

# LEED NARRATIVE

## **INTEGRATIVE PROCESS - 1 POINT**

In order to achieve the integrative process point, the project will analyze cost-effective project outcomes through synergies across disciplines and building systems. Before the schematic design is set, energy and water related systems should be considered. The project will assess at least two potential strategies within energy related systems. First, site conditions will be reviewed for shading, exterior lighting, and hardscape/landscape for opportunities to reduce energy loads. Second, massing and orientation of the building will be considered to select an appropriate sized HVAC system, lighting, and renewable energy opportunities. These strategies will help to implement energy reducing design elements. Similarly, an evaluation of water-related systems must be performed before the schematic design is developed. This evaluation will explore reducing potable water loads and potential use of non-potable water supply sources to support the water demand volumes including: indoor, outdoor and process water demand and their supply sources. Together, the analysis of both of these systems will influence how design elements of the building were made more sustainable.

## **SENSITIVE LAND PROTECTION - 1 POINT**

The existing site is currently developed as Flower Shop/Auto Repair Shop and will be renovated into the new development. Using a site with an existing development footprint earns 1 LEED point. This reduces the environmental impact from the location of a building on the site and avoids development of environmentally sensitive lands.

## **BICYCLE FACILITIES - 1 POINT**

The site will include bicycle storage. To meet this requirement, it must be within a 200 yard walking distance from a bus stop. RTS is a bus system that provides rounds through the City of Gainesville as well as through campus. The site chosen is within 200 feet of a bus stop that is service by route 8 and 10. Furthermore, at least two short term and long term bicycle spaces will be provided within 100 feet of the main entrance. In compliance with this requirement, there will also be a shower room with a changing facility.

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## REDUCED PARKING FOOTPRINT - 1 POINT

Due to the close proximity of the site to campus and multiple modes of transportation, the project proposed a reduction in parking spaces. The required parking amount was 31 regular spaces and 2 ADA spaces. This was reduced to below the minimum.

## CONSTRUCTION ACTIVITY POLLUTION PREVENTION - REQUIRED

To comply with this requirement, erosion and sedimentation control plan will be implemented for all construction activities associated with the project.

## SITE ASSESSMENT - 1 POINT

In order to earn this point, a documented site survey must be performed to include: topography, hydrology, climate, vegetation, soils, human use, and human health effects. This survey was provided in the site selection report.

## OUTDOOR WATER USE REDUCTION - REQUIRED & 2 POINTS

No permanent irrigation is required as there is minimal landscaping. Any landscaping on site will rely solely on rainfall. This earns the development 2 points towards LEED certification.



## INDOOR WATER USE REDUCTION - REQUIRED & 5 POINTS

To meet the requirement, all newly installed toilets, urinals, private lavatory faucets, and showerheads for labeling will be WaterSense Labeled and have a reduced aggregate water consumption by 20% from the baseline denoted in the table below.

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<i>Fixture or fitting</i>	<i>Baseline (IP units)</i>	<i>Baseline (SI units)</i>
Toilet (water closet)*	1.6 gpf	6 lpf
Urinal*	1.0 gpf	3.8 lpf
Public lavatory (restroom) faucet	0.5 gpm at 60 psi** all others except private applications	1.9 lpm at 415 kPa, all others except private applications
Private lavatory faucets	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Kitchen faucet (excluding faucets used exclusively for filling operations)	2.2 gpm at 60 psi	8.3 lpm at 415 kPa
Showerhead*	2.5 gpm at 80 psi per shower stall	9.5 lpm at 550 kPa per shower stall

To earn 5 points, the fixture and fitting water use must be reduced by 45% from the baseline numbers above. Additionally, retail is also required to comply with the appliance and process requirements in the table below.

**Table 4. Standards for appliances**

<i>Kitchen equipment</i>		<i>Requirement (IP units)</i>	<i>Requirement (SI units)</i>
Dishwasher	Undercounter	≤ 1.6 gal/rack	≤ 6.0 liters/rack
	Stationary, single tank, door	≤ 1.4 gal/rack	≤ 5.3 liters/rack
	Single tank, conveyor	≤ 1.0 gal/rack	≤ 3.8 liters/rack
	Multiple tank, conveyor	≤ 0.9 gal/rack	≤ 3.4 liters/rack
	Flight machine	≤ 180 gal/hour	≤ 680 liters/hour
Food steamer	Batch	≤ 6 gal/hour/pan	≤ 23 liters/hour/pan
	Cook-to-order	≤ 10 gal/hour/pan	≤ 38 liters/hour/pan
Combination oven,	Countertop or stand	≤ 3.5 gal/hour/pan	≤ 13 liters/hour/pan
	Roll-in	≤ 3.5 gal/hour/pan	≤ 13 liters/hour/pan

**Table 5. Process requirements**

Discharge water temperature tempering	Where local requirements limit discharge temperature of fluids into drainage system, use tempering device that runs water only when equipment discharges hot water  OR Provide thermal recovery heat exchanger that cools drained discharge water below code-required maximum discharge temperatures while simultaneously preheating inlet makeup water  OR If fluid is steam condensate, return it to boiler
Venturi-type flow-through vacuum generators or aspirators	Use no device that generates vacuum by means of water flow through device into drain

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## **BUILDING - LEVEL WATER METERING - REQUIRED & 1 POINT**

To meet this requirement, a permanent water meter must be installed and shared with USBGC for 5 years or until the building ownership is changed. To earn a point, water meters should be installed on the indoor plumbing fixtures and fittings and the domestic hot water,

## **FUNDAMENTAL COMISSIONING AND VERIFICATION - REQUIRED**

The commissioning process will need to be completed for mechanical, electrical, plumbing, and renewable energy systems and assemblies according to ASHRAE relating to energy, water, indoor environmental quality, and durability. The commissioning authority must follow all requirements and meet the qualifications. Additionally, a current facilities requirements and operations and maintenance plan must be prepared and maintained according to the requirements.

## **MINIMUM ENERGY PERFORMANCE - REQUIRED**

To comply with this requirement, the building should have a 3% improvement in building performance to the baseline building performance rating. For retail, this includes all major support appliances.

## **BUILDING-LEVEL ENERGY METERING - REQUIRED**

Energy meters will be installed to provide data of total building energy consumption such as electricity, natural gas, chilled water, steam, fuel oil, propane, etc. The data must be shared with USBGC for a 5 year period and be tracked at one-month intervals.

## **FUNDAMENTAL REFRIGERANT MANAGEMENT- REQUIRED**

No chlorofluorocarbon (CFC) based refrigerants will be used in heating, ventilating, air conditioning and refrigeration systems.

## **ENHANCED COMMISSIONING - 6 POINTS**

To achieve the requirements to earn the 6 points, the commissioning authority must be involved and complete the following for the mechanical, electrical, plumbing, and renewable energy systems in addition to the building envelope.

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The commissioning authority must do the following:

- Review contractor submittals.
- Verify inclusion of systems manual requirements in construction documents.
- Verify inclusion of operator and occupant training requirements in construction documents.
- Verify systems manual updates and delivery.
- Verify operator and occupant training delivery and effectiveness.
- Verify seasonal testing.
- Review building operations 10 months after substantial completion.
- Develop an on-going commissioning plan.

To complete the 6 points, there also needs to be a monitoring-based procedure established for evaluating performance of energy and water systems. The procedures and measurement points that must be included in the plan are as follows:

- roles and responsibilities;
- measurement requirements (meters, points, metering systems, data access);
- the points to be tracked, with frequency and duration for trend monitoring;
- the limits of acceptable values for tracked points and metered values (where appropriate, predictive algorithms may be used to compare ideal values with actual values);
- the elements used to evaluate performance, including conflict between systems, out-of-sequence operation of systems components, and energy and water usage profiles;
- an action plan for identifying and correcting operational errors and deficiencies;
- training to prevent errors;
- planning for repairs needed to maintain performance; and
- the frequency of analyses in the first year of occupancy (at least quarterly).

## OPTIMIZE ENERGY PERFORMANCE - 18 POINTS

To earn these whopping 18 points, the project must achieve a 48% energy reduction established before the schematic design phase. To achieve this, load reduction and HVAC related strategies will be employed using the most energy efficient practices and equipment. This will affect the selection of appliances and equipment, display lighting, and refrigeration.

## STORAGE AND COLLECTION OF RECYCLABLE - REQUIRED

To meet this requirement, dedicated areas for storage and collection of recyclables are necessary. For retail specifically, a study of the project's top five recyclable waste streams must be conducted. Based on the study, four of the five will be provided with collection and storage space.

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## **CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT PLANNING - REQUIRED**

A construction and demolition plan will be developed and implemented to meet this requirement. The proposal includes minimal demolition due to the majority of construction being a renovation. Waste diversion goals for at least 5 materials will be developed in the plan along with specification of how the materials will be stored and recycled. A final report will be generated at construction completion.

## **MINIMUM INDOOR AIR QUALITY PERFORMANCE - REQUIRED**

All spaces will be properly ventilated and monitored according to ASHRAE Standards using a airflow measurement device. The building will be able to meet the standards for mechanically and naturally ventilated spaces.

## **ENVIRONMENTAL TOBACCO SMOKE CONTROL - REQUIRED**

Smoking will be prohibited inside and outside the building except in designated areas. Signage of this will be posted within 10 feet of all building entrances.

## **DAYLIGHT - 3 POINTS**

The building will achieve illuminance levels between 300 lux and 3,000 lux for 90% of the regularly occupies floor area to earn 3 points towards the LEED Certification. In order to do this, the existing garage doors will be replaced with glass garage doors to let in more natural light.

