II. LEED narrative

a. Integrative Process- A project team letter will be drafted detailing the integrative design process and specifically analyzing water-related systems and conducting an assessment for resilience, this will result in one (1) point.

b. Location and Transportation

LT5: Bicycle Facilities- Short term bicycle storage will be within 200 feet of the main entrance and accommodate 2.5% of the total building occupancy, and long-term bicycle storage will be onsite in the flex space, which is withing 300 feet of an entrance, this will accommodate 5% of occupants. Further there will be 2 showers and changing areas in the office space, this will result in one (1) point.

LT7: Green Vehicles- There is a total of 116 parking spaces allotted for this development, 6 of them (5.2%) will be electric vehicle charging spaces with level 2 charging capacity. This exceeds the 5% requirement and will result in one (1) point.

c. Sustainable Sites

SS1: Construction Activity Pollution Prevention- A clear and definitive LEED project boundary will be defined for this development as the platted property lines. It will be evident throughout the site, building exterior, building interior and neighborhood that this is a LEED project and the standards are to be upheld. This clarity is a minimum program requirement.

SS2: Site Assessment- A comprehensive site assessment will be completed that touches on; topography, hydrology, climate, vegetation, soils, human use, and human health effects in relation to this development. This detailed site assessment will result in one (1) point.

SS4: Open Space- A large majority of the site will be left wooded, and there will be areas throughout the natural landscape to be social areas and foster human interaction such as picnic tables and benches. Only 50% of the site will be covered by the building

and the parking lot so this leaves half of the site to remain natural, which exceeds the requirements of 30%, which results in one (1) point.

SS5: Rainwater Management- An in-depth rainwater retainage and management system will be designed in conjunction with the roofing system to retain 80th percentile of rainwater. This will result in one (1) point out of three total, as reaching the 85th and 90th percentile in a roofing system solely without a retention pond seems too intensive.

d. Water Efficiency

WE1: Outdoor Water Use Reduction- This is a minimum program requirement, for the purpose of this development option 2 will be selected, which is to reduce the landscape water requirement by 30% form the calculated baseline for the site's peak watering month. This will be achieved by working in conjunction with the landscape subcontractor to achieve this reduction plant selection and irrigation increased efficiency.

WE2: Indoor Water Use Reduction- This again is a minimum program requirement to reduce indoor potable water use and to preserve water resources. This development will comply with all baseline water consumption of fixtures and fittings, and comply with all standards for appliances and processes, specifically the cooling tower.

WE3: Building-Level Water Metering- This is also a minimum program requirement, with a goal to conserve low cost water options and identify opportunities for savings. Permanent water meters will be installed to measure potable water use for this development. The data from these meters will be collated into monthly and annual reports to be shared with the USGBC for 5 years from the certificate of occupancy.

WE4: Outdoor Water Use Reduction- This requirement builds off of the minimum program requirement detailed above, and is worth a possible total of two (2) points. As previously mentioned, there will be strong up front planning efforts with the landscape contractor to reduce the landscape water requirement by 50% to result in one (1) point out of the possible two. This further reduction will be achieved by careful selection of drought resistant vegetation and opportunities for hardscaping to reduce the irrigation

load. This development is extremely suitable for a 50% reduction from the calculated base line for the peak watering month.

WE5: Indoor Water Use Reduction- This requirement also expands upon the minimum program requirement described before, this requirement boasts a total of 6 possible points. The team feels confident that this development will be able to receive a total of five (5) points by reducing the indoor potable water use. This reduction will be achieved through motion sensor fixtures, low flow toilets and urinals, and advanced water metering and data collection. These measures will reduce the water use and help identify future opportunities to increase performance and be more efficient.

WE6: Cooling Tower Water Use- This development will have a cooling tower due to the size and nature of the building; the purpose of this requirement is to conserve water in the cooling tower process. To achieve the two possible points for this requirement, a potable water analysis will be conducted on the cooling tower to ensure that concentrations for the 5 main parameters are well below the maximum levels listed in the table for this section. In addition to this analysis, further tests will be conducted to ensure tat the max number of cycles is reached without going over the concentration levels, and to increase the number of cycles by a minimum of 25% by increasing the level of treatment. These parameters will be met through intentional design of the cooling towers and the system as a whole, this increased design and planning efforts will result in a total of two (2) points.

WE7: Water Metering- Water metering is a minimum program requirement as well; this point expands upon the basic metering by requiring permanent water meters for two or more systems. For the sake of this development these additional water meters will be installed on the irrigation system to work in conjunction with the reduced outdoor water use. A meter will also be installed on the indoor plumbing fixtures and fittings to aid in the reduction efforts detailed above for the indoor water reduction. The installation of these meters will result in one (1) point.

e. Energy and Atmosphere

EA1: Fundamental Commissioning and Verification- This is a program minimum requirement, the basis of this requirement is to complete the commissioning OPR and

BOD for mechanical, electrical, and plumbing for this development. It is essential to stay ahead of commissioning efforts and go into the project with a set plan and schedule for commissioning. This will require a joint effort from the subcontractors, general contractor, and the design team. A successful joint effort will render the building commissioned and therefore this requirement met.

EA2: Minimum Energy Performance- This is a minimum program requirement that sets out to reduce energy use and the emissions of greenhouse gasses. In order to satisfy this requirement, this development must comply with ASHRAE 90.1-2016 or an approved equivalent standard. Compliance with this standard will come through modeling and various calculations to get pre-approval. This will occur in the design phase of the project to ensure that this development will exceed the minimum energy requirement.

EA3: Building-Level Energy Metering- Building-Level Energy Metering is also a program minimum requirement, it requires that this development has meters electricity and chilled water. The data from these meters will be combined to give a metric for the whole building energy use. In regards to this project these meters will be designed into their respective systems in the design phase of the project.

EA4: Fundamental Refrigerant Management- This is the final minimum program requirement for the Energy and Atmosphere category, it sets out to reduce ozone depletion by preventing the use of CFC or HCFCs in the HVAC system. This requirement will be met through the design of the CFC/HCFC free HVAC system with a cooling tower.

EA5: Enhanced Commissioning- As previously mentioned, commissioning will be a very important aspect of this project and will be planned in detail from the beginning of the job. This requirement has a total of six points, and the plan is to get all of them through the various pathways. The path is enhanced and monitoring-based commissioning, meaning that the project team will not only commission the project, there will be numerous meters collecting data that will be monitored to ensure the highest and most efficient performance. This process will render four (4) points for the development. The final two points come through commissioning the building's thermal enclosure, this will be achieved through upfront planning and work with the

envelope contractor to ensure all the correct measures are in place to receive the final two (2) points, in turn achieving a total of six (6) points for this requirement.

EA6: Optimize Energy Performance- This requirement has various options and pathways to achieve points, for the purposes of this development Option 1 – Energy Performance Compliance will be used to achieve six (6) points. To receive these points, three will come from percentage improvement in energy performance – percent cost which will improve by 15%. The following 3 points will come from improving the percent greenhouse gas emissions by 16%. Both of these improvements will be achieved through building system design and intensive system performance analysis.

EA10: Enhanced Refrigerant Management- This requirement has a total of one possible point through two different pathways, with the intent to eliminate ozone depletion. For this development, option 2 – calculation of refrigerant impact, will be selected, to result in one (1) point. This will be achieved by the mechanical engineers conducting a detailed analysis and calculation of the refrigerants that are being used and their impact. This also includes the development and implementation of an in depth refrigerant leak detection and management plan.

f. Materials and Resources

MR1: Storage and Collection of Recyclables- This is a program minimum requirement in order to educate and provide convenience of recycling. This will be achieved through purchasing of recycling designated bins, to help sort and ruse appropriate waste. There will be numerous collection and storage areas for this type of waste throughout the development.

MR2: Construction and Demolition Waste Management Planning- This is a program minimum requirement as well; to satisfy this requirement the project team will need to create a waste management plan prior to mobilization, in which waste diversion goals are established and described. The primary purpose of this plan is to divert 50% of waste throughout the construction process from landfills and incineration facilities and reduce the overall amount of waste materials throughout the construction process.

MR3: Building Life-Cycle Impact Reduction- For this requirement there is a possibility of 5 points, but for this development only one point will be targeted. This point will be achieved through the design team conducting a comprehensive life cycle assessment of the projects structure and enclosure. This will result in one (1) point being obtained.

g. Indoor Environmental Quality

IEQ1: Minimum Indoor Air Quality Performance- This is a minimum program requirement for this development as there will be mechanically ventilated spaces. This development's mechanical system will have to comply with ASHRAE Standard 62.1-2016 or a local equivalent, whichever of the two is more stringent. In addition to this, outdoor air monitors will have to be installed for the ventilation system in the office portion, it must be equipped with an alarm when the outdoor airflow varies by more than 15%.

IEQ2: Environmental Tobacco Smoke Control- This is also a minimum program requirement, and mainly pertains to the life of the building after construction but will also be in place during the construction process. It requires that there be no smoking in or withing 25 feet of the building. This standard will be in place throughout the construction process and communicated and enforced to all future tenants.

IEQ3: Enhanced Indoor Air Quality Strategies- This requirement is in place to ensure that the future occupants will be comfortable, safe and productive by regulating the air quality. There are a total of two (2) points for this category, to achieve these points six of the nine listed strategies must be complied with. This development will comply with the entryway systems, filtration of outdoor air, filtration of recirculated air, increased ventilation by 15%, operable windows, and carbon dioxide monitoring. All of these will be communicated to the respective subcontractor through the drawings and the specifications.

IEQ4: Low Emitting Materials- This requirement is intended to reduce the concentration of chemical contaminants in the building with a total of three points. To achieve this standard the development must satisfy 4 product categories' VOC emission requirements, the four categories are as follows: Paintings and Coatings,

Adhesives and Sealants, Floorings, and Insulation. These requirements will be communicated to the respective subcontractors through the specifications to ensure that three (3) points are awarded for this category.

IEQ5: Construction Indoor Air Quality Management Plan- This requirement has a total of one (1) possible point, and is intended to promote well being of construction workers and future tenants by regulating the air quality. An Indoor Air Quality (IAQ) plan for the construction and preoccupancy phase will be drafted, to ensure that all requirements are met and that the permanent HVAC equipment will not be ran without a filter with a MERV of 8. This comprehensive plan will be drafted and verified to meet all of the respective requirements before mobilization.

IEQ6: Indoor Air Quality Assessment- This requirement is in place to ensure the air quality after construction is safe and where it is intended to be. The requirements of this will be met through extensive air quality testing, both for matter and inorganic gases and testing for volatile organic compounds. Completing both of these extensive tests will result in a total of two (2) points.

IEQ7: Thermal Comfort- Thermal comfort is essential for productivity and safety, in order to receive one (1) point for this category the HVAC system must comply with ASHRAE Standard 55-2017, and have individual thermostats in 50% of individual spaces and have a group control in shared spaces. These requirements will be communicated to the mechanical engineer to ensure that they are reflected in the drawings and specifications.

IEQ8: Interior Lighting- Similar to thermal comfort, interior lighting is essential to productivity and comfort, there is a total of two (2) possible points for this category that can be achieved by adopting 3 of the 4 listed strategies. This development will adopt glare control, color rendering, and dimmable lighting. These requirements will be communicated to the electrical sub-contractor through the drawings and specifications, and enforced through the submittal process.

IEQ9: Daylight- Having adequate daylight is essential for occupant health, there is a total of three possible points but for the purpose of this development only two (2) points will be targeted. These points are under Option 2 – Simulation: illuminance calculations, the design team will conduct these calculations to ensure that 75% of the

regularly occupied floor area has illuminance levels between 300 and 3,000 LUX at 9 a.m. and 3 p.m., successful completion of these calculations will result in two (2) points.

h. Innovation

I2: LEED Accredited Professional- One point is awarded for having a principal participant of the project team being a LEED Accredited Professional (AP), this point will be achieved by assigning one of the many project managers that have their LEED AP, to this project. This will result in one (1) point towards the LEED project total.