LEED Pilot Credit Library

Pilot Credit 45: Site Assessment

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Applicable Rating Systems >>

Requirements >>

Submittals >>

Additional Questions >>

Background Information >>

Changes >>

Applicable Rating Systems

This credit is available for pilot testing by the following LEED project types:

- New Construction
- Core & Shell
- Schools
- Retail: New Construction
- Healthcare

Intent

To assess site conditions prior to design in order to evaluate sustainable options and inform related decisions about site design.

Requirements

Complete and document a site survey/assessment that includes the following information:

- Topography: Contour mapping, unique topographic features, slope stability risks;
- Hydrology: 100-year floodplain, delineated wetlands, lakes, streams, shorelines, rain/storm water collection/reuse opportunities, TR-55[1] initial water storage capacity of the site, or local equivalent outside the U.S.;
- Climate: Solar exposure, heat island effect potential, and seasonal sun angles, prevailing winds, monthly precipitation and temperature ranges;
- Vegetation: Primary vegetation types, greenfield area, significant tree mapping, threatened or endangered species, unique habitat, invasive plants;
- Soils: NRCS soils delineation[2], USDA prime farmland[3], healthy soils, previous development disturbed soils;
- Human Use: Views, adjacent transportation infrastructure, adjacent properties, existing recycle/reuse of potential construction materials;
- Human Health Impacts: proximity of vulnerable populations, adjacent physical activity opportunities, proximity to large sources of air pollution.

The survey/assessment should demonstrate the relationships between the site features/ topics listed above and how these features influenced the project design OR reasons for not addressing topics.

[1] **TR-55** (Technical Release 55) is an approach to hydrology that includes many techniques used to model watersheds including procedures to calculate storm runoff volume, peak rate of discharge, hydrographs, and storage volumes (USDA Soil Conservation Service).

[2] A **NRCS soils delineation** is a soil survey developed by the Natural Resources Conservation Service that shows the boundaries of different soil types and special soil features on the site.

[3] **USDA prime farmland** is defined by the NRCS as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses.

Credit Submittals

General:

1. Register for Pilot Credit(s) here.
2. Register a username at LEEDuser.com, and participate in online forum
3. Submit feedback survey; supply PDF of your survey/confirmation of completion with credit documentation

Credit Specific:

- Submit the completed Site Assessment Worksheet with relevant project information (both narrative descriptions and maps, as applicable). Include additional topics not listed, if any, and provide reasons for not addressing certain topics. The Site Assessment submittals should clearly demonstrate how the site features informed the choice of site as well as the ongoing design and construction of the project. The Site Assessment Worksheet can be found here.

Additional Questions

- To what extent does your firm and/or your project teams already conduct site assessments that include this information?
- The goal of this credit is to assess site conditions prior to design in order to evaluate sustainable options and inform related decisions about site and building design. Do you believe that these requirements achieve this intent? Why or why not?
- Did you encounter difficulties in gathering the information for the site assessment? If so, in what ways?

Background Information

The credit was originally included in the Integrated Process credit category. It is intended to incentivize project teams to thoroughly analyze the project site conditions prior to beginning design. This allows project teams to understand the site conditions, realize potential sustainability opportunities and cost savings, and make informed design decisions.
A site assessment evaluates resources and opportunities that can be incorporated into site and building design. For instance, social gathering spaces can be sited near existing large trees to take advantage of their shade, or existing materials can be reused, saving money and resources. Also, buildings can take advantage of the prevailing winds in the design of natural ventilation systems, saving the cost of mechanical systems as well as energy and materials.

Potential Technologies & Strategies

Consult with local experts and the community to evaluate existing site conditions and identify sustainable strategies prior to design. Evaluate the impact a site may have on the sustainable design and construction approach as well as the ongoing operations and maintenance (e.g., pruning requirements, deadheading to maintain formalized designs and uses of plants).

Changes from last version:

Changes made for 3rd Public Comment (03/01/2012):

- Incorporated global language into the requirements
- Added user-generated pilot credit recommendations, including:

1. heat island effect potential
2. adjacent properties
3. assessment of potential human health impacts

- Updated Site Assessment Worksheet – worksheet for pre-March 2012 projects can be found here