

## **7. Appendix C: Tools**

**7.1 SUSTAINABILITY KICK-OFF MEETING TOOL KIT**

**7.2 DESIGN CHECKLISTS**

## 7.1 SUSTAINABILITY KICK OFF

### 7.1.1 SAMPLE ENVIRONMENTAL HEALTH GOALS

#### Environmental Health Goals

Sustainable design for healthcare facilities is particularly appropriate as a natural extension of the hospital's mission to promote healing and wellness. Trinity and SJRMC will lead the industry in designing and constructing buildings in ways that enhance health.

An integrated design approach to sustainability addresses the shared mission of providing the finest patient care while also ensuring the health of the environment and providing economic benefits from reduced operating costs, improved productivity, and better patient environments.

- To integrate the building with its environment: by retaining stormwater onsite, reducing heat island effect, and minimizing light trespass.
- To maximize efficiency for building systems, including site and building water and energy systems.
- To select wherever possible building materials and indoor furnishings that are manufactured with low or no toxic chemicals, recycled content, or even reuse materials to further reduce the use of raw materials.
- To build responsibly by recycling construction waste and establishing a process for continued occupant recycling for the life of the building.
- To reduce or eliminate the use of toxic materials, adhesives, paints, and cleaning products in the indoor environment.
- To create an occupant-centered healthy healing environment that encourages patient recovery and staff comfort. Aesthetics, daylight, connection to the outdoors, access to areas that provide solitude and social activities, and welcoming patient areas will provide vital support for a patient's well-being.

*Site Reference: Saint Joseph Regional Medical Center, South Bend, IN*

#### Environmental Health Goals

Four rules against which each design decision must be measured:

- We will not do anything dumb to achieve a LEED credit
- Dumb was anything that doesn't have a Return on Investment (ROI) of 8.33 years or less and anything that created additional maintenance.
- We must know if we are being dumb; every decision needs to be tested
- We will achieve a Platinum Certification

*Site Reference: Dell Children's Medical Center of Central Texas, Austin, TX*

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## 7.1.2 SAMPLE AGENDA



Department of Veterans Affairs  
PROJECT NAME

### Environmental Health Kick-Off

**Date:** TBD

**Location:** TBD

**Participants:** VA Design Team; VA Functional Team;  
VA Operational Staff; VA Financial Staff;  
A/E Consultant; Design Consultants;  
Engineering Consultants; Estimator; Construction Manager



#### Introduction

The purpose of the Environmental Health Kick-Off is to identify the ultimate sustainable goals and objectives of the project and the measures for success. Performance criteria identified in this session will be used as part of the analysis and evaluation and serve as the basis for design.

The desired outcome of this meeting is to create the business and design context for the project. The Vision Session will result in a combined statement representing all aspects of the planning problem, including:

- Establish Project Environmental Health Targets
- Understand Priorities
- Determine Measurable Outcomes

#### Why Do We Need a Vision? Why Can't We Just Start Drawing?

Like any other important business initiative, a successful implementation results from a solid strategy. Successful project implementation depends on the VA's ability to flex and change, as it positions itself for the future.

#### AGENDA

- A. Welcome and Introductions
- B. Establish Ground Rules
- C. Discussion of Purpose
- D. Activity
- E. Brainstorm Environmental Health Goals
- F. Establish Consensus
- G. Write Goal Statement
- H. Next Steps / Wrap Up

### 7.1.3 FACILITATION RULES

When facilitating a meeting, it is important to be sure that all opinions are valued and all ideas heard. The following tips should be used in any exercise requiring facilitation, sustainable or not. The facilitator should:

- Establish ground rules
- Provide a safe and welcoming environment
- Encourage participation from all members of the group
- Define the mission of the meeting
- Keep group on task and schedule
- Remain neutral
- Listen actively and recognize participants' input
- Manage conflict
- Build consensus
- Be flexible and adaptable
- Be sensitive to group and individual dynamics
- Recognize that all ideas are good ideas (critique of others' ideas and comments is not allowed)
- Remind participants that ideas can be used to create hybrid solutions
- Encourage building upon the ideas of others
- Establish record keeping system
- Ask questions, but avoid loaded and leading questions, as well as yes/no questions
- Seek clarification, translate, or rephrase unclear comments
- Avoid giving lengthy comments
- Avoid negative tone of voice

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## 7.2 DESIGN CHECKLISTS

### INTEGRATED DESIGN CHECKLIST

The following checklist should be filled out by the AE and submitted with the other checklists required for end of phase review by VA.

## A/E REVIEW CHECKLIST

### INTEGRATED DESIGN

- Reviewers should** - Use Checklists when reviewing any type of VA construction project for the following disciplines:
- Sustainable Design
  - Site and Landscape,
  - Architectural,
  - Structural,
  - Plumbing, Fire Protection, and Sanitary,
  - Heating, Ventilating, and Air Conditioning (HVAC),
  - Steam Generation,
  - Steam Distribution,
  - Incineration/Solid Waste, and
  - Electrical.
- Reviewers should** - Insure that A/E Submission Instructions (PG-18-15) for Schematic, Design Development, and Construction Documents are followed for various types of VA construction projects.
- Reviewers should** - Insure that every VA construction project is in compliance with all life safety issues.
- Reviewers should** - Be aware that these checklists are not all-inclusive but only provide minimum review items.

## A/E CHECKLIST

**TITLE** \_\_\_\_\_ **PROJECT NO.** \_\_\_\_\_

**LOCATION** \_\_\_\_\_ **DATE** \_\_\_\_\_

**REVIEWED BY** \_\_\_\_\_

**ORGANIZATION** \_\_\_\_\_

### GENERAL INFORMATION FOR REVIEWERS

#### INTEGRATED DESIGN REVIEW

The reviewer should be thoroughly familiar with the following VA standards before conducting a design review. These are available on *Internet/Intranet*:

[http://www.va.gov/facmgt/standard/va\\_gov.htm](http://www.va.gov/facmgt/standard/va_gov.htm)

[http://vawww.va.gov/facmgt/standard/va\\_gov.htm](http://vawww.va.gov/facmgt/standard/va_gov.htm)

|     |   |
|-----|---|
| 1.  | <b>DESIGN MANUALS (PG-18-10)</b>  |
| 2.  | <b>MASTER CONSTRUCTION SPECIFICATIONS (PG-18-1)</b>   |
| 3.  | <b>STANDARD DETAILS (PG-18-4)</b> (Available in AutoCAD 2000 format)  |
| 4.  | <b>DESIGN AND CONSTRUCTION PROCEDURES (formerly Construction Standards) (H-18-3)</b> (Policies defining the minimum level of excellence in the design of VA facilities) |
| 5.  | <b>DESIGN GUIDES (PG-18-12)</b> (Graphic information on specific programs in the design development of VA facilities)   |
| 6.  | <b>DESIGN ALERTS</b> (These alerts are issued on a regular basis for design and construction related issues)  |
| 7.  | <b>A/E QUALITY ALERTS</b> (These alerts are issued to guard against common and repeat design errors)  |
| 8.  | <b>A/E SUBMISSION INSTRUCTIONS, PROGRAM GUIDE, PG-18-15</b>   |
| 9.  | <b>TECHNICAL SUMMARIES</b> (The summaries of HVAC design requirements for special and critical areas)   |
| 10. | <b>VA NCS APPLICATION GUIDE</b>   |
| 11. | <b>NCS (NATIONAL CAD STANDARD)</b>  |
| 12. | <b>VA SUSTAINABLE DESIGN MANUAL</b>   |

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### SUSTAINABILITY KICK-OFF MEETING

#### INTEGRATED DESIGN REVIEW

| NO. | ITEM  | COMMENTS/<br>YES/NO/NA |
|-----|---|------------------------|
| 1   | Five to ten project-specific priority environmental goals and target measurements |                        |
| 2   | Life-cycle cost parameters for decision making                                    |                        |

**PRELIMINARY EVALUATION MEETING****INTEGRATED DESIGN REVIEW**

| NO. | ITEM  | COMMENTS/<br>YES/NO/NA |
|-----|---|------------------------|
| 1   | A preliminary VA sustainable checklist for the project identifying targeted solutions to the Federal mandates by LEED credit. |                        |
| 2   | The results of the site base conditions analysis  |                        |
| 3   | An integrated budget estimate incorporating the planned sustainable strategies.   |                        |



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## A/E CHECKLIST

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**ORGANIZATION** \_\_\_\_\_

### SCHEMATIC 1

#### INTEGRATED DESIGN REVIEW

| NO. | ITEM   | COMMENTS/<br>YES/NO/NA |
|-----|--|------------------------|
| 1   | A preliminary VA sustainable checklist for the project identifying targeted solutions to the Federal Mandate by LEED credit.   |                        |
| 2   | Preliminary energy models for alternative schemes indicating at least relative percent reductions. Green Building Studio, Trane, or other similar software may be used for this stage. |                        |
| 3   | An integrated budget estimate incorporating the planned sustainable strategies   |                        |

## A/E CHECKLIST

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### SCHEMATIC 2

#### INTEGRATED DESIGN REVIEW

| NO. | ITEM  | COMMENTS/<br>YES/NO/NA |
|-----|---|------------------------|
| 1   | An updated VA sustainable checklist for the project with written narrative summarizing status of meeting full Federal mandates.   |                        |
| 2   | <p>Refine the energy model of the design building</p> <ul style="list-style-type: none"> <li>• Generate an ASHRAE 90.1-2004 Appendix G compliant base case to compare with the design case, for all buildings over 8000 GSF.</li> <li>• Use the energy model to simulate Energy Efficiency Measures (EEMs) for the proposed design and show the associated energy consumption and cost savings for each</li> <li>• Prepare an energy model report describing all assumptions used in creating the model and summarizing the energy and cost savings associated with each EEM simulated, as well as summarizing the projected savings vs. the ASHRAE 90.1-2004 Appendix G base case. The savings vs. the ASHRAE case will be summarized based on the following comparisons: <ul style="list-style-type: none"> <li>○ <b>Consumption:</b> BTU/GSF/year, including receptacle and process loads.</li> <li>○ <b>Energy Cost:</b> \$/GSF/YR for regulated energy (excluding receptacle and process loads)</li> <li>○ <b>LEED:</b> \$/GSF/YR for total energy (including receptacle and process loads)</li> </ul> </li> </ul> <p>NOTE: For calculating energy for acute care projects, 30% shall be used as the receptacle and process loads in determining the baseline building performance rating.</p> |                        |
| 3   | Document showing life-cycle cost analysis against varying levels of energy reduction target levels.   |                        |
| 4   | Updated cost estimate.  |                        |

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| <b>Design Development 1 (DD1)</b> |   |                        |
|-----------------------------------|---|------------------------|
| <b>INTEGRATED DESIGN REVIEW</b>   |   |                        |
| NO.                               | ITEM  | COMMENTS/<br>YES/NO/NA |
| 1                                 | Update the energy model based on design changes and added design detail   |                        |
| 2                                 | Use the energy model to simulate any additional EEMs considered   |                        |
| 3                                 | Update energy model report, summarize the energy and cost savings of each EEM simulated. Update the projected savings vs. the ASHRAE 90.1-2004 Appendix G code case, using the same comparison metrics as in the Schematic 2 phase. |                        |
| 4                                 | Identify percentage of energy savings achieved  |                        |
| 5                                 | Document showing life-cycle cost analysis against varying levels of energy reduction target levels.   |                        |

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| <b>Design Development 2 (DD2)</b> |   |                        |
|-----------------------------------|---|------------------------|
| <b>INTEGRATED DESIGN REVIEW</b>   |   |                        |
| NO.                               | ITEM  | COMMENTS/<br>YES/NO/NA |
| 1                                 | Update the energy model based on design changes and added design detail   |                        |
| 2                                 | Use the energy model to simulate any additional EEMs considered   |                        |
| 3                                 | Update energy model report, summarize the energy and cost savings of each EEM simulated. Update the projected savings vs. the ASHRAE 90.1-2004 Appendix G code case, using the same comparison metrics as in the Schematic 2 phase. |                        |
| 4                                 | Identify percentage of energy savings achieved  |                        |
| 5                                 | Document showing life-cycle cost analysis against varying levels of energy reduction target levels.   |                        |

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| <b>Construction Documents (CD1)</b> |   |                        |
|-------------------------------------|---|------------------------|
| <b>INTEGRATED DESIGN REVIEW</b>     |   |                        |
| NO.                                 | ITEM  | COMMENTS/<br>YES/NO/NA |
| 1                                   | An updated VA sustainable checklist for the project with written narrative summarizing status of meeting full Federal mandates.   |                        |
| 2                                   | For each design phase LEED credit mapped to a Federal mandate, submit documentation per requirement on USGBC LEED online website.   |                        |
| 3                                   | Final energy model report as follows: <ul style="list-style-type: none"> <li>• Update the energy model during the Construction Document phase based on the final design documents. Provide final information regarding the three energy measurements to Central Office.</li> <li>• Update energy model report, summarizing the projected savings vs. the ASHRAE 90.1-2004 Appendix G code case, using the same comparison metrics as in the Schematic 2 phase.</li> </ul> |                        |
| 4                                   | Updated cost estimate.  |                        |

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| <b>Construction Phase</b>       |   |                        |
|---------------------------------|---|------------------------|
| <b>INTEGRATED DESIGN REVIEW</b> |   |                        |
| NO.                             | ITEM  | COMMENTS/<br>YES/NO/NA |
| 1                               | Final VA sustainable checklist for the project with written narrative summarizing status of meeting full Federal mandates.              |                        |
| 2                               | For each construction phase LEED credit mapped to a Federal mandate, submit documentation per requirement on USGBC LEED online website. |                        |