

## LEED v4 Building Design and Construction

### Quiz #4

SS

1. Which of these must all projects complete in order to certify a project using the rating system LEED BD+C? [Choose two]
  - A. Construction and Demolition Waste Management Plan
  - B. Material Purchasing Plan
  - C. Erosion and Sedimentation Control Plan
  - D. Site Assessment Plan
  - E. Remediation Plan
2. SS Prerequisite Construction Activity Pollution Prevention requires projects to comply with the requirements of which standard?
  - A. ASTM E1527–05, Phase I Environmental Site Assessment
  - B. ASTM E1903–11, Phase II Environmental Site Assessment
  - C. 2012 EPA Construction General Permit (CGP)
  - D. 2012 EPA Construction General Permit (CGP) or local equivalent, whichever is more stringent
3. Erosion and Sedimentation Control (ESC) measures must address which of these environmental concerns that can occur due to construction activities? [Choose three]
  - A. Waterway sedimentation
  - B. Stormwater runoff
  - C. Airborne dust
  - D. Soil erosion
  - E. Air Quality
4. If a LEED BD+C: Schools project is located on a site that is contaminated, to meet the requirements for SS Prerequisite Environmental Site Assessment what standard for remediation must be met?
  - A. EPA Region
  - B. EPA Residential (unrestricted)
  - C. EPA School (unrestricted)
  - D. Local Code
5. For SS Credit Site Assessment when should the team plan to complete the assessment?
  - A. During Construction
  - B. Before conceptual design starts
  - C. When construction starts
  - D. At Certificate of Occupancy
6. What standard provides projects with an approach to hydrology in which watersheds are modeled to calculate storm runoff volume, peak rate of discharge, hydrographs, and storage volumes?
  - A. National Pollution Discharge Elimination Standard (NPDES)
  - B. Construction General Permit (CGP)
  - C. Technical Release (TR) 55
  - D. Natural Resources Conservation Service (NRCS)
7. What are the requirements for SS Credit Open Space?
  - A. Provide outdoor space greater than or equal to 25% of the total site area (including building footprint).
  - B. Provide outdoor space greater than or equal to 25% of the total site area (excluding building footprint).
  - C. Provide outdoor space greater than or equal to 30% of the total site area (including building footprint).
  - D. Provide outdoor space greater than or equal to 30% of the total site area (excluding building footprint).

8. A LEED BD+C: New Construction and Major Renovations is locating a project on total site area of 280,000 ft<sup>2</sup>. The minimum greenfield area on site is 180,000 ft<sup>2</sup>. The total previously developed area of the site, including the building footprint, is 100,000 ft<sup>2</sup>. The site plans include a rainwater management area of 20,000 ft<sup>2</sup>. To earn SS Credit Site Development: Protect or Restore what is the minimum area that must be preserved or restored for the previously developed area and the greenfield area on site?
- A. 40,000 ft<sup>2</sup> previously developed area and 54,000 ft<sup>2</sup> Greenfield area
  - B. 30,000 ft<sup>2</sup> previously developed area and 72,000 ft<sup>2</sup> Greenfield area
  - C. 32,000 ft<sup>2</sup> previously developed area and 54,000 ft<sup>2</sup> Greenfield area
  - D. 72,000 ft<sup>2</sup> previously developed area and 24,000 ft<sup>2</sup> Greenfield area
9. For projects that achieve a density of 1.5 floor-area ratio (FAR), which of these can contribute to the minimum vegetation requirement if they are physically accessible? [Choose two]
- A. Bicycle Network
  - B. Vegetated roof
  - C. Paving areas
  - D. Wetlands
  - E. Swimming pools
10. Which of these environmental issues contributes to disrupting natural hydrology systems?
- A. Soil compaction
  - B. Pervious surfaces
  - C. Drainage patterns
  - D. Vegetation
  - E. Heat Island
11. For SS Credit Rainwater Management the volume of runoff to be managed is calculated how?
- A. Compare the runoff volume for predevelopment conditions with the runoff volume under the postdeveloped conditions.
  - B. Compare the runoff volume under natural land cover conditions with the runoff volume under the postdeveloped conditions.
  - C. Compare the runoff volume for the 100 year storm with the runoff volume under the postdeveloped conditions.
  - D. Compare the runoff volume for the 95<sup>th</sup> percentile storm with the runoff volume under the postdeveloped conditions.
12. Which of these development strategies help to integrate the site with the surrounding watershed and could help projects to earn SS Credit Rainwater Management? [Choose three]
- A. Mimicking natural hydrologic cycle processes
  - B. Green infrastructure
  - C. Low-impact development
  - D. Locate the project in a LEED ND Neighborhood
13. To supplement the capacity of a sites pervious landscaped areas, which of these are GI and LID measures that could help to capture rainwater? [Choose five]
- A. Rain gardens
  - B. Bioretention areas
  - C. Native and adapted vegetation
  - D. Vegetated swales
  - E. Permeable pavement
  - F. Rainwater harvesting

14. What is the best strategy for managing rainwater?
- A. Infiltrate on site
  - B. Capture on site
  - C. Infiltrate on site to help recharge the local groundwater and aquifers
  - D. Capture on site to reuse for landscape irrigation
15. What is the minimum solar reflectance (SR) value that nonroof materials used to provide shade with architectural devices or structures can have to comply with SS Credit Heat Island Reduction?
- A. Three-year aged solar reflectance (SR) value of at least 0.28
  - B. Three-year aged solar reflectance (SR) value of at least 0.33
  - C. Three-year aged solar reflectance (SR) value of at least 28
  - D. Three-year aged solar reflectance (SR) value of at least 33
16. A LEED BD+C: Core and Shell project has 400 parking spaces. What is the minimum number of parking spaces that must be under cover in order to meet the requirements for SS Credit Heat island Reduction?
- A. 100
  - B. 200
  - C. 300
  - D. 400
17. For SS Credit Heat Island Reduction the applicable roof area can exclude which of these areas? [Choose three]
- A. Skylights
  - B. Vegetated roof systems
  - C. High-reflectance roofing materials
  - D. Solar energy panels
  - E. Mechanical equipment
18. What is the lighting zone for a high-intensity suburban commercial area?
- A. Lighting Zone 0
  - B. Lighting Zone 1
  - C. Lighting Zone 2
  - D. Lighting Zone 3
  - E. Lighting Zone 4
19. To meet the upright requirements for SS Credit Light Pollution Reduction projects can use which of these methods? [Choose two]
- A. BUG Rating
  - B. LID Rating
  - C. MLO Rating
  - D. Calculation
20. A LEED BD+C: Retail projects property boundary abuts to a public roadway. For SS Credit Light Pollution Reduction, which of these modifications to the lighting boundary can the project use?
- A. The lighting boundary may be moved to 5 feet beyond the property line
  - B. The lighting boundary may be moved to 15 feet beyond the property line
  - C. The lighting boundary may be moved to the center line of the roadway
  - D. The lighting boundary may not be modified

21. A project team has determined that their site falls within MLO Lighting Zone 2 and is pursuing SS Credit Light Pollution Reduction Option 2 Calculation Method for upright. The maximum allowable percentage of total luminaire lumens emitted above horizontal is 1.5%. The team calculates the total lumens above 90° from horizontal to be 600 lumens. What is the maximum total luminaire lumens the project can have and still achieve compliance?
- A. 400 lumens
  - B. 4,000 lumens
  - C. 40,000 lumens
  - D. 400,000 lumens
22. For SS Credit Site master Plan what must be included in the master plan?
- A. Current construction activity that affects the site
  - B. Future construction activity (within the building's lifespan) that affects the site
  - C. Current construction activity plus future construction (within the building's lifespan) that affects the building design
  - D. Current construction activity plus future construction (within the building's lifespan) that affects the site
23. What is required for SS Credit Tenant Design and Construction Guidelines?
- A. The team must design the building so that tenants can earn LEED v4 for interior Design and Construction
  - B. The team must provide an illustrated guideline highlighting the sustainable performance features of the building and the project's sustainability goals at the time the lease is signed.
  - C. The team must provide an illustrated guideline highlighting the sustainable performance features of the building and the project's sustainability goals before the lease is signed.
  - D. After occupancy the tenant(s) must pursue LEED v4 Interior Design and Construction
24. To qualify as an area of respite for SS Credit Places of Respite what requirements must all areas meet? [Choose three]
- A. The area is not within 25 feet of a smoking area
  - B. No medical intervention or direct medical care is delivered
  - C. The area is located within 100 feet of a building entrance
  - D. The area is accessible by a private shuttle provided by the owner
  - E. The area is accessible from within the building
25. What is the required outdoor area for SS Credit Direct Exterior Access if the total peak inpatients is 300 and the total peak qualifying outpatients is 500?
- A. 625 ft<sup>2</sup>
  - B. 1,250 ft<sup>2</sup>
  - C. 1,875 ft<sup>2</sup>
  - D. 2,500 ft<sup>2</sup>
26. Which of these spaces would qualify as a shared space usable by the general public for SS Credit Joint Use of Facilities? [Choose four]
- A. Police office
  - B. Cafeteria
  - C. Swimming Pool
  - D. Gymnasium
  - E. Auditorium
  - F. Classroom
  - G. Library

27. A LEED BD+C: Schools project has contracted with community organizations to provide a health clinic and police office on their campus. The health clinic and police office will operate during normal schools hours. What else must the project do to earn the credit?
- A. Provide direct pedestrian access to these spaces
  - B. Provide access to toilets
  - C. Obtain permission to use another organizations cafeteria
  - D. Obtain written confirmation from the school authorities
  - E. Collaborate with school authorities to determine which spaces in the project will be shared