



This Community Center is **GREEN** and the LEED process was used in its design and construction.

- **LEED is an internationally recognized green building certification system**, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.





# LEED Certification

- The Grandy Village Learning Center was designed and built to achieve the US Green Building Council's LEED Certification.
- The project achieves high marks in LEED's 5 categories:
  - Sustainable Sites
  - Water Efficiency
  - Energy and Atmosphere
  - Materials and Resources
  - Indoor Air Quality.



# GVLC LEED Gold Certification



**Project Checklist for LEED NCv2.2**  
Grandy Village Learning Center  
Norfolk Redevelopment and Housing Authority  
Norfolk, Virginia

## 10 Sustainable Sites

Y	Prereq 1	Construction Activity Pollution Prevention
1	Credit 4.1	Alternative Transportation, Public Transportation Access
1	Credit 4.3	Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles
1	Credit 4.4	Alternative Transportation, Parking Capacity
1	Credit 5.1	Site Development, Protect or Restore Habitat
1	Credit 5.2	Site Development, Maximize Open Space
1	Credit 6.1	Stormwater Design, Quantity Control
1	Credit 6.2	Stormwater Design, Quality Control
1	Credit 7.1	Heat Island Effect, Non-Roof
1	Credit 7.2	Heat Island Effect, Roof
1	Credit 8	Light Pollution Reduction

## 4 Water Efficiency

1	Credit 1.1	Water Efficient Landscaping, Reduce by 50%
1	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation
1	Credit 3.1	Water Use Reduction, 20% Reduction
1	Credit 3.2	Water Use Reduction, 30% Reduction

## 8 Energy & Atmosphere

Y	Prereq 1	Fundamental Commissioning of the Building Energy Systems
Y	Prereq 2	Minimum Energy Performance
Y	Prereq 3	Fundamental Refrigerant Management
7	Credit 1	Optimize Energy Performance
1	Credit 4	Enhanced Refrigerant Management

## 5 Materials & Resources

Y	Prereq 1	Storage & Collection of Recyclables
1	Credit 2.1	Construction Waste, Divert 50%
1	Credit 2.2	Construction Waste, Divert 75%
1	Credit 4.1	Recycled Content, 10% (post-consumer + 1/2 pre-consumer)
1	Credit 5.1	Regional Materials, 10% Extracted, Processed & Manufactured Regionally
1	Credit 5.2	Regional Materials, 20% Extracted, Processed & Manufactured Regionally

## 14 Indoor Environmental Quality

Y	Prereq 1	Minimum IAQ Performance
Y	Prereq 2	Environmental Tobacco Smoke (ETS) Control
1	Credit 1	Outdoor Air Delivery Monitoring
1	Credit 3.1	Construction IAQ Management Plan, During Construction
1	Credit 3.2	Construction IAQ Management Plan, Before Occupancy
1	Credit 4.1	Low-Emitting Materials, Adhesives & Sealants
1	Credit 4.2	Low-Emitting Materials, Paints & Coatings
1	Credit 4.3	Low-Emitting Materials, Carpet Systems
1	Credit 4.4	Low-Emitting Materials, Composite Wood & Agrifiber Products
1	Credit 5	Indoor Chemical & Pollutant Source Control
1	Credit 6.1	Controllability of Systems, Lighting
1	Credit 6.2	Controllability of Systems, Thermal Comfort
1	Credit 7.1	Thermal Comfort, Design
1	Credit 7.2	Thermal Comfort, Verification
1	Credit 8.1	Daylight & Views, Daylight 75% of Spaces
1	Credit 8.2	Daylight & Views, Views for 90% of Spaces

## 5 Innovation & Design Process

1	Credit 1.1	Innovation in Design: SSC5.2 Exemplary Performance
1	Credit 1.2	Innovation in Design: EQc8.1 Exemplary Performance
1	Credit 1.3	Innovation in Design: WE3 Exemplary Performance
1	Credit 1.4	Innovation in Design: Educational Signage
1	Credit 2	LEED® Accredited Professional

## 46 Total LEED Gold Certification



# LEED Goals for this building

## Energy & Atmosphere



- **On Site Examples –**
  - **High Efficiency Heating & Cooling Systems**
  - **Geo-Thermal Heat Pumps**
  - **Day lighting and photocell dimming of facility Solar Domestic Hot Water System**

### Energy & Atmosphere

According to the U.S. Department of Energy, buildings use 39% of the energy and 74% of the electricity produced each year in the United States. The Energy & Atmosphere category encourages a wide variety of energy strategies: commissioning; energy use monitoring; efficient design and construction; efficient appliances, systems and lighting; the use of renewable and clean sources of energy, generated on-site or off-site; and other innovative strategies.



# LEED Goals for this building

## Sustainable Sites



- **On Site Examples -**

- Minimal site paving
- Public Transportation Access
- Protect & Restore Habitat
- Minimal Light Pollution
- Low Heat Roof

- **Sustainable Sites**

Choosing a building's site and managing that site during construction are important considerations for a project's sustainability. The Sustainable Sites category discourages development on previously undeveloped land; minimizes a building's impact on ecosystems and waterways; encourages regionally appropriate landscaping; rewards smart transportation choices; controls storm water runoff; and reduces erosion, light pollution, heat island effect and construction-related pollution.



# LEED Goals for this building



- **Water Efficiency**  
Buildings are major users of our potable water supply. The goal of the Water Efficiency credit category is to encourage smarter use of water, inside and out. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside and water-wise landscaping outside.



- **On Site Examples**
  - 50% reduction in Water Efficient Landscaping
  - 30% reduction in Water Use



# LEED Goals for this building

## Innovation in Design



- **On Site Examples –**
  - **Efficient Design**
  - **Certified LEED Professional on Team**

### **Innovation in Design**

The Innovation in Design credit category provides bonus points for projects that use new and innovative technologies and strategies to improve a building's performance well beyond what is required by other LEED credits or in green building considerations that are not specifically addressed elsewhere in LEED. This credit category also rewards projects for including a LEED Accredited Professional on the team to ensure a holistic, integrated approach to the design and construction phase.



# LEED Goals for this building

## Indoor Environmental Quality



- **On Site Examples –**
  - Temperature and CO2 levels monitored and controlled in all zones
  - Outdoor Air Control
  - Open floor plan to allow natural lighting
  - Low Emitting Materials

### Indoor Environmental Quality

The U.S. Environmental Protection Agency estimates that Americans spend about 90% of their day indoors, where the air quality can be significantly worse than outside. The Indoor Environmental Quality credit category promotes strategies that can improve indoor air as well as providing access to natural daylight and views and improving acoustics.



# LEED Goals for this building

## Materials & Resources



- **On Site Examples –**
  - **Construction Waste reduced 75%**
  - **Construction Materials 10% recycled**
  - **Construction Materials 20% purchased locally**

### Materials & Resources

During both the construction and operations phases, buildings generate a lot of waste and use a lot of materials and resources. This credit category encourages the selection of sustainably grown, harvested, produced and transported products and materials. It promotes the reduction of waste as well as reuse and recycling, and it takes into account the reduction of waste at a product's source.