Neighborhood Pattern and Design

The Neighborhood Pattern and Design section emphasizes the creation of compact, walkable, vibrant, mixed-use neighborhoods with good connections to nearby communities. These neighborhoods provide many important benefits to residents, other users, and to the environment.

In particular, because compact neighborhoods use land and infrastructure efficiently, they reduce fragmentation of wildlife habitat and farmland loss resulting from development, provide opportunities to reduce driving and resultant emissions, conserve economic resources, and help reduce the spread of development across a region’s landscape. The addition of convenient access to nearby shops, basic services, and public spaces enables residents to reach them by walking, bicycling and, when people choose to drive, taking shorter automobile trips that save time and emissions. These features also facilitate access to public transportation, because transit becomes more economically viable when supported by higher concentrations of population. All told, doubling density in a metropolitan region is associated with a 20 to 50% reduction in vehicle miles traveled annually.

In addition, when neighborhoods employ smaller block sizes, walking and bicycling are facilitated by the increased connectivity, shorter travel distances, slower automobile traffic, and a more inviting walking environment. The slower traffic speeds typically found in dense developments also reduce injury rates. (The environmental and public health benefits that accompany increased transportation choices and reduced rates of driving are further discussed in the introduction to the Smart Location and Linkage section.)

Along with higher densities and a diversity of land uses, features such as sidewalks and paths, street trees, pedestrian-friendly building façades, smaller setbacks, reduction of land devoted to parking, and measures to slow automobiles also increase pedestrian activity. Public spaces for social interaction and active recreation attract pedestrians and bicyclists and promote exercise, in many cases while also providing green spaces that help control stormwater runoff and reducing the “heat island” effect of some urban development. Neighborhood gardens can also promote social interaction and physical activity while increasing access to fresh, locally-grown produce.

Communities with diverse housing types that accommodate a range of incomes, ages, and physical abilities can help assure equitable distribution of environmental benefits, permit residents to live closer to their workplaces, help the community retain residents, and allow families to remain in the neighborhood as their lives change over time. Community involvement in project design and planning can help assure that the project will complement adjacent neighborhoods and meet the needs of residents and other users, while helping the project sponsor develop a cooperative relationship with the project’s neighbors.

Resources for Learning More

Websites

American Planning Association
www.planning.org
As the major professional planning association in the U.S., APA organizes conferences and workshops, and communicates planning news, important planning legislation and policy, and the latest planning research.
Center for Neighborhood Technology  
www.cnt.org  
This website contains a searchable database of research about sustainable neighborhood design, lists of events, and a listserv documenting developments in the field.

The Congress for the New Urbanism  
www.cnu.org  
The major group promoting New Urbanism in the U.S. hosts an annual conference, has information about LEED-ND (Neighborhood Design), grants awards for exemplary projects, indexes example New Urbanist projects, and hosts networking tools for New Urbanist practitioners.

Reconnecting America  
www.reconnectingamerica.org  
Reconnecting America is a nonprofit organization seeking to integrate transportation systems and the communities that they serve.

Smart Growth Network  
www.smartgrowth.org  
A network of non-profit organizations and governmental agencies that promote smart growth practices. The website outlines smart growth principles, provides a guide through smart growth terms and technical concepts, and hosts a searchable catalogue of reports, websites, tools and case studies dating from 1997 to present.

SmartCode, Duany Plater-Zyberk & Co.  
www.smartcodefiles.com  
The SmartCode is a transect-based design and development code available for all scales of planning, from the region to the community, to the block to the building. It keeps towns compact and rural lands open, while reforming the destructive sprawl-producing patterns of separated-use zoning.

Trust for Public Land  
www.tpl.org/tier2_pa.cfm?folder_id=705  
TPL’s Parks for People initiative uses Geographical Information Systems (GIS) mapping technology to show which neighborhoods most need parks and playgrounds. TPL works with community leaders to identify opportunities for park creation, secure park funding, and acquire parklands. The initiative’s website contains a range of resources about neighborhood and community parks.

Urban Land Institute  
www.uli.org  
A nonprofit organization that promotes the responsible use of land in order to enhance the total environment, sponsors meetings and provides customized research and advisory services.

Print Media


**NPD Prerequisite 1: Open Community Required**

**Intent**

Promote communities that are physically connected to each other. Foster community and connectedness beyond the development.

**Requirements**

Designate all streets and sidewalks that are built as part of the project or serving the project directly as available for general public use and not gated. Gated areas and enclaves are NOT considered available for public use, with the exception of education and health care campuses where gates are used for security purposes.

---

**Summary of Referenced Standards**

There is no standard referenced for this credit.

**Calculations for Submittal Templates**

There are no calculations associated with this credit.

**Submittal Documentation**

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

  **For STAGE 1 Submissions (Pre-review)**
  *Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*
  
  - A site and/or vicinity map indicating that all streets and sidewalks are available for general public use.

  OR

  - Declaration that all streets and sidewalks are available for general public use.

  **For STAGE 2 Submissions (Certification of Approved Plan)**
  *Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*
Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Implementation

Print Media

Institute of Transportation Engineers. Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities. Institute of Transportation Engineers, 2006.

Resources for Learning More

Print Media

NPD Prerequisite 2: Compact Development

Required

Intent

Conserve land. Promote livability, transportation efficiency, and walkability.

Requirements

Build any residential components of the project at an average density of seven or more dwelling units per acre of buildable land available for residential uses;

AND

Build any non-residential components of the project at an average density of 0.50 FAR or greater per acre of buildable land available for non-residential uses.

If the project location is serviced by a transit agency which has specified minimum service densities that are greater than the densities required by this prerequisite, then the project must meet the transit agency’s minimum service densities instead.

The specified average density must be achieved by the point in the project’s construction at which 50% of dwelling units are built, or within five years of the date that the first building is occupied, whichever is longer.

Additional Notes

Many projects will have a more complex combination of land types. Please see the “Residential and Non-Residential Densities” subsection of the “Getting Started” section of this reference guide for further guidance.

Summary of Referenced Standards

There is no standard referenced for this credit. Check with local transit agencies to determine if there are any minimum service densities for locating near transit.

Potential Technologies & Strategies

To achieve higher densities, build some multi-family residential housing and limit lot size for single family homes. Build shops and restaurants below offices and apartments, or in multi-story non-residential buildings. Identify locations on the site where higher density development is most appropriate. These include areas that can have a mix of residential and non-residential uses (such as main streets, downtowns, mixed use corridors, or retail areas) and locations served by transit.
Calculations for Submittal Templates

Amounts of Residential and Non-Residential Use

1. Determine the total residential buildable land acreage, and the total number of dwelling units (included dwelling units in mixed-use buildings).

2. Determine the total non-residential buildable land acreage, and the total non-residential building floor area on the non-residential land.

Many projects will have a more complex combination of land types. Please see the “Residential and Non-Residential Densities” subsection of the “Getting Started” section of this reference guide for further guidance.

Sum Residential and Non-Residential Amounts

1. Sum all land area and dwelling units assigned to the residential category, and sum all land area and floor area assigned to the non-residential category. Divide total dwelling units by total residential land area to obtain residential (DU/acre) density for the project (Equation 1). Confirm that the result is 7 DU/acre or more. Divide total non-residential floor area by total non-residential land area to obtain non-residential (FAR) density for the project (Equation 2). Confirm that the result is 0.5 FAR or greater.

Equation 1

Residential density (DU/ac) = \[ \frac{\text{Total DU}}{\text{Total buildable residential land area}} \]

Equation 2

Non-residential density (FAR) = \[ \frac{\text{Total non-residential floor area}}{\text{Total buildable non-residential land area}} \]

Example

A mixed-use building of 10 dwellings at 1,500 sq. ft. each, and 25,000 sq. ft. of retail, on one net acre of land would have a residential density of 26 DU/acre and a non-residential density of 0.92 FAR. Densities of mixed use buildings that are not being averaged with other single-use buildings must meet either the residential density minimum or the non-residential density minimum, but need not meet both.

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:
For STAGE 1 Submissions (Pre-review)

Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

- A site plan indicating densities by parcel.

OR

- A table of calculations of the densities of any residential components, non-residential components, and mixed use buildings.

- A statement indicating whether any transit agency has specified minimum service densities higher than densities required by this prerequisite for the area where the project is located.

- A statement indicating the expected timeline for project construction and (for projects that have a residential component) which components of the project will be completed when 50% of the dwelling units are built.

For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to prerequisite requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2

- If project conditions remain unchanged with respect to prerequisite requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.
Resources for Implementation

Print Media


Resources for Learning More

Print Media


NPD Credit 1: Compact Development
1 to 7 Points

Intent

Conserve land. Promote community livability, transportation efficiency, and walkability.

Requirements

Design and build the project to achieve the densities shown in the table below.

<table>
<thead>
<tr>
<th>Residential Density (DU/acre)</th>
<th>Non-residential Density (FAR)</th>
<th>Points Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 to 20</td>
<td>0.75 to 1.0</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 20 and ≤ 30</td>
<td>&gt; 1.0 and ≤ 1.5</td>
<td>2</td>
</tr>
<tr>
<td>&gt; 30 and ≤ 40</td>
<td>&gt; 1.5 and ≤ 2.0</td>
<td>3</td>
</tr>
<tr>
<td>&gt; 40 and ≤ 50</td>
<td>&gt; 2.0 and ≤ 2.5</td>
<td>4</td>
</tr>
<tr>
<td>&gt; 50 and ≤ 60</td>
<td>&gt; 2.5 and ≤ 3.0</td>
<td>5</td>
</tr>
<tr>
<td>&gt; 60 and ≤ 70</td>
<td>&gt; 3.0 and ≤ 3.5</td>
<td>6</td>
</tr>
<tr>
<td>&gt; 70</td>
<td>&gt; 3.5</td>
<td>7</td>
</tr>
</tbody>
</table>

The specified density must be achieved by the point in the project’s construction at which 50% of dwelling units are built, or within five years of the date that the first building is occupied, whichever is longer.

Detail on how the density of mixed use projects is to be calculated is included in the “Calculations for Submittal Templates” section below.

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies & Strategies

See NPD Prerequisite 2: Compact Development for “Potential Technologies & Strategies.”

Calculations for Submittal Templates

Residential or Non-Residential Projects

1. In cases of single-use projects, determine the total residential buildable land acreage, and the total number of dwelling units on the residential buildable land; or determine the total non-residential buildable land acreage, and the total non-residential building floor area on the non-residential land.

2. Sum all land area and dwelling units assigned to the residential category, or sum all land area and floor area assigned to the non-residential category. Divide total dwelling units by total residential...
land area to obtain residential (DU/acre) density for the project, or divide total non-residential floor area by total non-residential land area to obtain non-residential (FAR) density for the project. Use the density results to find earnable points in the requirements table.

**Mixed-Use Projects**

For mixed-use projects containing both residential and non-residential components, use the following calculation to determine earnable points.

1. Determine how many points the residential and non-residential component each earns separately according to the table in the requirements, based on the densities calculated for NPD Prerequisite 2. If the point scores are the same, this is the number of points earned. If the points earned by the two components are different, multiply the point value of the residential component by the percentage of the total floor area it represents (as determined in step 2) and multiply the point value of the non-residential component by the percentage of the total floor area it represents (as determined in step 2). Add the two scores together to obtain the number of points earned.

**Example**

A project that is 75% residential at an average density of 65 DU/acre and 25% non-residential at an FAR of 0.8 would earn 4 points: 

\[
(0.75 \times 6) + (0.25 \times 1) = 4.25, 
\]

which is rounded to 4.

**Submittal Documentation**

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

  For STAGE 1 Submissions (Pre-review)

  *Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

  - A site plan indicating densities by parcel.

  OR

  - A table of calculations of the densities of any residential components, non-residential components, and mixed use buildings.

  - For mixed-use projects, submit a calculation showing the points earned by the weighted average of residential and non-residential.

  - A statement indicating the expected timeline for project construction and (for projects which have a residential component) which components of the project will be completed when 50% of the dwelling units are built.
For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Implementation

See NPD Prerequisite 2: Compact Development for “Resources for Implementation” and “Resources for Learning More.”
NPD Credit 2: Diversity of Uses
1 to 4 Points

Intent

Promote community livability, transportation efficiency, and walkability.

Requirements

Include a residential component in the project that constitutes at least 25% of the project’s total building square footage; and design or locate the project such that at least 50% of the dwelling units are within ½ mile walk distance of at least two (1 point), four (2 points), seven (3 points) or ten (4 points) of the diverse uses defined in Appendix A. Uses may either be in nearby areas or be built within the development.

Verify that a pedestrian can reach the uses via routes that do not necessitate crossing any streets that have speed limits of greater than 25 miles per hour, unless those crossings have vehicle traffic controls such as signals and stop signs with crosswalks.

The specified number of uses must be in place by the time certain percentages of occupancy are in place, as indicated in the following table:

<table>
<thead>
<tr>
<th>Number of uses</th>
<th>Percentage of project occupancy at which uses need to be in place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two uses (1 point)</td>
<td>20%</td>
</tr>
<tr>
<td>Four uses (2 points)</td>
<td>30%</td>
</tr>
<tr>
<td>Seven uses (3 points)</td>
<td>40%</td>
</tr>
<tr>
<td>Ten uses (4 points)</td>
<td>50%</td>
</tr>
</tbody>
</table>

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies and Strategies

See SLL Prerequisite 1: Smart Location for information on how to analyze the diverse mix of uses near a project or in a jurisdiction. A principal difference between the standard for SLL Prerequisite 1 and this credit, however, is that for this credit you may count uses that are supplied by the new project as well as those that were pre-existing when the site was chosen.

Calculations for Submittal Templates

Residential Component
1. Determine the total residential building floor area and the total floor area of all buildings. Calculate the residential percentage by dividing the total residential building floor area by the total building floor area (Equation 1). Confirm that the result is 25% or greater.

**Equation 1**

\[
\text{\% total building floor area that is residential} = \frac{\text{Total residential building floor area (sq.ft.)}}{\text{Total building floor area (sq.ft.)}}
\]

**Diverse Uses within Walking Distance**

1. On a vicinity map inclusive of the site, identify each dwelling unit and Appendix A Diverse Uses within the site and a \(\frac{1}{2}\)-mile radius of the project boundary. Use shortest path analysis to create a table of walk distances from the dwellings to the diverse uses (Table 1). Sort the distances and destinations to calculate the percent of total dwelling units that are within a \(\frac{1}{2}\)-mile walk of 2, 4, 7, and 10 diverse uses. Use the results to confirm that 50% or more of dwelling units can reach the specified numbers of diverse uses in order to earn points.

<table>
<thead>
<tr>
<th>Building</th>
<th>No. of Dwelling Units</th>
<th>No. Diverse Uses Reachable w/i (\frac{1}{2})-mi.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Two</td>
</tr>
<tr>
<td>Detached Residential A</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Detached Residential B</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Detached Residential C</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Detached Residential D</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Duplex A</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Duplex B</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Multifamily Dwelling A</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Multifamily Dwelling B</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td><strong>Total No. of Units:</strong></td>
<td><strong>90</strong></td>
<td><strong>86</strong></td>
</tr>
<tr>
<td><strong>% of total DU</strong></td>
<td><strong>100%</strong></td>
<td><strong>96%</strong></td>
</tr>
</tbody>
</table>

**Submittal Documentation**

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

  For STAGE 1 Submissions (Pre-review)

  *Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

  - A calculation demonstrating that at least 25% of the project’s built square footage is residential.
A site and/or vicinity map of the vicinity showing the project’s dwelling units and walking routes to any of the relevant uses defined in Appendix A.

A table of walk distances between each dwelling unit and relevant uses defined in Appendix A, and calculation of the percentage of dwelling units that lie within the specified distance.

For any streets with speed limits greater than 25 miles per hour that intersect with walking routes to the relevant uses defined in Appendix A, verify that vehicle traffic controls exist or will be installed at all walking route intersections.

A statement indicating the expected timeline for project construction and which uses will be in place at the time the relevant percentages of occupancy are in place.

For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Learning More

Websites
Project for Public Spaces, Mixed-Use Development Program
www.pps.org/mixed_use/
This site provides resources, case examples, and links to services related to creating mixed-use development.

Smart Growth Network
www.smartgrowth.org
Website contains resources and information on the benefits of a mix of uses.

Print Media


NPD Credit 3: Diversity of Housing Types
1 to 3 Points

Intent

To enable citizens from a wide range of economic levels and age groups to live within a community.

Requirements

Include a sufficient variety of housing sizes and types in the project such that the total variety of housing within the project, or within a ¼ mile of the center of the project, achieves at least 0.5 according to the following calculation, which is based on the Simpson Diversity Index using the housing categories below.

The Simpson Diversity Index score is calculated with the following equation:

\[
\text{Score} = 1 - \sum \left( \frac{n}{N} \right)^2 ,
\]

where \( n = \) the total number of dwellings in a single category, and \( N = \) the total number of dwellings in all categories.

<table>
<thead>
<tr>
<th>Score on the Simpson Diversity Index</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 0.5 and &lt; 0.6</td>
<td>1</td>
</tr>
<tr>
<td>≥ 0.6 and &lt; 0.7</td>
<td>2</td>
</tr>
<tr>
<td>≥ 0.7</td>
<td>3</td>
</tr>
</tbody>
</table>

Housing categories are defined for the purposes of this calculation in LEED for Neighborhood Development as:

(1) Detached residential large - (greater than 1200 sq. ft.)
(2) Detached residential small - (less than 1200 sq. ft.)
(3) Duplex or townhouse - large (greater than 1200 sq. ft.)
(4) Duplex or townhouse - small (less than 1200 sq. ft.)
(5) Multifamily dwelling in a building with no elevator - large (greater than 750 sq. ft.)
(6) Multifamily dwelling in a building with no elevator - small (less than 750 sq. ft.)
(7) Multifamily dwelling in a building with elevator four stories or fewer - large (greater than 750 sq. ft.)
(8) Multifamily dwelling in a building with elevator four stories or fewer - small (less than 750 sq. ft.)
(9) Multifamily dwelling in a building with elevator more than four stories and fewer than nine stories - large (greater than 750 sq. ft.)
(10) Multifamily dwelling in a building with more than four stories and fewer than nine stories - small (less than 750 sq. ft.)
(11) Multifamily dwelling in a building with elevator nine stories or more - large (greater than 750 sq. ft.)
(12) Multifamily dwelling in a building with nine stories or more - small (less than 750 sq. ft.)
(13) Live/work large (greater than 1200 sq. ft.)
(14) Live/work small (less than 1200 sq. ft.)
(15) Accessory Unit – large (greater than 1200 sq. ft.)
(16) Accessory Unit – small (less than 1200 sq. ft.)

Townhouse and live/work units may be ground related and/or within a multifamily or mixed-use building. Double counting is prohibited. Each dwelling may be classified in only one category.
Summary of Referenced Standards

There is no standard referenced for this credit. The source for this credit came from the Traditional Neighborhood Development Design Rating Standards Version 2.2 developed by Lawrence Aurbach.

Potential Technologies & Strategies

To identify an appropriate diversity of housing types within a project, project sponsors should consider conducting a market analysis of the feasibility of various housing categories identified in the requirements.

To determine the homes diversity of housing types within a ¼ mile of the center of the project, contact the local planning and or the tax assessor’s office to obtain information on the building sizes within the ¼ mile area. Information from these sources should contain information on building square footage and whether the unit is a single family or multi-family unit.

Calculations for Submittal Templates

1. Using the project development program table, classify all dwelling units by one of 16 type numbers defined in the requirement. If the ¼-mile radius option is used, it should be a ¼-mile radius from the geographic center of the project’s combined residential areas.

2. Calculate the Simpson Diversity Index as given in the requirement (Equation 1). Use the result to determine points earned in the requirements table.

Equation 1

\[
\text{Housing diversity score} = 1 - \sum \left( \frac{n}{N} \right)^2
\]

Where \( n \) = total DU in a single category

\( N \) = total DU in all categories

Example

<table>
<thead>
<tr>
<th>Type of Unit</th>
<th>DU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Detached residential (2,600 + sq.ft.)</td>
<td>238</td>
</tr>
<tr>
<td>2. Detached residential (1,200 - 2,600 sq.ft.)</td>
<td>239</td>
</tr>
<tr>
<td>3. Townhouses</td>
<td>378</td>
</tr>
<tr>
<td>4. Apartments/condominiums w/ elevator</td>
<td>513</td>
</tr>
<tr>
<td>5. Apartments/condominiums w/o elevator</td>
<td>909</td>
</tr>
<tr>
<td>6. Live-works</td>
<td>45</td>
</tr>
<tr>
<td>7. Accessory units</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>2358</td>
</tr>
</tbody>
</table>
Repeat the formula and add for each category, then subtract the final sum from 1.

1. \((\frac{238}{2,373})^2\) = .01
2. Add to \((\frac{239}{2,373})^2\) = 0.02
3. Add to \((\frac{378}{2,373})^2\) = 0.046
4. Add to \((\frac{513}{2,373})^2\) = 0.092
5. Add to \((\frac{909}{2,373})^2\) = 0.239
6. Add to \((\frac{45}{2,373})^2\) = 0.2394
7. Add to \((\frac{36}{2,373})^2\) = 0.2396

Final calculation: 1 - 0.2396 = 0.76

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

- Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

- A site and/or vicinity map showing the location of different types of housing, either 1) within the project; or 2) within ¼ mile of the center of the project.

- The number of dwelling units in each category, the total number of dwelling units, and the results of the Simpson Diversity Index calculation.

For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1

If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1

If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.
For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

☐ Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Implementation

Print Media


Resources for Learning More

Websites

U.S. Department of Housing and Urban Development
www.hud.gov
This website provides information to help increase access to affordable housing, promote homeownership, and support community development.
NPD Credit 4: Affordable Rental Housing
1 to 2 Points

Intent
To enable citizens from a wide range of economic levels and age groups to live within a community.

Requirements
Include a proportion of rental units priced for households earning below area median income such that:

OPTION 1
At least 15% of total rental units are priced for households up to 50% of area median income and units are maintained at affordable levels for a minimum of fifteen years (1 point);

OR

OPTION 2
At least 30% of total rental units are priced for households up to 80% of area median income and units are maintained at affordable levels for a minimum of fifteen years (1 point);

OR

OPTION 3
At least 15% of total rental units are priced for households up to 50% of area median income and an additional 15% of total rental units are priced for households at up to 80% of area median income and units are maintained at affordable levels for a minimum of fifteen years (2 points).

Summary of Referenced Standards
There is no standard referenced for this credit.

Potential Technologies & Strategies
Identify the area median income and the resulting rental unit price points. Many cities have housing departments or staff that specialize in affordable housing. Check with municipalities for pre-calculated charts of affordable rental unit price points. Consider subsidizing affordable housing through tax credits, if available, from the local, state or federal governments. In some jurisdictions, such as the State of California, projects that provide affordable housing may increase the density or size of the project over and above that which is allowed in current zoning. Consider partnerships with local non-profit affordable housing organizations or developers. These organizations may have extensive expertise in creating affordable housing projects in the local market.
Calculations for Submittal Templates

Use a combination of HUD and other information as needed to perform the following calculations:

1. Determine total number of rental dwelling units.

2. Determine the area median income (AMI) of a 4-person household for the area in which the project is located.

3. Multiply the AMI by the household income percentages in the credit requirements (50% or 80%) to determine the target income (Equation 1).

4. For each category of dwelling unit size in the project, adjust for family size by multiplying by the appropriate factor (Equation 2):
   - 0.70 for studios
   - 0.75 for 1-BR units
   - 0.90 for 2-BR units
   - 1.04 for 3-BR units
   - 1.16 for 4-BR units

5. Multiply by 30% to determine the maximum amount of income for housing costs and, therefore, the annual rental price. Divide by 12 to get the maximum monthly gross rent for the unit. This is the maximum monthly rent that may be charged if the rental unit is counting towards credit achievement (Equation 3).

**Equation 1**

Target income = Area median income x .5

and

Target income = Area median income x .8

**Equation 2**

Target median income adjusted for family size = (target income x BR unit factor)

**Equation 3**

Max. monthly gross rent = (target median income adjusted for family size x .30) / 12
6. Calculate the percent of rental units meeting at least one of the requirement thresholds (Equation 4). Use the results to confirm that at least one of the requirement thresholds is achieved in terms of percent of total rental units that are priced affordably.

Equation 4

\[
\% \text{ total rental units priced for } 50\% \text{ of AMI} = \frac{\text{Rental units priced for } 50\% \text{ AMI}}{\text{Total rental units}}
\]

(Use 80% AMI for Option 2)

Submittal Documentation
During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

☐ Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)
Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

☐ Confirmation of current HUD data regarding the area median income and the resulting maximum monthly rents.

☐ A table showing the number of affordable and market rate housing units, the rental prices of any affordable units, and a calculation of the percentage of rental units that are priced within the specified range.

☐ A copy of, or a written commitment to create a regulatory and operating agreement, deed restrictions, or other recorded document evidencing that the units will be maintained at the specified affordable levels for a minimum of fifteen years.

For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

☐ Submit updated versions of the relevant documentation required at Stage 1.
Case 2C: Did not submit at Stage 1

☐ Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

☐ Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Implementation

Websites

Enterprise Foundation
www.enterprisefoundation.org
Enterprise Foundation provides assistance in determining maximum rents and sales prices.

Fannie Mae
www.fanniemae.com/tools/hudmedian/index.jhtml?p=Tools+%26%23038%3B+Resources&s=HUD+Median+Income+Limits
This website contains searchable and easy to use database for the Median Family Incomes (MFI) using area median incomes (AMI) in metropolitan and non-metropolitan areas.

Green Communities
www.greencommunitiesonline.org
Green Communities is a national green building program focused entirely on affordable housing. It offers Green Grants, loans, tax-credit equity, training, and technical assistance.

HUD User
www.huduser.org/datasets/il.html
This website contains datasets with Median Family Incomes (MFI) using area median incomes (AMI) in metropolitan and non-metropolitan areas as well as the detailed method of calculating the AMI.

Resources for Learning More

Websites

Department of Housing and Urban Development
www.hud.gov
HUD provides information to help increase access to affordable housing, promote homeownership, and support community development.
**NPD Credit 5: Affordable For-Sale Housing**

1 to 2 Points

**Intent**
To enable citizens from a wide range of economic levels and age groups to live within a community.

**Requirements**
Include a proportion of for-sale housing affordable to households at or slightly above the area median income such that:

OPTION 1
At least 10% of for-sale housing is priced for households up to 80% of the area median income (1 point);

OR

OPTION 2
At least 20% of for-sale housing is priced for households up to 120% of the area median income (1 point);

OR

OPTION 3
At least 10% of for-sale housing is priced for households up to 80% of the area median income and an additional 10% of for-sale housing is priced for households at up to 120% of the area median income (2 points).

______________________________________________________________________________

**Summary of Referenced Standards**
There is no standard referenced for this credit.

**Potential Technologies & Strategies**
See NPD Credit 4: Affordable Rental Housing for “Potential Technologies & Strategies.”

**Calculations for Submittal Templates**
Use a combination of HUD and other information as needed to perform the following calculations:

1. Determine the total number of for-sale dwelling units.
2. Determine the area median income (AMI) of a 4-person household for the area in which the project is located.

3. Multiply the AMI by the household income percentages in the credit requirements (80% or 120%) to determine the target income (Equation 1).

4. For each category of unit in the project, adjust for family size by multiplying by the appropriate factor (Equation 2):
   - 0.75 for 1-BR
   - 0.90 for 2-BR
   - 1.04 for 3-BR
   - 1.16 for 4-BR

Equation 1

\[
\text{Target income} = \text{Area median income} \times 0.8
\]

\[
\text{Target income} = \text{Area median income} \times 1.2
\]

Equation 2

\[
\text{Target median income adjusted for family sizes} = (\text{target income} \times \text{BR factor})
\]

5. Multiply by 28% to determine the income available to pay PITI (principle, interest, taxes, insurance). Divide by 12 to get the monthly PITI that the household can afford (Equation 3)

Equation 3

\[
\text{Monthly PITI} = (\text{median income adjusted for family size} \times 0.28) / 12
\]

6. Calculate the percent of for-sale dwelling units meeting at least one of the requirements thresholds (Equation 4). Use the results to confirm that at least one of the requirement thresholds is achieved in terms of percent of total for-sale units that are priced affordably.

Equation 4

\[
\% \text{ total for-sale units priced for } 80\% \text{ of AMI} = \frac{\text{For-sale units priced for } 80\% \text{ AMI}}{\text{Total for-sale units}}
\]

(Use 120% AMI for Option 2)

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:
For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

- Confirmation of current HUD data regarding the area median income and the resulting maximum housing sale price(s).
- A table showing the number of affordable and market rate housing units, the sale prices of any affordable units, and a calculation of the percentage of for-sale units that are priced within the specified range.

For STAGE 2 Submissions (Certification of Approved Plan)

*Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

**Case 2A: No change since Stage 1**
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

**Case 2B: Change since Stage 1**
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

**Case 2C: Did not submit at Stage 1**

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

*Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.*

**Case 3A: No change since Stage 2**
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

**Case 3B: Change since Stage 2**
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

**Resources for Implementation**

See NPD Credit 4: Affordable Rental Housing for “Resources for Implementation” and “Resources for Learning More.”
NPD Credit 6: Reduced Parking Footprint
2 Points

Intent

Design parking to increase the pedestrian orientation of projects and to minimize the adverse environmental effects of parking facilities.

Requirements

For any non-residential buildings and multifamily residential buildings that are part of the project, locate all off-street surface parking lots at the side or rear of buildings, leaving building frontages and streetscapes free of surface parking lots;

AND

Use no more than 20% of the total development footprint area for surface parking facilities, with no individual surface parking lot larger than 2 acres. For the purposes of this credit, surface parking facilities include ground-level garages unless they are under or over space intended for human occupancy. Underground or multi-story parking facilities can be used to provide additional capacity, and on-street parking spaces are exempt from this limitation;

AND

For any non-residential buildings and multifamily residential buildings that are part of the project, provide bicycle and/or carpool parking spaces equivalent to 10% of the total automobile parking for each non-residential and multifamily building on the site. Signage indicating carpool parking spots should be provided, and bicycle parking should be within 200 yards of the entrance to the building that it services. The 10% carpool/bicycle space requirement can be met with any combination of bicycle and carpool parking.

Summary of Referenced Standard

There is no standard referenced for this credit.

Potential Technologies & Strategies

Build no more parking than the minimum required. If parking demand is projected to be lower than required, apply for permission to build fewer spaces than required. Incorporate shared parking allowances where multiple buildings with staggered peak parking demands are able to use common parking facilities. Consider incorporating multi-story or underground parking facilities.

Design for on-street parking. When designing off-street surface parking away from street frontages, locate the primary entrance to the building on the street and additional entrances to the building from the parking lots.
For bicycle parking, install racks, lockers, or provide indoor storage. Designate preferred carpool spaces to help reduce the overall need for parking.

Calculations for Submittal Templates

Total Off-Street Parking Area and Maximum Lot Size

1. Calculate the percent of development footprint covered by off-street surface parking facilities. Confirm that the result is 20% or less.

2. Measure the total area of each off-street surface parking lot to confirm that none exceed 2 acres.

Bicycle/Carpool Parking

1. For any non-residential and multifamily residential buildings in the project, sum the auto parking spaces associated with each building. Multiply the sum of spaces by 0.10 to obtain the minimum number of bike and carpool spaces for each building (Equation 1).

   \[
   \text{Minimum bike/carpool spaces} = 0.1 \times \text{total NR & MF spaces}
   \]

   \[\text{Example}\]
   
   83 NR and MF spaces x 0.1 = 8 bike and/or carpool spaces

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

- A site plan indicating the location of all surface, underground, or multi-story parking facilities, including relevant carpool and bicycle spaces and carpool signage. For bicycle spaces provided for non-residential buildings, indicate the distance between the spaces and the entrance of the building they serve.

- The percentage of total development footprint that is used for surface parking facilities.

- The size of each individual parking lot that is part of the project.

- For any non-residential or multifamily residential buildings, submit the number of conventional automobile parking spaces, carpool spaces, and bicycle parking spaces that will be provided.
Confirm that signage will be provided for any carpool spaces.

For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:
- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1
- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:
- Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Learning More

Websites

Best Workplaces for Commuters
www.bestworkplacesforcommuters.gov/index.htm (888) 856-3131
This program, established by the U.S. EPA and DOT, publicly recognizes employers for their exemplary commuter benefits programs, including carpooling programs. It provides tools, guidance and promotions to help employers incorporate commuter benefits into their employee benefits plan, reap financial benefits, and gain national recognition.

Print Media


Shoup, Donald. The High Cost of Free Parking. APA Planners Press, 2005

NPD Credit 7: Walkable Streets

4 to 8 Points

Intent

Provide appealing and comfortable pedestrian street environments in order to promote pedestrian activity. Promote public health though increased physical activity.

Requirements

Design and build the project such that all of the following are achieved (4 points):

a. A principal functional entry of each building has a front façade that faces a public space such as a street, square, park, paseo, or plaza.

b. A minimum of 30% of all street frontages located within the project, if any, are planned for development that complies with the minimum building-height-to-street-width proportions of 1:3; and where building sites are planned along streets bordering the project, a minimum of 15% of the total street frontage of such sites contains (or is dedicated to) development that will produce a building-height-to-street-width proportion of 1:3. Street frontages are to be measured in linear feet.

c. Continuous sidewalks or equivalent provisions for walking are provided along both sides of all streets within the project. New sidewalks must be at least 4 feet wide. Equivalent provisions for walking include woonerfs and footpaths.

d. All streets along exclusively residential blocks within the project, whether new or existing, are designed for a maximum speed of 20 mph.

e. All streets along non-residential or mixed use blocks within the project, whether new or existing, are designed for a maximum speed of 25 mph.

If the above measures are achieved, the project may earn additional points as follows: 1 point for designing and building the project such that any three measures on the list below are accomplished (up to 4 additional points):

f. The front façades of at least 80% of all buildings are no more than 25 feet from front property line.

g. The front facades of at least 50% of all buildings are no more than 18 feet from the front property line.

h. The front facades of at least 50% of mixed-use and non-residential buildings are contiguous to the sidewalk.

i. Functional building entries occur every 75 feet, on average, along non-residential or mixed use blocks.
j. All ground-level non-residential interior spaces that face a public space have transparent glass on at least 33% of the ground-level façade.

k. No blank (without doors or windows) walls longer than 50 feet occur along sidewalks. Walls with public art installations such as murals may be exempted.

l. Any ground-level storefront windows must be kept open and visible (unshuttered) at night, and this must be stipulated to future owners in CC&Rs or other binding documents.

m. On-street parking is provided on 70% of both sides of all new streets. The percentage of on-street parking shall be measured by comparing the length of street designated for parking to the total length of the curb around the perimeter of each block, including curb cuts, driveways, and intersection radii.

n. Street trees occur between the vehicle travel way and sidewalk at intervals of no greater than 40 feet;

o. At least 50% of ground-floor dwelling units have an elevated finished floor no less than 24 inches above the sidewalk grade.

p. In non-residential or mixed use projects, 50% or more of the total number of office buildings include ground floor retail; and all businesses and/or other community services on the ground floor are accessible directly from sidewalks along a public space such as a street, square, or plaza.

q. Trees or other structures provide shade within five years of project occupancy over at least half the length of sidewalks included within or contiguous to the project. The estimated crown diameter (the width of the shade if the sun is directly above the tree) is used to calculate the shaded area.

---

**Summary of Referenced Standards**

There is no standard referenced for this credit.

**Potential Technologies & Strategies**

To achieve this credit, a project design must treat walking as an important travel mode. The design of the built environment and other transportation infrastructure must prioritize pedestrian considerations, including:

- Access to buildings and sites directly from the pedestrian realm
- Safety and comfort of pedestrians including the design speed of roads, pedestrian crossings, and streetscape design
- Sense of enclosure of the buildings
- The design of building elements for pedestrian scale and interest
Calculations for Submittal Templates

This credit has five minimum requirements and a set of 12 optional requirements that projects can achieve for additional points.

Minimum Requirements

1. Perform the following calculation (Equation 1) once for all street frontages within the project, but not on its border; and for all street frontages bordering the project’s edge. Confirm that 30% or more of street frontages within the project achieve the minimum 1.3 BH/SW ratio, and confirm that 15% or more of all street frontages bordering the project achieve the minimum 1.3 BH/SW ratio.

   \[
   \text{Equation 1 (b)}
   \]

   \[
   \% \text{ street frontages achieving min. BH/SW ratio} = \frac{\text{Frontages w/BH/SW ratio 1.3 or greater}}{\text{Total frontages}}
   \]

   Confirm that other non-calculated minimum requirements are satisfied.

Optional Requirements

1. For additional points, perform the following calculations depending on the selected design measures:

   \[
   \text{Equation 2 (f)}
   \]

   \[
   \% \text{ buildings w/25 ft. or less setback} = \frac{\text{Buildings w/25 ft. or less setback}}{\text{Total number of buildings}}
   \]

   \[
   \text{Equation 3 (g)}
   \]

   \[
   \% \text{ buildings w/18 ft. or less setback} = \frac{\text{Buildings w/18 ft. or less setback}}{\text{Total number of buildings}}
   \]

   \[
   \text{Equation 4 (h)}
   \]

   \[
   \% \text{ mixed-use & non-res buildings w/ zero setback} = \frac{\text{MU & NR buildings w/ zero setback}}{\text{Total number of MU & NR buildings}}
   \]

   \[
   \text{Equation 5 (i)}
   \]

   \[
   \text{Average ft. between MU & NR building entries} = \frac{\text{Sum of ft. between MU & NR building entries}}{\text{Total number of MU & NR buildings}}
   \]
Equation 6 (j)

\[
\% \text{ ground level NR interior spaces facing public spaces w/glass facades} = \frac{\text{No. of ground level NR interior spaces facing public spaces w/glass facades}}{\text{Total no. of ground level NR facades w/interior spaces facing public spaces}}
\]

Equation 7 (m)

\[
\% \text{ new streets w/on-street parking both sides} = \frac{\text{New streets w/on-street parking both sides}}{\text{Total number of new streets}}
\]

Equation 8 (o)

\[
\% \text{ ground floor DU w/floor 24 in. above sidewalk} = \frac{\text{Ground floor DU w/floor 24 in. above sidewalk}}{\text{Total number of ground floor DU}}
\]

Equation 9 (p)

\[
\% \text{ office buildings w/ground floor retail} = \frac{\text{Office buildings w/ground floor retail}}{\text{Total number of office buildings}}
\]

Equation 10 (q)

\[
\% \text{ sidewalk length shaded} = \frac{\text{Sidewalk ft. shaded}}{\text{Total sidewalk ft.}}
\]

In preparing these calculations, the following guidelines apply:

- The proposed position of a building front relative to the centerline of the street and building height may be used to calculate whether a frontage will accomplish the BH/SW ratio of 1:3, independently of what is going on across the street; or in the case of two-sided street space, the combination of buildings on both sides of the street may be used to calculate the ratio, at the applicant’s option. When there are building sites on both sides of a street, then each side’s linear feet contribute to the sum of the frontage.

- If there are building sites on only one side of the street, such as when buildings face a park across the street, then the building side counts toward the frontage total, but the park side does not. Private surface parking lots, however, should be treated as building sites, and their frontage should count toward the total.

- Frontage along pedestrian-only public rights-of-way that are fronted by buildings may be counted toward the sum of the frontages, at the applicant’s option.

- Building setbacks and heights governed by local regulations should use average values when minimum/maximum regulations apply, or maximum values when maximum regulations apply.
Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)
Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

To achieve the base 4 points, submit a site plan or plans indicating the following:

(a) the principal functional entries of all buildings and any streets or other public spaces.
(b) any street frontages planned for development with a minimum building height-to-street-width proportion of 1:3.
(c) the location and width of sidewalks or equivalent provisions for walking.
(d/e) the location of residential and non-residential uses, and the speed for which each street within the project will be designed.

To achieve the base 4 points, submit the following additional documentation:

(b) a calculation showing the percentage of street frontage within the project that will meet the minimum building height-to-street-width proportion of 1:3; and the same percentage for street frontage on the borders of the project.

To achieve additional points, submit a site plan or plans indicating the following (as appropriate to the measures attempted):

(f/g) the distance between the front façades of buildings and the front property lines.
(h) the location of any mixed-use or non-residential buildings and the distance between their front façades and the sidewalk.
(i) the location of functional entries along non-residential or mixed use blocks.
(j) the location of all ground-level non-residential uses along public spaces, the length of the use that will border the public space (in linear feet), and which of them will have transparent glass on the ground-level façade.
(k) the location and length of any blank walls along sidewalks.
(l) the location of any ground-level storefront windows that will be kept open and visible (unshuttered) at night.

(m) the location and length of any on-street parking.

(n) the location of any street trees and the distance between them.

(o) the location of any ground-floor dwelling units, and which of them will have an elevated finished floor.

(p) the location of any office buildings, which of them will have ground floor retail, and the location of entries to any ground-level business or community service from sidewalks or other public spaces.

(q) the location and length of sidewalks, and the location and length of shade that will be generated by trees or other structures.

☐ To achieve additional points, submit the following additional documentation (as appropriate to the measures attempted):

(f) a calculation showing the percentage of building front façades that will be no more than 25 feet from the front property line.

(g) a calculation showing the percentage of building front façades that will be no more than 18 feet from the front property line.

(h) a calculation showing the percentage of mixed-use and non-residential building front façades that will be contiguous to the sidewalk.

(i) a calculation showing the average of the distances between functional building entries along non-residential or mixed-use blocks.

(j) a calculation showing the percentage of ground-level non-residential interior spaces that will face a public space that will have transparent glass on the ground-level façade.

(l) a copy of, or a written commitment to create, any necessary CC&Rs, development agreements, or other binding documents that will ensure that ground-level storefront windows are kept open and visible (unshuttered) at night.

(m) a calculation showing the percentage of street length that will have on-street parking.

(o) a calculation showing the percentage of ground-floor dwelling units that will have an elevated finished floor.

(p) a calculation showing the percentage of office buildings that will have ground floor retail.

(q) a calculation showing the percentage of sidewalks that will be shaded.
For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- For projects attempting the measure described in (l), if a written commitment to create the required agreements was submitted previously, submit a copy of the actual agreement(s).

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

Resources for Implementation

Websites

Institute of Transportation Engineers, Traffic Calming Website
www.ite.org/traffic/index.html
This webpage includes descriptions of traffic calming strategies and a searchable library of reports and articles about traffic calming.
Pedestrian and Bicycle Information Center
www.bicyclinginfo.org/de/calm.htm
This webpage provides information about traffic calming strategies.

Print Media


Institute of Transportation Engineers. Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities. Institute of Transportation Engineers, 2006.

Resources for Learning More

Websites

The City of Davis, California’s Parking Lot 50% Shading Ordinance:
www.city.davis.ca.us/pb/pdfs/planning/forms/Parking_Lot_Shading_Guidelines.pdf
www.city.davis.ca.us/pcs/trees/master.cfm
This website provides an example ordinance to make streets more walkable.

Local Government Commission
www.lgc.org
LGC provides information, technical assistance, and networking to local elected officials and developers about making more walkable and resource-efficient cities.

Victoria Transportation Policy Institute
www.vtpi.org
VTPI is an independent research organization that provides consulting and publicly available research about solutions to emerging transportation issues, including walkability.

Print Media


Figure 1: Examples of building-height-to-street-width proportions that meet Requirement “b.”
Figure 2: Example of building-height-to-street-width proportions that does not meet Requirement “b.”
Figure 3: Example of façade transparency on ground level transparency from Requirement “j”

Figure 4: Example of finished floor elevation of no less than 24 inches from sidewalk grade for Requirement “o”
NPD Credit 8: Street Network  
1 to 2 Points

Intent

Encourage the design of projects that incorporate high levels of internal connectivity and the location of projects in existing communities in order to conserve land, promote multimodal transportation and promote public health through increased physical activity.

Requirements

If new cul-de-sacs are created as part of the project, include a pedestrian or bicycle through-connection in at least 50% of any new cul-de-sacs. If topographical conditions prohibit such connections, these are not included in the calculation.

AND meet the requirements under one of the following Options:

OPTION 1 – FOR PROJECTS SMALLER THAN 7 ACRES

Locate the project such that the street grid density within a ¼ mile radius from the center of the project falls within one of the ranges listed in the table below, OR design the project such that the project’s street grid density falls within one of the ranges listed in the table below.

OR

OPTION 2 – FOR PROJECTS 7 ACRES OR LARGER

Design the project such that the project’s street grid density falls within one of the ranges listed in the table below.

<table>
<thead>
<tr>
<th>Street grid density (centerline miles/sq.mi.)</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 – 29</td>
<td>1</td>
</tr>
<tr>
<td>&gt;30</td>
<td>2</td>
</tr>
</tbody>
</table>

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies and Strategies

Achieving this credit requires that a project design the project with a dense street network and/or locate the project in an area with a dense street network. Higher street network densities are accomplished with smaller blocks served by a hierarchy of streets. Street design features such as cul-de-sacs generally reduce the street network density, however they may be required when certain topographic features are present such as steep slopes, protected habitat or water bodies.
Calculations for Submittal Templates

Option 1A – Projects Under Seven Acres Counting Internal and External Streets

1. Calculate the percent of new cul-de-sacs containing a pedestrian or bicycle through-connection. Confirm that the result is 50% or greater.

2. Calculate the street grid density within a ¼-mile radius from the geographic center of the project site (Equation 1).

   Equation 1
   
   \[
   \text{Street grid density} = \frac{\text{Total centerline miles}}{\text{Net grid area after exclusions}}
   \]

Option 1B – Projects Under Seven Acres Counting Only Internal Streets

1. Calculate the percent of new cul-de-sacs containing a pedestrian or bicycle through-connection. Confirm that the result is 50% or greater.

2. Calculate the street grid density within the project site (Equation 1).

Option 2 – Projects Over Seven Acres Counting Only Internal Streets

1. Calculate the percent of new cul-de-sacs containing a pedestrian or bicycle through-connection. Confirm that the result is 50% or greater.

2. Calculate the street grid density within the project site (Equation 1). Use the result to determine points earned in the requirements table.

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

All Options

- A site plan indicating the location of any cul-de-sacs and pedestrian or bicycle through-connections.
Option 1

- A site plan and map of the vicinity showing the street grid density of the area within a ¼ mile radius of the center of the project site.
- A calculation of the street grid density within a ¼ mile radius of the center of the project site.

Option 2

- A site plan showing the street grid density of the project site.
- A calculation of the street grid density of the project site.

For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to prerequisite requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.
Resources for Implementation

Print Media


Websites

Victoria Transportation Policy Institute
www.vtpi.org
VTPI is an independent research organization that provides consulting, best practice examples and publicly available research about solutions to emerging transportation issues.
NPD Credit 9: Transit Facilities  
1 Point

Intent

Encourage transit use and reduce driving by creating safe and comfortable transit facilities.

Requirements

Provide covered and at least partially enclosed shelters, adequate to buffer wind and rain, with at least one bench at each transit stop within the project boundaries. Shelters shall be illuminated to five average maintained footcandles (light levels may be reduced after hours). Existing external lighting can contribute to this level, but any new lighting shall meet light pollution requirements in GCT Credit 20, and designed to not directly illuminate any windows of residential properties.

AND

Provide kiosks, bulletin boards, and/or signs devoted to providing local transit information as part of the project, including basic schedule and route information at each transit stop that borders or falls within the project.

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies & Strategies

In some cases, transit agencies may provide some or all of these facilities. Work with the transit agency to provide improvements to those facilities provided by the agency if they do not already meet the requirements. Determine if the agency has standards or guidelines for the type or location of facilities and if the agency has specifications for the specific brand of facilities such as benches, shelters, or information signs. Transit information posted should include a map of bus or rail routes that serve the project, a schedule of routes that serve the stop, and information regarding fare prices and how to purchase any necessary tickets, tokens, or passes.

Calculations for Submittal Templates

There are no calculations associated with this credit.

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.
Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

- A site plan showing the location of any transit stops within the project boundaries and any kiosks, bulletin boards, or signs with local transit information that will be provided as part of the project.

- A brief narrative listing the facilities for each transit stop that will be provided, including shelters, benches, and the mechanism for achieving the minimum light levels.

- A brief narrative describing the transit information that will be posted at kiosks, bulletin boards, or signs.

For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.
Resources for Learning More

Websites

American Public Transit Association
www.apta.com
This website contains comprehensive rail and bus information, statistics, transit facility standards and guidelines, frequent conferences and reports and news about public transportation in the U.S.

Reconnecting America
www.reconnectingamerica.org
Reconnecting America is a nonprofit organization seeking to integrate transportation systems and the communities that they serve; publications include a Transit Technologies Worksheet

Victoria Transportation Policy Institute
www.vtpi.org
VTPI provides publications about transit cost-benefit analysis and a report called “Valuing Transit Service Quality Improvements,” which explains the value transit users place on comfort and convenience.

Print Media

NPD Credit 10: Transportation Demand Management

2 Points

Intent

Reduce energy consumption and pollution from motor vehicles by encouraging use of public transit.

Requirements

OPTION 1

Create and implement a comprehensive transportation demand management (TDM) program for the project aimed at reducing weekday peak period trips by at least 20% compared to the forecasted trip generation for the project without the TDM strategies; and fund for a minimum of two years following buildout of the project (1 point);

OR

OPTION 2

Provide transit passes valid for at least one year, subsidized to be half of regular price or cheaper, to each resident and employee locating within the project during the first three years of project occupancy (or longer). Publicize the fact that subsidized transit passes are available to the eligible residents and employees (1 point);

OR

OPTION 3

Provide transit service (with vans, shuttles, buses) to rail, ferry, or other major transit facilities and/or another major destination such as a retail or employment center, with service no less frequent than five rides per weekday peak period. The service must begin when the project is 20% occupied or sooner, and must be guaranteed for at least two years beyond project buildout (1 point).

No more than 2 points can be earned under this credit.

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies & Strategies

For Option 1, the TDM plan should ideally have goals, a budget, and individuals identified to implement the plan. TDM plans ensure that specific strategies are complementary and coordinated for maximum effectiveness. A variety of TDM strategies should be explored and selected based on their effectiveness for the local situation. These include:
• Parking cash out – This means that people (typically commuters and residents of multi-family housing) who are offered a free parking space are also offered the cash equivalent when they use alternative transportation modes and so do not impose parking costs.

• Charging for parking – This is when motorists pay directly for using parking facilities. Time variable parking pricing can be used as a congestion reduction strategy.

• Flextime – This is when the employer allows employees to work variable hours to avoid driving in peak commute times.

• Rideshare and ridematch programs – Ridesharing is a program where residents or workers drive together to work in carpools or vanpools. Ridematching is a system that matches residents or workers together to facilitate ridesharing.

• Pedestrian and bicycle promotion – These include a variety of programs that support and promote non-motorized transportation, such as providing bicycle parking, showers, and reimbursement of employee cycling mileage.

• Guaranteed ride home – These programs provide an occasional subsidized ride to commuters who use alternative modes (such as ridesharing, cycling or transit). For example, if a bus rider must return home in an emergency, or a car pooler must stay at work longer than expected. This addresses a common objection to the use of alternative modes. Guaranteed ride home programs may use taxies, company vehicles or rental cars.

To quantify trip reductions based on TDM strategies, first identify the baseline trip generation rates using Institute for Transportation Engineers (ITE) standard rates or comparable references used by the regional transportation agency or state department of transportation. Second, to determine the potential reductions from the various TDM strategies, contact the state department of transportation, the local Metropolitan Planning organization or the regional air quality management district. Often, these agencies have standard trip reductions that can be applied to different strategies. If regional or state standards do not exist, then use the trip reductions developed for California's URBEMIS transportation model (www.urbemis.com).

Calculations for Submittal Templates

Option 1 – TDM Program

1. Calculate the percent of weekday peak period trip reduction for each measure in the TDM program (Equation 1). For baseline trip generation rates use ITE or comparable references, and for trip reduction rates use local DOT or air quality agency guidelines, and provide source citations. Confirm that the total trip reduction is 20% or greater.

   Equation 1

   \[
   \text{Total trip reduction (%) } = \frac{\text{No. of baseline trips}}{\text{No of reduced trips}}
   \]
Option 2 – Transit Passes

1. Calculate the percent of regular transit pass cost that is charged for project transit passes, and confirm that the result is 50% or less.

Option 3 – Transit Service

There are no calculations associated with this option.

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

Option 1

- A narrative describing the TDM program, including the strategies used, the estimated resulting trip reduction percentage, and the estimated cost of the program for two years following buildout of the project.

- A written commitment to fund the TDM program for two years following buildout of the project if the project is built.

Option 2

- A narrative describing the type of transit available, the mechanism for publicizing and distributing subsidized transit passes, the regular and subsidized prices of passes, and the estimated number of new residents and employees that will receive subsidized transit passes.

- A written commitment to provide a legally binding guarantee that passes will be provided to meet the requirements, if the project is built.

Option 3

- A map of the vicinity indicating the routes of new transit service that will be provided as part of the project.

- A description of the type of transit, and a schedule of service to be provided by as part of the project.

- A timeline of estimated project occupancy as compared with the estimated start date of transit service provided as part of the project.
A written commitment to provide a legally binding guarantee that such service will be provided for at least two years beyond project buildout, if the project is built.

For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

☑ Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

☑ Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

☑ For Options 2 or 3, if a copy of the legally binding guarantee has not yet been submitted, submit a copy of this guarantee.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

☑ Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

Resources for Implementation

Websites

URBEMIS Environmental Management Software

www.urbemis.com
This website contains values that can be used for trip generation reduction from TDM measures.
Victoria Transportation Policy Institute
www.vtpi.org
VTPI provides an extensive list of resources for TDM programs, transit subsidies and new transit service.

Print Media


**Resources for Learning More**

**Websites**

American Public Transit Association
www.apta.com
APTA provides Best Practice descriptions, comprehensive rail and bus information, statistics, transit facility standards and guidelines, frequent conferences and reports and news about public transportation in the U.S.
NPD Credit 11: Access to Surrounding Vicinity
1 Point

Intent

Provide direct and safe connections, for pedestrians and bicyclists as well as drivers, to local destinations and neighborhood centers. Promote public health by facilitating walking and bicycling.

Requirements

Design and build projects such that there is at least one through-street at the project boundary every 800 feet, or at existing abutting street intervals, whichever distance is smaller. This does not apply to connections that cannot physically be made; e.g. wetlands, rivers, railroads, extreme topography, natural gas lines, pipeline easements, highways, expressways and other limited-access roads.

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies and Strategies

Achieving this credit is accomplished by providing frequent through-street connections on a project’s boundary, including use of existing abutting streets that are spaced sufficiently close together. Where possible, streets should be connected through adjoining development projects.

Calculations for Submittal Templates

There are no calculations associated with this credit.

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

- A site and/or vicinity map showing the project boundary, existing abutting street intervals, the through-streets at the project boundary, and the distances between through-streets.
For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Implementation

Print Media

Institute of Transportation Engineers. Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities. Institute of Transportation Engineers, 2006.


Butler, Kent, Susan Handy, Robert Paterson. Planning for Street Connectivity: Getting From Here to There. APA Planning Advisory Service, 2003
Resources for Learning More

Print Media

**NPD Credit 12: Access to Public Spaces**

**1 Point**

**Intent**
To provide a variety of open spaces close to work and home to encourage walking, physical activity and time spent outdoors.

**Requirements**
Locate and/or design project so that a park, green plaza or square at least 1/6 acre in area lies within 1/6 mile walk distance of the 90% of the dwelling units and business entrances in the project. Parks less than 1 acre must also have a proportion no narrower than 1 unit of width to 4 units of length and parks greater than 1 acre must be at least 150’ in width;

AND

For projects larger than 7 acres only, locate and/or design the project so that taken together all of the parks in the project shall average at least 1/2 acre in size.

---

**Summary of Referenced Standards**
There is no standard referenced for this credit.

**Potential Technologies and Strategies**
Design emphasis should be given to a pedestrian network that efficiently connects dwellings and businesses to nearby public spaces. Information on the existing parks within a jurisdiction may be obtained from the local planning department, parks and recreation department or similar local department. These departments may also have minimum standards for the creation of new parks within the jurisdiction.

**Calculations for Submittal Templates**

1. On a vicinity map inclusive of the site, identify each dwelling unit and business entrance and parks, green plazas, and public squares within a 1/6-radius from the project boundary. Eliminate any parks, green plazas, or public squares that are less than a 1/6-acre in area and 150 feet in width.

2. Use shortest path analysis to create a table of walk distances from the project’s dwelling units and business entrances to the remaining parks, green plazas, and public squares (Table 1). Using shortest path results, sum the number of dwelling units and business entrances within a 1/6-mile walk of a park, green plaza, or public square. Calculate the percent of total dwelling units and business entrances represented by those within the 1/6-mile walk (Equation 1). Confirm that the result is 90% or greater.
3. For project sites larger than seven acres, calculate the average acreage of all parks within the project. Confirm that the average value is at least a ½-acre.

**Equation 1**

\[
\frac{\% \ DU \ & \ entrances \ w/i \ 1/6\text{-mi.} \ of \ public \ spaces}{Total \ DU \ & \ entrances \ w/i \ project} = \frac{DU \ & \ entrances \ w/i \ 1/6\text{-mi.} \ public \ spaces}{Total \ DU \ & \ entrances \ w/i \ project}
\]

**Example**

**Table 1: Walk Distance to Public Spaces**

<table>
<thead>
<tr>
<th>Building</th>
<th>No. of DU and business entrances</th>
<th>DU &amp; entrances w/i 1/6-mile of specified public spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detached Residential A</td>
<td>1</td>
<td>- - -</td>
</tr>
<tr>
<td>Detached Residential B</td>
<td>1</td>
<td>- - -</td>
</tr>
<tr>
<td>Duplex A</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Duplex B</td>
<td>2</td>
<td>- - -</td>
</tr>
<tr>
<td>Multifamily Dwelling A</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Multifamily Dwelling B</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Business A</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Business B</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>63</strong></td>
<td><strong>59</strong></td>
</tr>
</tbody>
</table>

\[
\frac{59}{63} = 94\% \ within \ 1/6\text{-mile} (\text{minimum} \ 90\% \ required)
\]

**Submittal Documentation**

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

  **For STAGE 1 Submissions (Pre-review)**
  
  *Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

  - A site and/or vicinity map showing 1) the location of all residential units and non-residential building entrances; 2) the location, size, and proportions of all relevant parks; and 3) the walking routes between the project’s buildings and relevant parks.

  - A table of walk distances between each dwelling unit or non-residential building entrance and the closest relevant public space, and a calculation of the percentage of dwelling units and non-residential building entrances that lie within the specified distance.
For projects larger than 7 acres, submit a calculation of the average size of parks (in acres) in the project.

For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1
- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Implementation

Websites

National Recreation and Park Association
www.nrpa.org
NRPA provides educational resources, frequent conferences, recommended accreditation programs, community initiatives and published research about parks.

Print Media


**Resources for Learning More**

**Websites**

**Municipal Research Services Center of Washington: Park Planning, Design, and Open Space**
www.mrsc.org/Subjects/Parks/parkplanpg.aspx
This website provides an overview of the Park Planning, Design and Open Space element required in an example state’s comprehensive plan guidelines for local governments.

**Print Media**


NPD Credit 13: Access to Active Spaces
1 Point

Intent

To provide a variety of open spaces close to work and home to encourage walking, physical activity and
time spent outdoors.

Requirements

OPTION 1

Locate and/or design the project so that an active open space facility (e.g., general playfields, soccer,
baseball, basketball and other sports fields) of at least 1 acre lies within ½ mile walk distance of 90% of
the dwelling units and building entrances in the project;

OR

OPTION 2

Locate and/or design the project so that at least 50% of dwelling units and building entrances are located
within ¼ mile walk distance of a multi-use trail or Class I bikeway of at least 3 miles in length;

OR

OPTION 3

Locate and/or design the project so that at least 90% of all dwelling units and building entrances in the
project are located within ¼ mile walk distance of a public recreation center or gym with outdoor
facilities or a park with active recreational facilities.

________________________________________________________

Summary of Referenced Standards

There is no referenced standard for this credit.

Potential Technologies & Strategies

Contact the city parks and recreation department (or similar department) to determine the location of
existing parks, recreational facilities and Class I bikeways in the jurisdiction as well as the facilities at
each park. This information is often available in a parks and recreation master plan. Map these resources
in relation to the project site. Geographic information on parks is often also available from the planning
department. Information on Class I bikeways may also be found in the jurisdiction’s comprehensive plan,
bicycle master plan or public works department or from local bicycle advocacy organization.
Calculations for Submittal Templates

Option 1 – Proximity to Active Open Space

1. On a vicinity map inclusive of the site, identify each dwelling unit and business entrance, and active open space facilities (general playfields, soccer, baseball, basketball, and other sports fields) within a ½-mile radius of the project boundary. Eliminate open space locations of less than one acre.

2. Use shortest path analysis to create a table of walk distances from the project’s dwelling units and business entrances to the remaining open space facilities. Using the shortest path results, sum the number of dwelling units and business entrances within a ½-mile walk of active open space facilities. Calculate the percent of total dwelling units and business entrances represented by those within the ½-mile walk distance (Equation 1). Confirm that the result is 90% or greater.

\[ \text{Equation 1} \]
\[
\frac{\text{DU & entrances w/i ½-mi. of active open space facilities}}{\text{Total DU & entrances w/i project}} = \frac{\text{DU & entrances w/i ½-mi. of active open space facilities}}{\text{Total DU & entrances w/i project}}
\]

Option 2 – Proximity to Trails

1. On a vicinity map inclusive of the site, identify each dwelling unit and business entrance, and trails (multi-use trail or Class I bicycle trail) within a ¼-mile radius of the project boundary. Eliminate trails of less than three miles in length.

2. Use shortest path analysis to create a table of walk distances from the project’s dwelling units and business entrances to the remaining trails. Using the shortest path results, sum the number of dwelling units and business entrances within a ¼-mile walk of trails. Calculate the percent of total dwelling units and business entrances represented by those within the ¼-mile walk distance. Confirm that the result is 50% or greater.

Option 3 – Proximity to Outdoor Active Facilities

1. On a vicinity map inclusive of the site, identify each dwelling unit and business entrance, and public recreation centers (gym with outdoor facilities or park with active recreation facilities) within a ¼-mile radius of the project boundary. Eliminate those public recreation centers of less than one acre.

2. Use shortest path analysis to create a table of walk distances from the project’s dwelling units and business entrances to the remaining public recreation centers. Using the shortest path results, sum the number of dwelling units and business entrances within a ¼-mile walk of public recreation centers. Calculate the percent of total dwelling units and business entrances represented by those within the ¼-mile walk distance. Confirm that the result is 90% or greater.
Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

For STAGE 1 Submissions (Pre-review)

*Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

Option 1

- A site and/or vicinity map showing 1) the location of all residential units and non-residential building entrances; 2) the location and size of all relevant active open space facilities; and 3) the walking routes between the project’s buildings and relevant facilities.

- A table of walk distances between each dwelling unit or non-residential building entrance and the closest relevant active open space facility, and a calculation of the percentage of dwelling units and non-residential building entrances that lie within the specified distance.

Option 2

- A site and/or vicinity map showing 1) the location of all buildings; 2) the location and length of the relevant trail; and 3) the walking routes between the project’s buildings and relevant trail.

- A table of walk distances between each building and the closest relevant trail, and a calculation of the percentage of building that lie within the specified distance.

Option 3

- A site and/or vicinity map showing 1) the location of all residential units and non-residential building entrances; 2) the location of all relevant recreation centers and gyms with outdoor facilities, and parks with active recreational facilities; and 3) the walking routes between the project’s buildings and relevant recreation centers, gyms, and parks.

- A table of walk distances between each dwelling unit or non-residential building entrance and the closest relevant recreation center, gym, or park, and a calculation of the percentage of dwelling units and non-residential building entrances that lie within the specified distance.
For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

☐ Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

☐ Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)

Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

☐ Submit updated versions of the relevant documentation submitted at Stage 2.

Resources for Implementation

See NPD Credit 12: Access to Public Spaces for “Resources for Implementation” and Resources for Learning More.”
NPD Credit 14: Universal Accessibility
1 Point

Intent

Enable the widest spectrum of people, regardless of age or ability, to more easily participate in their community life by increasing the proportion of areas that are usable by people of diverse abilities.

Requirements

For projects with residential components:

For each residential unit type developed, design 20% (and not less than one) of each type to comply with the accessible design provisions of the Fair Housing Amendments Act (FHAA) and Section 504 of the Rehabilitation Act (Rehabilitation Act), as applicable. Separate residential unit types include: single-family, duplex, triplex, multi-unit row or townhouses, and mixed-use buildings that include residential units. (Compliance for multi-family buildings of four or more units is already a regulatory requirement.). All paths of travel between residential units and other buildings within the project shall comply with the accessible design provisions of the FHAA and Rehabilitation Act, as applicable;

AND

For projects with common-use or recreational facilities constructed as part of the project:

- For any residential areas, apply the accessible design provisions of the FHAA and the Rehabilitation Act to facilities and rights-of-way; and

- For any non-residential areas, apply the accessible design provisions of the American Disabilities Act (ADA) to facilities and rights-of-way.

Projects that include only non-residential components and public right-of-ways will not be able to achieve this credit, since they are already required by law to comply with applicable accessibility regulations. However, if non-residential projects include any common-use or recreational facilities not covered by accessibility regulations, they will be able to achieve the credit.

Regarding residential accessibility design provisions, an accessible entrance can be located at the front, side or back of the residential unit, which may sometimes be determined by the topography of the site.

Summary of Referenced Standards

Fair Housing Amendments Act (FHAA)
U.S. Department of Justice
www.usdoj.gov/crt/housing/title8.htm
FHAA includes requirements regarding entries, floorplans, and turn-around radii.
### Section 504 of the Rehabilitation Act (Rehabilitation Act)

**U.S. Department of Labor**

[www.dol.gov/oasam/regs/statutes/sec504.htm](http://www.dol.gov/oasam/regs/statutes/sec504.htm) 866-4-USA-DOL

U.S. Department of Labor requirements ensure that no individual, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service.

### American Disabilities Act (ADA)

**U.S. Department of Justice**

[www.ada.gov](http://www.ada.gov) 800-514-0301

ADA for recreational facilities includes requirements regarding: ramps, surface types (asphalt vs. gravel), slopes and grades of trails, etc.

### Potential Technologies & Strategies

To create a universally accessible community, designers may need to rethink fundamental architectural concepts. Equal access provisions should be an integral part of the whole-building design process. Accessible features should be coordinated and incorporated into all planning, programming, design, construction, operation, and maintenance of the building and work together to optimize the overall site and building design throughout the life-cycle of the project.

### Calculations for Submittal Templates

For each residential unit type defined in the requirement, apply the following calculation:

\[
\text{% residential type compliant w/FHAA & RA} = \frac{\text{DU in type category compliant w/FHAA & RA}}{\text{Total DU in type category}}
\]

Confirm that calculated percentages are 20% or greater for each residential type in the project.

**Example**

\[
\begin{align*}
16 \text{ DU in Type A compliant} & = 50\% \text{ of Type A is compliant} \\
32 \text{ DU total in Type A} & = (20\% \text{ is required})
\end{align*}
\]

### Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

  **For STAGE 1 Submissions (Pre-review)**

  *Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*
A brief narrative identifying the universal design or universal accessibility features of the project, and identifying any applicable provisions of the FHAA, Rehabilitation Act, and the ADA.

For projects with residential components, submit a site plan indicating the location of any units and paths of travel that comply with the applicable provisions of the FHAA and the Rehabilitation Act, and a calculation showing the percentage of each type of residential unit that complies with the applicable provisions.

For projects with common-use or recreational facilities constructed as part of the project, submit a site plan indicating the location of these facilities, including rights-of-way in residential areas.

For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- For projects with residential components, submit a list of street addresses for any residential units that comply with the applicable provisions of the FHAA and the Rehabilitation Act.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.
Resources for Implementation

Websites

Adaptive Environments
www.adaptenv.org
Adaptive Environments advances the role of design in achieving universal accessibility, providing access to information and guidance about civil rights laws and codes, as well as consultation about strategies, precedents and best practices.

Center for Inclusive Design & Environmental Access
New York State University at Buffalo
www.ap.buffalo.edu/idea
This website provides resource and technical expertise in architecture, product design, facilities management and social and behavioral sciences to achieve universal accessibility.

The Center for Universal Design
www.design.ncsu.edu/cud/about_ud/udprinciples.htm
This website outlines the seven principles of Universal Design.

National Center on Accessibility
www.ncaonline.org
This website offers publications and video on topics such as retrofitting for accessibility, and technical assistance staff can advise on project design.

U.S. Access Board
www.access-board.gov
This website includes design guidelines for recreation areas, outdoor areas, and play areas.

www.access-board.gov/prowac/draft.htm
This website includes Guidelines for Accessible Public Rights-of-Way, developed by the U.S. Access Board under purview of the Americans with Disabilities Act.

Print Media

NPD Credit 15: Community Outreach and Involvement

1 Point

Intent

To encourage community participation in the project design and planning and involve the people who live in a community in deciding how it should be improved or how it should change over time.

Requirements

Meet with immediate neighbors and local public officials to solicit input on the proposed project during the pre-conceptual design phase,

AND

Host an open community meeting during conceptual design phase to solicit input on the proposed project,

AND

Modify the project design as a direct result of community input, or if modifications are not made, explain why community input did not generate design improvements,

AND

Work directly with community associations and/or other social networks of the community to advertise public meetings and generate comments on project design,

AND

Establish ongoing means for communication between the developer and the community throughout the design, construction, and in cases where the developer maintains control of part or the entire project, post-construction.

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies & Strategies

Prepare a public outreach and communications plan early in the project planning phase. The plan should identify all of the key stakeholders or those who may be directly affected by the project, the timing and nature of public meetings or forums and how the project team expects to reach out to citizens and other stakeholders to engage them in the planning process.

Prior to significant design work, the project team should consider holding a series of individual meetings or small focus groups with the key stakeholders to understand the issues, concerns and ideas of each
person or group. Such individuals and organizations include, but are not limited to, residents in close proximity to the project, neighborhood associations, environmental organizations, historic preservation organizations, farmland or open space advocates, local chapters of professional associations (such as the American Planning Association or the American Institute of Architects) and local government departments.

Following this, hold a public workshop or forum to present the project and receive feedback from the participants. Significant time and effort should be spent advertising the public meeting. Consider using existing community social and political networks, such as existing organization and associations, to publicize the event. The format of the workshop should allow the project team to communicate the project concept and also provide a method for participants to express their views and make concrete and constructive recommendations. Ideas generated during the workshop should be recorded and communicated back to the participants.

Using the ideas generated at the workshop, consider modifying the project as necessary and feasible to improve the project and address the concerns of residents and stakeholders.

As the project moves forward through different stages, continue the outreach and communication with the public to ensure they are informed of the process and key decisions. Hold additional stakeholder meetings and public workshops as needed to ensure that the project meets the community’s objectives. Consider creating a project web page, project site office or regular newsletter to communicate project information.

**Calculations for Submittal Templates**

There are no calculations associated with this credit.

**Submittal Documentation**

*During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.*

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

  **For STAGE 1 Submissions (Pre-review)**

  *Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.*

  - For projects that have not yet undertaken community outreach and involvement but intend to, submit a written commitment to meet the requirements of the credit and a brief description as to how and when the activities are expected to take place.

  - For projects that have already undertaken community outreach and involvement, submit the following:

    1) some documentation that at least one public meeting was held (examples could include meeting fliers, agenda, minutes, invitation letters, photographs of the meeting, copies of meeting sign-in sheets);
2) a brief narrative and/or illustration demonstrating how community input influenced changes to the design or an explanation of why changes were not made;

3) at least one letter of support from a community association and/or social network stating that the project team worked directly to engage with the association or network to advertise and generate comments on the project;

4) a brief narrative describing the ongoing means of communication between developers and community during design, construction, and in cases where the developer maintains control of part or the entire project, after construction.

For STAGE 2 Submissions (Certification of Approved Plan)
Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation required at Stage 1.

Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- If community outreach and involvement efforts had not taken place at the time of previous stages of certification, submit documentation of these efforts.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.
Resources for Implementation

Websites

National Charrette Institute
www.charretteinstitute.org
This website provides guidelines and recommendations for collaborative, open-process public workshops that produce feasible plans.

Print Media


NPD Credit 16: Local Food Production
1 Point

Intent

Promote community-based and local food production to minimize the environmental impacts from transporting food long distances and increase direct access to fresh foods.

Requirements

Establish CC&Rs or other forms of deed restrictions that do not prohibit areas for growing produce, including greenhouses, on any portion or area of residential front yards, rear yards, side yards, balconies, patios or rooftops. Greenhouses, but not gardens, may be prohibited in front yard areas that face the street.

AND

Meet the requirements under one of the following Options:

OPTION 1 – NEIGHBORHOOD FARMS AND GARDENS

Dedicate permanent and viable growing space and/or related facilities (such as greenhouses) within the project at the square footage areas specified below. Provide fencing, watering systems, soil and/or garden bed enhancements (such as raised beds), secure storage space for garden tools, solar access, and pedestrian access for these spaces. Ensure that the spaces are owned and managed by an entity that can include occupants of the project in its decision-making, such as a community group, a homeowners association, or a public body.

<table>
<thead>
<tr>
<th>Project density (dwelling unit/acre)</th>
<th>Required growing space (sq ft per dwelling unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 to 14</td>
<td>200</td>
</tr>
<tr>
<td>&gt; 14 and ≤ 22</td>
<td>100</td>
</tr>
<tr>
<td>&gt; 22 and ≤ 28</td>
<td>80</td>
</tr>
<tr>
<td>&gt; 28 and ≤ 35</td>
<td>70</td>
</tr>
<tr>
<td>&gt; 35</td>
<td>60</td>
</tr>
</tbody>
</table>

OR

OPTION 2 – COMMUNITY SUPPORTED AGRICULTURE

Purchase shares in a Community Supported Agriculture (CSA) program located within 150 miles of the project site for at least 80% of the households within the project for two years. Shares must be delivered to within ¼ mile of the project on a regular schedule, which shall not be less than twice per month at least four months of the year.
OPTION 3 – PROXIMITY TO FARMERS’ MARKET

Locate and/or design the project such that the center is within project within ¼ mile of an established farmer’s market (that has been operating for at least two years), with at least three producer vendors, and that operates at least once a week for at least 5 months of the year.

Summary of Referenced Standards

There is no standard referenced for this credit.

Potential Technologies & Strategies

For projects where CC&Rs are not developed, work with the local jurisdiction to ensure that the zoning code does not prohibit the growing of food. If the code does prohibit this, work with the jurisdiction to create amendments to the code that apply to, at minimum, the project site.

For Option 1, consider development of a neighborhood farm stewardship plan for on-site farms or gardens with a description of the following, at a minimum: (a) public and/or community use and access including oversight and responsibilities, usage of gardens and produce, capacity-building; (b) a plan for potential capital improvements, (c) provision of supplies, (d) a plan for vehicular access, and (e) community programs, including training and education programs.

For Option 2, explore the locations of regional CSA programs by contacting the local Farm Bureau, or visiting the websites of the U.S. Department of Agriculture or non-profit organizations such as Local Harvest. Determine a delivery system; delivery locations could be individual residences, local businesses or community centers.

Calculations for Submittal Templates

There are no calculations associated with this credit.

Submittal Documentation

During the pilot program, project teams are encouraged to suggest replacement documentation that may be easier to access or produce than the items listed below, but still clearly verifies that the requirements have been met. The certification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.

- Provide the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:
For STAGE 1 Submissions (Pre-review)

Submitting for Stage 1 is optional. If it is skipped, these items will be required at Stage 2.

All Options

☐ A copy of, or a written commitment to create, any necessary CC&Rs, development agreements, deed restrictions, or other binding documents that will establish that areas for growing produce are not prohibited as specified.

Option 1

☐ A site plan showing the location and size of dedicated space for growing and/or related facilities.

☐ A calculation showing the required growing space based on density.

☐ A written commitment to provide the items specified if the project is built.

☐ A brief narrative explaining what entity will serve to own and manage the growing spaces and facilities.

Option 2

☐ Identification of available CSA programs that can deliver to within ¼ mile of the project site according to the specified schedule, and an estimated cost for purchasing shares for 80% of the project’s households for two years.

☐ A written commitment to purchase shares for 80% of the project’s households for two years, if the project is built.

Option 3

☐ A map showing the location of the relevant farmers’ market in relation to the project.

☐ A brief narrative describing the number of producer vendors and the market’s schedule of operation.

For STAGE 2 Submissions (Certification of Approved Plan)

Stage 2 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 2A: No change since Stage 1
If the project submitted at Stage 1, and project conditions remain unchanged with respect to credit requirements, no additional documentation is required. Indicate “No change since Stage 1” on project checklist.

Case 2B: Change since Stage 1
If the project submitted at Stage 1, and project conditions have changed with respect to credit requirements:

☐ Submit updated versions of the relevant documentation required at Stage 1.
Case 2C: Did not submit at Stage 1

- Submit the documentation required at Stage 1.

For STAGE 3 Submissions (Certification of Completed Neighborhood Development)
Stage 3 must be completed. If a project is already built, Stage 2 and 3 documentation may be submitted simultaneously.

Case 3A: No change since Stage 2
If project conditions remain unchanged with respect to credit requirements, indicate “No change since Stage 2” on project checklist, and submit the following additional post-construction documentation:

- If a written commitment to create the required agreements regarding the allowance of growing spaces and facilities was submitted previously, submit a copy of the actual agreement(s).
- For Option 1, if a written commitment to provide the items specified was submitted previously, submit confirmation that the items were provided.
- For Option 2, if a written commitment to purchase shares for 80% of the project’s households for two years, submit confirmation that the shares were purchased.

Case 3B: Change since Stage 2
If project conditions have changed with respect to credit requirements:

- Submit updated versions of the relevant documentation submitted at Stage 2 and the additional item(s) listed above in Case 3A.

Resources for Implementation

Websites

American Community Gardens Association
www.communitygarden.org
This nonprofit membership organization provides publications about community gardening.

Local Harvest
www.localharvest.org
This website can be used to find farmers' markets, family farms, and other sources of sustainably grown food in your area.

U.S. Department of Agriculture - Farmers Markets
www.ams.usda.gov/farmersmarkets/
This website provides a list of farmer’s markets in each state as well as facts about farmer’s markets.

U.S. Department of Agriculture, National Agricultural Library
Alternative Farming Systems Information Center, Community Supported Agriculture
This website contains information on community supported agricultural (CSA) programs.
Resources for Learning More

Websites

American Farmland Trust
www.farmland.org
This website provides information and support about the importance of preserving farmland, farming practices that lead to a healthy environment, and the link between local consumption and production of food.

FamilyFarmed.org
www.familyfarmed.org
A project of Sustain, one of the country's leading non-profit organizations working for a healthy environment, it supports the growth of a regional food system in the Midwest by establishing markets for many organic and sustainable family farms.

Print Media
