

LEED v4.1 Cities and Communities: Existing

Pilot Alternate Compliance Path

TR Prerequisite: Transportation Performance

PURPOSE:

Develop an alternative approach in recognizing transportation performance and management strategies for cities and communities attempting LEED v4.1 Cities and Communities: Existing rating system but unable to achieve a minimum of 40 points under Transportation Performance on Arc platform.

BACKGROUND:

Intent: To promote non-motorized transportation, encourage use of public transit and reduce pollution from transportation sector.

Original Requirements:

Measure the daily Vehicle Miles Travelled (VMT) per capita for all passenger vehicles within the city or community. Total VMT must be calculated for one whole calendar year within the last 5 years using either of the following methodologies:

- Non-traffic count based
- Traffic count based
- Transportation modeling software derived

Daily VMT per capita is calculated by dividing the annual total VMT for the city or community for a period of one calendar year, by total population of the city (Use USGBC population calculator based on residing and floating population). Divide this by 365 to get daily VMT per capita. Document the assumptions for diurnal and seasonal population if variations significantly alter travel patterns.

Obtain a minimum Transportation Performance score of 40.

Additional points for this prerequisite are awarded for transportation performance scores above 40, according to the table given below.

Table 1. LEED Points for Transportation Performance

Transportation Performance Score in Arc	Points
40	Prerequisite
41 - 50	1
51 - 60	2
61 - 70	3
71 - 80	4
81 - 90	5
91 - 100	6

Challenges: Transportation patterns within cities and communities depend on land use plans and policies, access to diverse uses, population density, provision of public infrastructure. Cities closer to highways or freeways may have high traffic passing through. This may prevent projects from achieving the required threshold.

ALTERNATIVE REQUIREMENTS:

Cities or communities that are unable to obtain a minimum Transportation Performance score of 40 in Arc due to high VMT per capita must demonstrate achievement of the prerequisite by meeting the Alternative Compliance Requirements below:

VTM Trend Improvement (Prerequisite only)

Demonstrate reduction in VMT per capita over a period of five years. Reporting year must be within five years of the certification year.

AND

Adopt a plan, policy or program to reduce the Vehicle Miles Travelled (VMT) within the city or community. The plan must include targets for VMT reduction over a period of time. City or community must have in place at least two programs or policies.

Indicative list of programs or policies:

- Pricing mechanisms (congestion pricing, parking policies, VMT-based fees).
- Investment in bike and transit infrastructure, including transit priority.
- Transport Demand Management including large employer TDM requirements, universal transit passes.
- Shared mobility programs.
- Development standards and policies for infill and compact development.
- Improvements to local zoning (e.g. eliminate min parking requirements, height limits, exclusionary zoning).

DOCUMENTATION REQUIREMENTS:

Documentation	ACP
Calculated Transportation Performance score on Arc	X
Narrative describing the reasons for high VMT per capita for the city or community.	X
Data and documentation demonstrating trend improvement in VMT per capita.	X
Plans, policies or programs to improve VMT performance in the future.	X

WE Prerequisite: Water Performance

PURPOSE:

Develop an alternative approach in recognizing domestic water performance and management strategies for cities and communities attempting LEED v4.1 Cities and Communities: Existing rating system but unable to achieve a minimum of 40 points under Water Performance on Arc platform.

BACKGROUND:

Intent: To support water management by minimizing water use and demand as a means to conserve water.

Original Requirements:

Measure the daily per capita domestic water consumption within the city or community. Domestic water consumption must be calculated for one whole calendar year within the last 5 years.

Domestic water is water used for indoor and outdoor household purposes which includes drinking, cooking, washing, landscaping and sanitation. Domestic water consumption is represented by the amount of water supplied by the public water supply utility or municipality. It may also include some industrial users that receive water from public water treatment facilities rather than well systems. It does not include water withdrawn for non-domestic uses such as agricultural irrigation, golf course irrigation, livestock, aquaculture, mining, or thermoelectric generation.

Applicants must include non-revenue water in the calculations.

Daily domestic water consumption per capita is calculated by dividing the total annual domestic water consumed for the most recent calendar year by total population of the city (Use USGBC population calculator based on residential and floating population). Divide this by 365 to get Domestic Water Consumption per capita per day. Document any assumptions for differing day/night and seasonal populations if variations significantly alter water consumption patterns.

Obtain a minimum water performance score of 40. Additional points for this prerequisite are awarded for water performance scores above 40, according to table below.

Table 2. LEED Points for Water Performance

Water Performance Score in Arc	Points
40	Prerequisite
41 - 50	1
51 - 60	2
61 - 70	3
71 - 80	4
81 - 90	5
91 - 100	6

Challenges: Calculation of domestic water per capita differs from region to region, due to differences in definition of domestic water, accounting variations or climatic conditions. This may prevent projects from achieving the required threshold.

ALTERNATIVE REQUIREMENTS:

Cities or communities that are unable to obtain a minimum Water Performance score of 40 in Arc due to high water consumption must demonstrate achievement of the prerequisite by meeting the Alternative Compliance Requirements below:

Option 2. Water Consumption Trend Improvement (Prerequisite only)

Demonstrate reduction in domestic water consumption per capita over a period of five years. Reporting year must be within five years of the certification year.

AND

Adopt a plan, policy or program to reduce per capita domestic water consumption within the city or community. The plan must include targets for domestic water use reduction over a period of time. City or community must have in place at least two programs or policies.

Indicative list of programs or policies:

- Community wide plumbing, building, and/or zoning codes or ordinances that promote water efficient practices and products along with its enforcement.
- Comprehensive education and outreach campaign to engage residents and businesses in water efficiency efforts.
- Increase smart meters for water use throughout the city or community.
- Incentives to encourage the new construction of water efficient buildings and landscaping.
- Water conservation programs to residents and businesses to reduce domestic water usage.

DOCUMENTATION REQUIREMENTS:

Documentation	ACP
Calculated water performance score on Arc.	X
Narrative describing the reasons for high per capita domestic water consumption within the city or community.	X
Data demonstrating trend improvement (reduction) in domestic water consumption per capita.	X
Narrative and documentation supporting the plans, policies or programs to reduce domestic water consumption.	X

EN Prerequisite: Energy and GHG Performance

PURPOSE:

Develop an alternative approach in recognizing energy and GHG performance and management strategies for cities and communities attempting LEED v4.1 Cities and Communities: Existing rating system but unable to achieve a minimum of 40 points under Energy and GHG Performance on Arc platform.

BACKGROUND

Intent: To support energy management and move towards a zero energy and emissions city.

Original Requirements:

Measure the annual energy consumption and greenhouse gas (GHG) emissions for the city or community. The inventory should cover Scope 1 and Scope 2 emissions for one whole calendar year within the last five years. LEED points are based on Energy and GHG performance on Arc scored by Greenhouse Gas emissions per capita (tons CO₂e per capita).

Document the assumptions for differing diurnal and seasonal population if varying numbers are used to arrive at GHG emissions per capita.

Obtain a minimum Energy and GHG Performance Score of 40 on Arc. Additional points for this prerequisite are awarded for Energy and GHG Performance Scores above 40, according to table below.

Table 3. Energy and GHG Performance score in Arc and corresponding LEED for Cities and Communities points

Energy and GHG Performance Score on Arc Score		Points
Cities	Communities	
40	40	Prerequisite
41 - 44	41 - 44	1
45 - 49	45 - 48	2
50 - 53	49 - 52	3
54 - 57	53 - 56	4
58 - 61	57 - 60	5
62 - 66	61 - 64	6
67 - 70	65 - 68	7
71 - 74	69 - 70	8
75 - 79	71 - 73	9
80 - 83	74 - 76	10
84 - 87	77 - 79	11
88 - 91	80 - 82	12
92 - 96	83 - 85	13
97 - 100	86 - 88	14
	89 - 91	15
	92 - 94	16
	95 - 97	17
	98 - 100	18

Challenges: Energy consumption of cities and communities is driven by economic activity and depends on the sectors and industries present. Comparing these cities in terms of per capita is inaccurate and may prevent projects from achieving the required threshold.

ALTERNATIVE REQUIREMENTS

Cities or communities that are unable to obtain a minimum Energy and GHG Performance score of 40 in Arc due to high GHG emissions must demonstrate achievement of the prerequisite by meeting the Alternative Compliance Requirements below:

Energy and GHG Trend Improvement (Prerequisite only)

Demonstrate reduction in GHG emissions per capita over a period of five years. Reporting year must be within five years of the certification year.

AND

Adopt a plan, policy or program to reduce total GHG emissions from the city or community. Set energy and emissions targets to reduce total GHG emissions over a period of time. City or community must have in place at least two programs or policies.

Indicative list of programs or policies:

- Regulations and policies: Codes and ordinances for green buildings, sustainable transit and energy efficient industry practices, renewable energy portfolio.
- Incentives: Incentives such as expedited permitting, fee waivers, identification of approved agencies for encouraging energy efficiency and renewable energy; tax credit systems to incentivize low carbon infrastructure.
- Programs and services: Demand aggregation and procurement of clean energy, creation of integrated urban energy systems, demand response programs.
- Technology and innovation: Pilot programs for clean technologies, innovative service-provider models.
- Education and Outreach: Education and outreach campaign to engage residents and businesses in GHG emissions reduction.

DOCUMENTATION REQUIREMENTS

Documentation	ACP
Calculated Energy and GHG performance score on Arc.	X
Narrative describing the reasons for high energy consumption and GHG emissions.	
Data demonstrating trend improvement (reduction) in GHG emissions.	X
Narrative and documentation supporting the plans, policies or programs to reduce energy and GHG emissions.	X

MR Prerequisite: Waste Performance

PURPOSE:

Develop an alternative approach in recognizing waste performance and management strategies for cities and communities attempting LEED v4.1 Cities and Communities: Existing rating system but unable to achieve a minimum of 40 points under Waste Performance on Arc platform.

BACKGROUND

Intent: To track and reduce the municipal waste generated by the project, while increasing the waste diversion.

Original Requirements:

Measure the total weight of waste (in lbs., kg, or tons) that is generated, and the total weight that is diverted from landfills or incineration for a minimum period of the most recent calendar year. LEED points are based on waste performance in Arc across two metrics:

- ▶ Municipal solid waste generated (in metric tons per year per capita)
- ▶ Municipal solid waste diverted (% of total generated)

Municipal solid waste generated must include waste generation from all sectors within the city or community including but not limited to residential, institutional, commercial, other sectors and open spaces.

Construction and demolition waste is not included under this credit. Exclude land clearing debris, soil and landscaping materials.

Document the assumptions for differing diurnal and seasonal population if varying numbers are used to arrive at waste generation per capita.

Obtain a minimum waste performance score of 40. Additional points for this prerequisite are awarded for waste performance scores above 40, according to Table below.

Table 4. Waste Performance Score in Arc and corresponding LEED points

Waste Performance Score in Arc		Points
Cities	Communities	
40	40	Prerequisite:
41 - 55	41 - 52	1
56 - 70	53 - 64	2
71 - 85	65 - 76	3
86 - 100	77 - 88	4
	89 - 100	5

Challenges: The composition of municipal solid waste differs regionally. Cities or communities that have higher commercial or tourism related activities may generate higher amount of waste, thus impacting the achievement of the threshold.

ALTERNATIVE REQUIREMENTS

Cities or communities that are unable to obtain a minimum Waste Performance score of 40 in Arc due to high waste generation (or low diversion) must demonstrate achievement of the prerequisite by meeting the Alternative Compliance Requirements below:

Waste Diversion Trend Improvement (Prerequisite only)

Demonstrate a reduction in the waste per capita sent to landfill or incineration over a period of five years. Reporting year must be within five years of certification year.

AND

Adopt a plan, policy, or program to reduce the waste per capita sent to landfill or incineration. The plan must include targets for per capita waste diversion from landfill/incineration over a period of time. City or community must have in place at least two programs or policies.

Indicative list of programs or policies:

- Focused waste management plan for the waste intensive sectors
- Legally binding product bans to reduce contamination in recycling and composting programs
- Regional coalitions that enhance the project's ability to address waste management targets
- Community wide incentives or regulations including fees, taxes, and cost avoidance
- Targeted recycling programs at key locations
- Inventory of existing waste infrastructure conditions, and priorities for maintenance
- Professional waste audits
- Assessment of local food waste generation, disposal, and targeted solutions

DOCUMENTATION REQUIREMENTS

Documentation	ACP
Calculated waste performance score on Arc.	X
Narrative describing the reasons for high amount of waste sent to landfill.	
Data demonstrating trend improvement (reduction) in waste sent to landfill.	X
Narrative and documentation supporting the plans, policies or programs to reduce waste sent to landfill.	X