room to provide the necessary access for a future AHU. A new, floor-mounted AHU can be provided and installed. This would allow sufficient space for all future maintenance and to reconnect the new supply and return connections from the AHU to the existing duct risers to the Chase Bank space. There is an old Break Room previously serving the bank that is no longer being used within the basement space that could then be retrofitted to be the new landlord office in exchange to provide the mechanical room for the AHU. This is the least invasive option as it minimizes the impact to the existing HVAC system.
- It is not recommended to just replace the AHU as the current maintenance issues and hardships would continue. There is not sufficient space within the Chase Bank space or above ceiling to install a similarly sized AHU.
- Additionally, a like-for-like replacement would most likely require extensive modifications to the existing supply and return duct risers that would also impact the adjacent base-building operations.
- A like-for-like replacement would also still require the use of the base-building central steam plant for heating. There are no other options to provide heating as there is no gas service to the Chase Bank space and there is no extra electrical capacity to provide the necessary electric heating coil size. When possible, it is preferred to not utilize any base-building HVAC systems as the Chase Bank operations are now dependent on a system that is maintained by others.
- The condensing unit can be easily replaced with a direct replacement. There is sufficient space on the roof and rigging of a new unit is possible.
- Ultimately, the preferred recommendation from Core States Group is to provide and install an all new Variable Refrigerant Flow (VRF) system to serve the entire Chase Bank. The current HVAC system is very old and should be removed. The VRF system would remove the dependency on the base-building steam plant and is capable of providing electric heating with the removal of the large AHU and corresponding condensing unit. The VRF system utilizes individual fan coil units (FCUs) that are slim and can be easily installed above the ceiling within the Chase Bank space. This also provides direct access to the HVAC systems within the bank and no longer

requires the facilities personnel to be waiting on the landlord for access. The VRF system allows the complete removal of the AHU in the basement and no longer interrupts the landlord for access. The central supply and return duct risers from the basement can be removed and demolished. Multiple FCUs will also provide better HVAC as the heat recovery function of the VRF can provide simultaneous heating and cooling to the entire bank. The VRF system would only require an outdoor condensing unit to be installed, which is readily feasible based on the ample roof space. The existing dunnage can be modified for the new condensing unit footprint.

- The existing steam radiators within the space should remain and be re-used to serve as supplemental heat during the winter months.
- Verification regarding the scope of work to the existing system is required to fully determine the proposed electrical scope. A like-for-like replacement of the existing basement AHU would require rerouting from the existing MDP. New disconnecting means should be provided for the unit.
- The new AHU would be required to remain on the steam central plan for the building. if removed from the steam plant system, providing an all-electric new AHU would likely require an increase in electrical demand, which the existing Chase space does not appear to have the capacity to handle.
- The condensing unit can be replaced like-for-like as there is adequate room on the roof for a new unit and this unit can be re-fed from the existing 125A/3P circuit breaker in panel MDP.
- If the proposed and recommended VRF system should be installed, the existing rooftop condensing unit and basement AHU will be removed, therefore electrical space in MDP will be available to connect to. The new VRF condensing unit shall be connected to MDP and a breaker shall be installed based on the size of the unit. The corresponding fan coil units can either be connected to one breaker in MDP pending electrical ratings (though not preferred) or fed from electrical within the branch. Electrical capacity in panelboards within the branch will have to be verified in field by an electrician to determine if connection can be made. Pending the size of the units, it's possible that MDP can handle a new breaker to feed a dedicated load center to feed the proposed fan coil units for the VRF system within the Chase branch.

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## Appendix A: Photos

**Photo #1 – Existing AHU in Basement Ceiling**

**Photo #2 – Available Space for Maintenance Access**

**Photo #3 – Blocked Filter Access**

**Photo #4 – Condensing Unit on Roof**

**Photo #5 – Chase MDP Located in Base Building Basement Electrical Room**

**Photo #6 – Panel A Located within Chase Bank Space**


**Photo #7 – Lighting Panel Located within Chase Bank Space**


**Photo #8 – ATM Panel Located within ATM Room of Chase Bank Space**