

EXHIBIT 35

SUSTAINABILITY NARRATIVE

1. INTRODUCTION

The design and systems incorporated into the hospital enable sustainable operation of the facility by reducing resources consumed, waste generated, emissions generated, and reducing the financial burden on facility operators while improving occupant and public health.

Many sustainable features provide subtle benefits to the hospital such as selected robust, easily cleaned materials which last longer and reduce risk of infection. Other features such as energy efficiency have direct, measurable impacts on utility bills. The project should embrace a holistic design that may not always have a measurable impact, but improves the physical, mental, and financial health and wellbeing of building owners, staff, patients and the surrounding community.

2. CODES & STANDARDS

A. International Energy Conservation Code (IECC) 2012

- a. The state of Maryland has recently adopted IECC 2012 as a means of reducing the energy consumption associated with buildings. The American Society of Heat, Refrigeration, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2010 Energy Standard for Buildings Except Low-Rise Residential Buildings is equivalent to IECC 2012.
- b. Meeting IECC 2012 is a significantly greater challenge than prior codes had been; this will require the design team to consider more aggressive energy efficiency approaches, some of which may be new to the building owners and operators and may carry a first cost premium. The design team will thoroughly research and analyze each energy savings option considered and will include the first cost and maintenance complexity as significant factors before incorporating an energy conservation measure into the design.

B. Water Standards

- a. Few jurisdictions have significant guidance for water consumption as water availability is a relatively new problem in many locations. The majority of the water consumption requirements will be driven LEED as discussed in section 3.C.a and good design practices as discussed in section 5.
- b. There are significant stormwater requirements that include:
 - i. Implement environmental site design (ESD)—*e.g.*, small scale stormwater management practices, nonstructural techniques, site planning that mimics natural hydrologic runoff—to the maximum extent practicable to provide water quality treatment for at least 50% of the existing impervious area within the limit of disturbance, OR use a combination of the both for at least 50% of the site impervious area within the limit of disturbance.
 - ii. Implement ESD to the maximum extent practicable to provide water quality treatment for 100% of the proposed impervious area within the limits of disturbance OR use a combination of the D and E to meet 100% of the proposed impervious area within the limits of disturbance.
 - iii. ESD must be distributed.
 - iv. Alternative and off-site ESD possible when site cannot otherwise meet the stormwater standards.

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- C. Emissions Standards
- a. As of July 31, 2013 The U.S. EPA has designated Prince George's County, Maryland as Nonattainment for 3 NAAQS (National Ambient Air Quality Standards) Pollutants. NAAQS covers Carbon Monoxide, Lead, Nitrogen Dioxide, Ozone, Particulate Matter, and Sulfur Dioxide. Specifically Ozone (8-hour Ozone 1997,2008) and Particulate Matter (PM-2.5-1997) are currently of concern for Prince George's County.
 - b. Sources of combustions such as emergency generators, boilers, and cogeneration systems may be subject to additional emissions requirements and after treatment to meet local requirements to remove ozone and filter particulates.
 - c. LEED introduces the California South Coast Air Quality Management District standards for all sources of combustion under EAc7. Many larger pieces of equipment may not be able to meet this standard without the addition of after treatment equipment.

3. CERTIFICATIONS

- A. Sustainability strategies will be implemented that support the goal of achieving LEED 2009 for Healthcare certification, with the certification level to be evaluated during the next design phase.
- B. LEED 2009 for Healthcare is broken into six categories which cover: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality, and Innovation in Design. A total of 110 points are available to LEED projects, however not all will be applicable or available to each project.
- C. LEED HC incorporates 13 prerequisites that are required for all certified projects. Many of these are best practice and/or are required by local codes. Some set minimum performance thresholds in key areas. The following prerequisites require special attention as they may not be standard practice for all locations and facilities. They are not required to be pursued except to achieve the highest levels of certification.
 - a. Water Efficiency: LEED 2009 for Healthcare requires that the hospital save 20% water consumption from domestic fixtures and processes as compared to the Energy Policy Act 1992 and 2005. This prerequisite is typically easy to achieve when appropriate plumbing fixtures are specified. Because domestic plumbing fixtures can represent less than half of the overall water consumption of a hospital, additional LEED credits are recommended to reduce water consumption associated with irrigation, building/medical equipment, food service and cooling towers.
 - b. Energy Efficiency: A minimum energy cost savings of 10% beyond ASHRAE 90.1-2007 is required for LEED certification as part of the energy efficiency prerequisite. The local code is IECC 2012 is often about 10-15% more stringent than ASHRAE 90.1-2007. Meeting energy code should enable the project to meet its minimum energy requirements under LEED. See section 2.A.b.
 - c. Fundamental Commissioning: Fundamental commissioning during and after construction is a LEED HC prerequisite. Additional credits are offered for enhanced commissioning and building envelope commissioning.
 - d. Building Recycling: Hospitals are required to incorporate recycling programs into building operations for standard recyclable materials, including but not limited to paper, cardboard, glass, plastics, metals, batteries, and mercury containing devices.

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- Appropriate collection and storage locations are required to be incorporated into the design.
 - e. Ventilation: Hospitals are required to meet ASHRAE Standard 170. Spaces not covered in ASHRAE 170, such as offices, are required to meet ASHRAE 62.1.
 - D. There are multiple design paths that support achieving LEED certification for any given project. Many credits are simple to achieve and are considered standard practice in many facilities. However, based on project experience the following areas may provide challenges to the design team and will need to be carefully considered:
 - a. SSc9.2: Connection to the Natural World - Direct Exterior Access
 - b. WEc3: Water Use Reduction (highest reduction thresholds)
 - c. EAc1: Energy Performance (highest performance thresholds)
 - d. EAc2: On-Site Renewable Energy
 - e. EAc5: Measurement & Verification
 - f. EAc7: Community Containment Prevention – Airborne Release
 - g. IEQc2.2: Acoustic Environment
 - h. IEQc5: Indoor Chemical and Pollutant Source Control
 - i. IEQc6.1,2: Controllability of Systems – Lighting, Thermal Comfort
 - j. IEQc8.1,2: Daylight and Views
 - E. There are additional certifications and initiatives that the hospital may pursue such as:
 - a. EnergyStar – Based on 1 year of measured energy performance as compared to peer hospital buildings. Score better than 75 out of 100 points to achieve EnergyStar certification.
 - b. Healthier Hospital Initiative – A series of challenges that focus on: Leaderships, Food, Energy, Waste, Chemicals, and Purchasing. HHI is a peer-to-peer, membership-based organization.
 - c. Green Guide for Healthcare Operations (GGHC Operations) – This guidance document provides good recommendations for greening the operations of healthcare facilities. Although many measures are not directly relevant for new construction projects, it is beneficial to evaluate operations measures to properly plan for them during the design process. LEED for Existing Buildings Operations and Maintenance can provide a third party certification for operational measures, but it is not specific to healthcare.
 - d. Sustainable Roadmap for Hospitals – This initiative was set up by ASHE, the AMA, and other industry organizations to provide free peer-to-peer implementation tools and justification metrics for sustainability measures.

4. ENERGY

- A. Systems & Strategies
 - a. The basis of design will include many common energy savings features such as high performance chiller and boiler plants, VAV air handling systems, heat shift heat pump system, sophisticated HVAC and lighting control schemes, heat recovery where appropriate, and other solutions that have proven life cycle cost effective in healthcare facilities. Life cycle cost analysis will be conducted during schematic design to confirm these assumptions.
 - b. Additional sustainable strategies such as combined heat and power (CHP), dedicated outside air system coupled with active chilled beams, renewable energy

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- etc. will be evaluated as design progresses. Preliminary CHP analyses have already been completed, and are included in the engineering narrative.
 - c. Process loads (imaging, sterilizers, kitchen equipment, etc.) will be incorporated into the sustainable engineering strategies to reduce energy and water consumption related to these systems and to create energy and water efficiency synergies that support the facility's goals.
- B. Energy Modeling
- a. The design team will provide early exploratory energy modeling starting in the Programming and Concept phases of the project with the intent of testing goals, gauging ideas, and filtering some of the ideas. Standard and custom modeling tools will allow for a smooth transition into the Schematic Design phase and a greater level of design detail.
 - b. The modeling is intended to support a variety of needs: design goals, code compliance, LEED documentation, utility incentive opportunities and/or water use impacts. The data can also be used to support economic analysis efforts which may include payback analysis, life cycle cost analysis, and/or Value Engineering efforts.
 - c. The models will be updated as the project progresses into later phases and can be used in the construction submittal stage to evaluate the value of potential final system alternatives if deemed of value.
- C. Energy Savings Target
- a. The U.S. Department of Energy's Commercial Building Energy Consumption Survey (CBECS) 2003 determined that the average energy use intensity of inpatient healthcare facilities for the mid-Atlantic region of the U.S. is 220kBtu/SF-Year.
 - b. A new hospital meeting energy code should have an EUI of between 175 to 200 kBtu/SF-Year for this region with a goal of 150 kBtu/SF-Year. The target will be revisited during schematic design and confirmed with energy models as the design progresses.

5. WATER

- A. The design team will provide an estimate of both water used on the site and water available on the site. This includes gross quantities of site, mechanical and building water needs, each of which are characterized by different water quality requirements. This will inform strategies that support project goals, compliance with stormwater and water reuse/recycling standards, and cost effective reduction of potable water use. Water use will be minimized through design of the plant and building mechanical systems, site landscape design, and fixture and equipment selection. Opportunities for minimizing the project's potable water use, such as rain or gray water reuse, will be studied. These concepts will be supported by gross estimates of water volumes that correlate sources and uses with an assessment of relative costs. These will be initially vetted with the owner and the most viable of the strategies will be developed and evaluated with greater detail as the design progresses.
- B. Energy is a significant portion of the cost of water, both at the utility level and at the site and building scale. Similarly, significant volumes of water are used to support the functioning of building mechanical systems and building process loads. The design team will employ life cycle cost analysis to track the water cost-versus energy cost tradeoffs of design decisions and use this data to support design decision making. Note that this site's

water utilities (including stormwater) are relatively expensive. Water utility costs have risen an average of 7% per annum for the previous 8 years in part because of a consent decree that compels system improvements. It is reasonable to expect similar annual increases through the direction of the consent decree schedule (to 2016) and beyond.

- C. Based on a past project experience and the local water utility rates, a design-modeled (mechanical systems, site water, fixtures and furnishings, lawn) plant/building water savings target of 50% potable is recommended. The target will be revisited during schematic design and confirmed with energy and water models as the design progresses. The design team will describe its water related design work with the following metrics:
- Design baseline (assumed volume of potable water)
 - Designed water volumes (potable and reused/recycled water)
 - Potable water volumes
 - Reused/recycled water volumes
 - Design baseline annual water utility costs (water, sewer, stormwater)
 - Designed water annual utility costs (water, sewer, stormwater)

6. INDOOR ENVIRONMENTAL QUALITY

- A. A major factor in sustainability is enabling a productive and healthy working environment, and in the case of hospitals an environment that supports healing. Indoor environmental quality includes: views and daylight, air quality, acoustic quality, and thermal comfort.
- B. Daylight & Views
- Access to natural light and views helps establish circadian rhythm and creates a calm environment that encourages healing and productivity. This can be especially important in hospitals where staff often works night shifts, which can have detrimental impacts on performance.
 - Interior and exterior shading will be investigated to minimize glare while maximizing quality daylight. The target value for glare (maximum daylight autonomy) should be less than 5%, and the target value for daylight (continuous daylight autonomy) shall be 50%. Of particular concern will be the location of the patient's head as compared to the window and direct sun to eliminate glare. Glare on patients faces will cause discomfort and will result either in a nurse call or closing of shades and activation of artificial lighting. Motorized blinds with controls at the patient beds are recommended to provide additional comfort and control when glare and/or high light levels are problematic.
- C. Indoor Air quality
- Both ASHRAE Standard 170 Ventilation of Health Care Facilities and ASHRAE Standard 62.1 Ventilation for Acceptable Indoor Air Quality set air flow and filtration requirements for the hospital.
 - Key components to maintaining air quality are internal pollutants generated by offgassing furniture and materials.
- D. Acoustics
- Architectural and MEP systems shall be designed to minimize noise and maintain privacy. This is especially important in a hospital where confidential medical information is frequently conveyed.
 - Exterior noise shall be managed as practicable. Major sources of noise include: The Capitol Beltway, Largo Town Center Metro Station, Air Traffic for nearby

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- airports, medical transport helicopters, and mechanicals systems (cooling towers & generators).
 - E. Thermal Comfort
 - a. Thermal comfort guidelines are established by ASHRAE Standard 55 Thermal Environmental Conditions for Human Occupancy.
 - F. User (Staff & Patient) Controls
 - a. The user's ability to adjust their environment and light levels is great satisfier. The level of controllability of systems including lighting and thermal comfort will be discussed early in schematic design.

7. ECONOMICS & OPERATIONS

- A. Life cycle cost analyses will be conducted for all major systems and strategies analyses. Factors that help to determine total cost of ownership include: first cost, incentives, utility cost (energy & water), maintenance costs, and expected equipment life.
- B. A target payback time or ROI will be set early in schematic design to be used as a performance metric. Initial investigations into both energy and water utility rates indicate effective paybacks for multiple energy and water savings strategies. Utility rates will need to be confirmed with UMMS, and include:
 - a. Electricity = \$0.134/kWh : Pepco GS-3A Electric Rate Schedule
 - b. Natural Gas = \$10.15/MMBtu : US DOE, EIA Maryland Average Rate
 - c. Water = \$6.76/kgal : Washington Suburban Sanitary Commission
 - d. Sewer = \$10.29/kgal : Washington Suburban Sanitary Commission
- C. Both energy and water measurement and verification will be pursued to meet both LEED and UMMS requirements to maintain long term efficient performance of MEP and process systems such as sterilizers, food service, laundry and imaging.
- D. Incentives:
 - a. Pepco pays incentives for electricity and water savings
 - i. Electricity Incentive = \$0.16/kWh
 - ii. Water Incentive = \$0.624/kgal
 - b. Maryland Department of Environmental Resources
 - i. Incentives are currently being determined under the Clean Water Act Fee regulation.
 - c. Additional incentives will be determined as the design progresses.

END OF NARRATIVE