Building Maintenance and Operation Template (BM) BM-B
Basis of Design (BOD)

[Documentation of the Basis of Design (BOD) is a step required for compliance with 2010 CALGREEN Code, section 5.410.2.1, for newly constructed buildings greater than 10,000 sq. ft. This template is a guide for use by the design team.]

1. HVAC System
   1.1. Narrative Description of System
      A. [System type(s), location, control type, efficiency features, outdoor air ventilation strategy, indoor air quality features, noise reduction features, environmental benefits, other special features]
      B. [Describe how system meets any special requirements listed in the Owner’s Project Requirements document.]
   1.2. Reasons for System Selection
      A. [Reasons that the selected system is a better choice than alternatives. E.g. comfort performance, efficiency, reliability, flexibility, simplicity, cost, owner preferences, site constraints, climate, availability of maintenance, acoustics]
   1.3. Load Calculations
      A. Load calculation method/software: ______________________
      B. Summer outdoor design conditions: __°F drybulb, __°F wetbulb
      C. Winter outdoor design conditions: __°F drybulb
      D. Indoor design conditions: __°F, __%RH cooling; __°F heating
      E. Internal heat gain assumptions:

<table>
<thead>
<tr>
<th>Space</th>
<th>Lighting Load</th>
<th>Plug Load</th>
<th>Occupant Load</th>
<th>Infiltration Load</th>
<th>Other:</th>
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   F. Calculated cooling loads and system size:

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<tr>
<th>System/ Air Handler ID</th>
<th>Calculated Peak Cooling Load</th>
<th>Selected System Cooling Capacity</th>
<th>Reasons for difference between calculated load and selected system capacity</th>
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   G. Other load calculation assumptions:

   1.4. Sequence of Operations
      A. [Operating schedules, setpoints, etc. May refer to plans and/or specifications if sequence of operations is included there.]
2. Indoor Lighting System

2.1. Narrative Description of System
   A. Fixture type(s)
   B. Lamp and ballast type
   C. Control type
   D. [Describe how system meets any special requirements listed in the Owner’s Project Requirements document.]

2.2. Reasons for System Selection
   A. [Reasons that the selected lighting system is a better choice than alternatives. E.g. visual comfort performance, efficiency, reliability, flexibility, simplicity, cost, owner preferences, color rendering, integration with daylighting, ease of maintenance, etc.]

2.3. Lighting Design Criteria

<table>
<thead>
<tr>
<th>Space ID</th>
<th>Space Type</th>
<th>Illumination Design Target (footcandles)</th>
<th>Source of Target (e.g. IES Standard, Owner Requirement)</th>
<th>Other Lighting Design Criteria: [e.g. CRI, CCT]</th>
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2.4.Lighting Power Design Targets

<table>
<thead>
<tr>
<th>Space Type</th>
<th>Title 24 Lighting Power Allowance (watts/ft²)</th>
<th>Lighting Power Design Target (watts/ft²)</th>
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3. Water Heating Systems

3.1. Narrative Description of System
   A. [System type(s), location, control type, efficiency features, environmental benefits, other special features]
   B. [Describe how system meets any special requirements listed in the Owner’s Project Requirements document.]

3.2. Reasons for System Selection
   A. [Reasons that the selected water heating system is a better choice than alternatives. E.g. performance, efficiency, reliability, simplicity, space constraints, etc.]
cost, owner preferences, ease of maintenance, utility company incentives, etc.)

3.3. Water Heating Load Calculations
   A. [Describe sizing calculation method, assumptions, and results]

4. Renewable Energy Systems
   4.1. Narrative Description of System
      A. [System type(s), location, inverter type, control type, performance, efficiency, energy savings, payback period]
      B. [Describe how system meets any special requirements listed in the Owner’s Project Requirements document.]
   4.2. Reasons for System Selection
      A. [Reasons that the selected renewable energy systems are a better choice than alternatives. E.g. performance, efficiency, reliability, flexibility, simplicity, expandability, cost, payback period, utility company incentives, owner preference, space constraints, cost, owner preferences, ease of maintenance, etc.]
   4.3. Renewable Energy System Generation Calculations
      A. [Describe sizing calculation method, assumptions, and results]

5. Landscape Irrigation Systems
   5.1. Narrative Description of System
      A. [System type(s), location, control type, performance, efficiency, water savings]
      B. [Describe how system meets any special requirements listed in the Owner’s Project Requirements document.]
   5.2. Reasons for System Selection
      A. [Reasons that the selected landscape irrigation systems are a better choice than alternatives. E.g. performance, efficiency, reliability, flexibility, simplicity, expandability, cost, payback period, utility company incentives, owner preference, cost, owner preferences, ease of maintenance, etc.]
   5.3. Landscape Irrigation System Calculations
      A. [Describe sizing calculation method, assumptions, and results]

6. Water Reuse Systems
   6.1. Narrative Description of System
      A. [System type(s), location, space requirements, equipment requirements, control type, performance, efficiency, potable water savings, payback period]
      B. [Describe how system meets any special requirements listed in the Owner’s Project Requirements document.]
   6.2. Reasons for System Selection
      A. [Reasons that the selected water reuse systems are a better choice than alternatives. E.g. performance, efficiency, reliability, flexibility, simplicity, expandability, cost, payback period, utility company incentives, owner preference, space constraints, cost, owner preferences, ease of maintenance, etc.]
   6.3. Water Reuse System Calculations
      A. [Describe sizing calculation method, assumptions, and results]