

LOTUS NC V3 Guidelines

Certification for a part of a building (Draft version)

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1. Introduction

These guidelines are for projects where only a part of a building is targeting LOTUS Certification.

The aim of these guidelines is to provide guidance on how to handle LOTUS certification for part of buildings.

2. Eligibility

The present guidelines can be used with the following LOTUS rating systems:

- LOTUS New Construction V3 (LOTUS NC V3)

For a part of a building to be eligible for LOTUS NC V3, it should have a clear separation from the other building components:

- Where a part of a building has no physical connection or is physically connected only by circulation, parking, or mechanical/storage rooms with the other parts of the building, it can be considered as having a clear separation and can be considered as a separate building.
- Where a part of a building shares an occupied space with the other parts of the building, it cannot be considered as one a separate building for LOTUS NC V3 Certification unless it is physically distinct and has a distinct identity as a separate building or if it is a newly constructed addition. Also, in this case, the part of building targeting LOTUS Certification should have separate air distribution systems and water and energy meters.

Note: Different parts of a same building can be eligible for LOTUS NC V3 Certification as individual projects. This might be the case for buildings that:

- include different building types (Residential, Office, Hotel, etc.)
- are targeting different LOTUS certification levels (Certified, Silver, Gold or Platinum) for the different parts of the building

3. Scope and boundaries

3.1 LOTUS Project scope

The part of a building applying for LOTUS NC V3 Certification is called the LOTUS project.

The LOTUS project should include the entire part of the building that is separated from the other building components and the complete scope of work for this part of the building.

The LOTUS project should also include all the spaces, whether physically connected or not, supporting the building, such spaces include parking areas, technical rooms, storage rooms, etc.

Also, in the case that the LOTUS project shares an occupied space with the other parts of the building, the shared occupied space should be included in the scope of the LOTUS project.

3.2 LOTUS Project site boundary

Project teams should use reasonable judgment in drawing a LOTUS Project site boundary following these general guidelines:

- Projects may elect to use the legal limits of the site (e.g. property boundary) or define an alternative boundary for LOTUS purposes that is wholly contained within the legal ownership rights of the site. The entire area contained within this boundary is required to be under the same ownership or property manager or developer.
- The LOTUS Project site boundary may not include real property (except for the other parts of the building) for which LOTUS certification will not be pursued
- The LOTUS Project site boundary must be a single unbroken site.
- The LOTUS project boundary may not unreasonably exclude portions of the site to give the project an advantage in complying with credit requirements.

4. Procedures for compliance with LOTUS Prerequisites and Credits

Part of buildings applying for LOTUS NC V3 Certification (referred to as “LOTUS project”) must follow the procedures listed in Table 1.

Table 1: Applicability of LOTUS NC V3 Prerequisites and Credits with the different credit approaches

PR/Credit	Procedure
E-PR-1 Minimum Energy Efficiency Performance	Only the LOTUS project must demonstrate compliance with the requirements of the prerequisite.
E-PR-2 Passive Design	The whole building must be considered in the Passive design analysis.
E-1 Passive Design	Only the LOTUS project must demonstrate compliance with requirements.
E-PR-3 and E-2 Total Building Energy Use	<p>Only the LOTUS project must demonstrate compliance with requirements.</p> <p>Notes on the energy simulation:</p> <ul style="list-style-type: none"> • If an energy simulation is to be performed for the other parts of the building (for separate LOTUS Certification or other purposes), the whole building can be modelled and simulation results can be separated at the end. • If no energy simulation is to be performed for the other parts of the building, their architecture (walls, roofs, windows, etc.) should be modelled (to account for shading/reflection). <ul style="list-style-type: none"> - If the other parts of the building adjacent to the LOTUS project are air-conditioned, then the demising walls between the LOTUS project and the other parts of the building should be set as an adiabatic surface (i.e. no heat is transferred across the wall). In case it's not possible to set the demising walls as an adiabatic surface in the simulation software, the demising walls should be modelled with a U-value of 0.001 W/m².K. - If the other parts of the building adjacent to the LOTUS project are not air-conditioned, the architecture of the other parts of the building and the demising walls should be modelled with the actual U-values. <p>Note on renewable energy:</p> <ul style="list-style-type: none"> • If all the renewable energy produced onsite is directly consumed by the loads of the LOTUS project, the total renewable energy produced onsite can be considered to calculate the reduction of the total building energy use compared to the baseline. <p>Else, the renewable energy considered must be equal to the total renewable energy produced onsite multiplied by the ratio between the GFA of the LOTUS project and the total GFA of the building.</p>

E-3 Building Envelope – Option A	Only the LOTUS project must demonstrate compliance with requirements: only the roof and external wall areas directly adjacent to the LOTUS Project must be considered to calculate OTTV.
E-3 Building Envelope – Option B	<ul style="list-style-type: none"> For NR projects, Option B can be followed only if the LOTUS project has more than 50% of occupied spaces without air-conditioning. For Residential projects, Option B can be followed only if LOTUS project has more than 50% of dwelling units with a building layout design that meets requirements of Strategy A1 of credit E-4. Strategy B1: Only the LOTUS project must demonstrate compliance with requirements: only the roof and external wall areas directly adjacent to the LOTUS Project must be considered. Strategy B2: The whole building must be considered to demonstrate compliance with requirements. Strategy B3: Only the LOTUS project must demonstrate compliance with requirements: only the façades directly adjacent to the LOTUS Project must be considered. Strategy B4: Only the LOTUS project must demonstrate compliance with requirements: only the glazing areas directly adjacent to the LOTUS Project must be considered.
E-4 Building Cooling – Strategy A	Only the LOTUS project must demonstrate compliance with requirements: only the occupied spaces within the LOTUS project must be considered.
E-4 Building Cooling – Strategy B	All the air-conditioning systems serving the LOTUS project must be considered to demonstrate compliance with requirements.
E-5 Artificial Lighting – Strategy A	Only the LOTUS project must demonstrate compliance with requirements.
E-5 Artificial Lighting – Strategy B	Only the LOTUS project must demonstrate compliance with requirements.
E-6 Energy Monitoring and Management (For NR projects)	Only the LOTUS project must demonstrate compliance with requirements.
E-6 Energy Monitoring and Management (For Residential projects)	All the dwelling-units within the LOTUS project must demonstrate compliance with requirements.
E-7 Lifts (For Residential projects)	All the lifts serving the residential areas with dwelling-units in the LOTUS project must demonstrate compliance with requirements.
E-8 Renewable Energy	If all the renewable energy produced onsite is directly consumed by the loads of the LOTUS project, the total renewable energy produced onsite can be considered to demonstrate compliance with requirements. Else, the renewable energy considered must be equal to the total renewable energy produced onsite multiplied by the ratio between the GFA of the LOTUS project and the total GFA of the building.

W-PR-1 Water Efficient Fixtures	Only the water fixtures installed in the LOTUS project must demonstrate compliance with requirements.
W-1 Water Efficient Fixtures	Only the water fixtures installed in the LOTUS project must demonstrate compliance with requirements.
W-2 Water Efficient Landscaping	The whole vegetated area within the LOTUS Project site boundary and the associated irrigation systems must be considered to demonstrate compliance with requirements.
W-3 Water Metering	Water meters must be installed for all major water flows of the LOTUS project, including water flows that are shared with the other building components.
W-4 Sustainable Water Solutions – Strategy A	Points awarded should be based on LOTUS project's total water consumption and on the amount of recycled, reused and/or harvested water used to cover water uses of the LOTUS project. LOTUS project's total water consumption is equal to the sum of all the water uses of the LOTUS project including water use for irrigation of the vegetation within the LOTUS Project site boundary, water use for cooling towers working with chiller systems supplying chilled water to cool down the LOTUS project, etc.
W-4 Sustainable Water Solutions – Strategy B	All the swimming pools within the LOTUS project site boundary must demonstrate compliance with requirements.
W-4 Sustainable Water Solutions – Strategy C	All the cooling towers working with chiller systems supplying chilled water to cool down the LOTUS project must demonstrate compliance with requirements.
W-4 Sustainable Water Solutions – Strategy D	Only the LOTUS project must demonstrate compliance with requirements.
MR-1 Reduced Concrete Use	Only the LOTUS project must demonstrate compliance with requirements.
MR-2 Sustainable Materials	All the materials used for the construction of the LOTUS project must be considered to demonstrate compliance with requirements. In the case that material costs are not calculated separately for the LOTUS project and only material costs of the whole building are available, materials used for the construction of the whole building must be considered to demonstrate compliance with requirements.
MR-3 Non-Baked Materials	All the non-structural walls of the LOTUS project and the non-structural walls of the demising walls (used as separation between the LOTUS project and the other parts of the building) must be considered.
MR-PR-1 Demolition and Construction Waste	The Demolition and Construction Waste Plan must be implemented for the whole building.
MR-4 Demolition and Construction Waste – Strategy A	Points awarded should be based on the percentage of demolition and construction waste diverted from landfill considering the total amount of demolition and construction waste of the whole building.

MR-4 Demolition and Construction Waste – Strategy B	Strategies to reduce the waste generation during construction must be implemented for the construction of the whole building.
MR-5 Operation Waste Management – Option A (For NR Projects)	If the dedicated recycling storage area is located within the LOTUS project: it should be located for convenient access by occupants of the LOTUS project and collection vehicles, and it should have storage spaces sufficiently sized based on waste generation of the LOTUS project. Else, a central dedicated recycling storage area for the whole building can be used for compliance with this credit. In this case, it should be located for convenient access by occupants of the whole building and collection vehicles, and it should have storage spaces sufficiently sized based on waste generation of the whole building.
MR-5 Operation Waste Management – Option B (For Residential Projects)	Only the LOTUS project must demonstrate compliance with requirements and all the storage areas must be located within the LOTUS project.
H-PR-1 Indoor Smoking	Only the LOTUS project must demonstrate compliance with requirements.
H-1 Ventilation for indoor air quality	Only the LOTUS project must demonstrate compliance with requirements.
H-PR-2 Low-Emission Products	Only the interior paint and coating products installed within the LOTUS project must demonstrate compliance with requirements.
H-2 Low-Emission Products	Only the products installed within the LOTUS project must demonstrate compliance with requirements.
H-3 Biophilic Design	Only the LOTUS project must demonstrate compliance with requirements.
H-4 Daylighting	Only the occupied spaces within the LOTUS project must be considered to demonstrate compliance with requirements.
H-5 External Views	Only the occupied spaces within the LOTUS project must be considered to demonstrate compliance with requirements.
H-6 Thermal Comfort	Only the occupied spaces within the LOTUS project must be considered to demonstrate compliance with requirements.
H-7 Acoustic Comfort – Option A (For NR Projects)	Only the occupied spaces within the LOTUS project must be considered to demonstrate compliance with requirements.
H-7 Acoustic Comfort – Option B (For NR Projects)	Only the occupied spaces within the LOTUS project must be considered to demonstrate compliance with requirements.
H-7 Acoustic Comfort (For Residential Projects)	All the walls and floors within the LOTUS project and all the walls and floors between the LOTUS project and the other building components must be considered.

SE-1 Flooding Resistance	The whole building must demonstrate compliance with requirements.
SE-2 Development Footprint	The whole building must be considered in the development footprint.
SE-3 Vegetation – Strategy A	The total site area of the LOTUS Project site boundary and all the vegetation within the LOTUS Project site boundary must be considered to demonstrate compliance with requirements.
SE-3 Vegetation – Strategy B	The Landscape management plan must be established and implemented for the whole LOTUS Project site boundary.
SE-4 Stormwater Management – Option A	The average perviousness of the site must be calculated considering the whole LOTUS Project site boundary.
SE-4 Stormwater Management – Option B	The volume of on-site stormwater runoff must be calculated considering the whole LOTUS Project site boundary.
SE-5 Heat Island Effect	All the paved and roof areas within the LOTUS Project site boundary must be considered, at the exception of the roof area above spaces not part of the LOTUS Project.
SE-6 Refrigerants – Option A	Only the LOTUS project must demonstrate compliance with requirements.
SE-6 Refrigerants – Option B	All the air-conditioning systems serving the LOTUS project must be considered in the credit.
SE-6 Refrigerants – Option C (For NR Projects)	All the air-conditioning and refrigeration systems installed within the LOTUS project buildings and/or serving the LOTUS project must be considered in the credit.
SE-7 Construction Activity Pollution Control	The measures to limit air, water and land pollution during the construction process must be implemented for the construction of the whole building.
SE-8 Light Pollution Minimization – Option A	The whole LOTUS project site boundary should comply with requirements.
SE-8 Light Pollution Minimization – Option B	All the exterior lighting fixtures installed within the LOTUS project site boundary should comply with requirements.
SE-9 Green Transportation – Strategy A	<ul style="list-style-type: none"> • If the parking spaces are reserved for the occupants of the LOTUS project, the number of bicycle parking spaces to be provided must be calculated and documented for all the occupants of the LOTUS project. Else, the number of bicycle parking spaces to be provided must be calculated and documented for all the occupants of the whole building. • For the provision of showers, only the LOTUS project must demonstrate compliance with requirements.

SE-9 Green Transportation – Strategy B	Only the LOTUS project must demonstrate compliance with requirements.
SE-9 Green Transportation – Strategy C	If a parking area is reserved for the LOTUS project and the electric vehicle charging stations within the parking area are reserved for the occupants of the LOTUS project, the number of electric vehicle charging stations to be provided must be calculated and documented based on the total vehicle parking capacity of the parking area reserved for the LOTUS project. Else, the number of electric vehicle charging stations to be provided must be calculated and documented based on the total vehicle parking capacity within the whole building.
SE-9 Green Transportation – Strategy D	Only the LOTUS project must demonstrate compliance with requirements.
SE-10 Community Connectivity	Only the LOTUS project must demonstrate compliance with requirements.
SE-11 Outdoor Communal Space and Facilities – Strategy A	The whole LOTUS project site boundary must be considered to calculate the percentage of public space.
SE-11 Outdoor Communal Space and Facilities – Strategy B	All the outdoor communal facilities for occupants within the whole LOTUS site project boundary can be considered to demonstrate compliance with requirements.
Man-1 Effective Design Process – Strategy A	The design process for the whole building must demonstrate compliance with requirements.
Man-1 Effective Design Process – Strategy B	The whole building must demonstrate compliance with requirements.
Man-1 Effective Design Process – Strategy C	The whole building must demonstrate compliance with requirements.
Man-2 Construction Stage – Strategy A	The project management must be performed in accordance with an internationally recognized system for the construction of the whole building.
Man-2 Construction Stage – Strategy B	Trades Training must be conducted for all the contractors involved on the construction of the LOTUS project.
Man-3 Commissioning	All the building systems installed within the LOTUS Project and all the systems serving the LOTUS project must be considered within the scope of this credit.
Man-PR-1 Maintenance	All the building systems installed within the LOTUS Project and all the systems serving the LOTUS project must be considered in the building operation and maintenance manual.
Man-4 Maintenance	All the building systems installed within the LOTUS Project and all the systems serving the LOTUS project must be considered in the preventative maintenance plan.

Man-PR-2 Green Awareness	Only the LOTUS project must demonstrate compliance with requirements.
Man-5 Green Awareness	Only the LOTUS project must demonstrate compliance with requirements.
EP-1 Enhanced Performance	The procedure to follow should be the same as for the credit for which the performance achieved by the project exceeds significantly the requirements.
EP-2 Innovative Solutions	Depending on the solution, compliance may need to be demonstrated for the LOTUS project only or for the whole building. For this reason, it is advisable to confirm the approach that can be followed for the proposed innovative solutions with the VGBC at any time prior to submittal