



The Harker School  
Nichols Hall  
**LEED-NC Gold**



Harker School Nichols Hall LEED NC-Gold

## Too Cool for School

A design-build, ground-up, 50,000 s.f. concrete and steel science and technology building including classrooms and a 200-seat auditorium. A student-led project to educate people on the buildings sustainable features helped secure the additional points to achieve LEED-NC Gold.

Designer: DES Architects + Engineers



## Energy

Direct/indirect evaporative cooling system  
(6 air changes/hour using 25% less energy)

Highly efficient glazing on windows reduces  
solar heat transfer

Radiant heating in the concrete and stone  
floors

*How efficient is the mechanical system?*

The addition of Nichols Hall increased Harker's building square footage by 50%.

Harker experienced an increase in utility costs of just 16-18%.



## Water

Bioswales to filter/reduce runoff water

Low-flow water fixtures - 44.6% reduction in water usage from baseline





## Going the Extra Green Mile

**Kalwall curvilinear roof system over forum provides daylighting and insulation**

**Construction waste diversion of almost 95%**

**Living roof covering the 200-seat auditorium aids in cooling the space**

**Solar panel installation produces up to 1/3 of the buildings energy needs**



## Materials

Low VOC/No-VOC emitting materials

Adherence to material ventilation and off-gassing requirements

The building contains 27% recycled content, including the structural steel




# Learn by Doing

Students at the Harker School helped the project achieve LEED Gold by creating an educational display. XL's MEP Coordinator Greg Creighton worked with the kids to help them understand the benefits of the advanced mechanical system.

# Scorecard

**MY ACTION ITEMS**  
 Displays the next steps for the project. Depending on your project role, the project status and number of points anticipated or awarded; different action items will appear.  
 This Project has achieved LEED Certification.  
[Customer Satisfaction Survey](#)  
 You have 0 new Notifications

**LEED RATING**  
 Displays LEED level which is based on number of points attempted. \*  
  
 This Project has achieved enough points for Gold Rating.  
 \* Actual Certification Level will be based on the number of points awarded and successful completion of all Prerequisites.  
[View Review Summary](#)

**ATTEMPTED CREDIT SUMMARY**  
 Displays attempted points for the project by status.

Status	Design	Points Construction	Total
Earned:	29	10	39
Total Attempted:	29	10	39

**CREDIT SCORECARD**  
 Displays all credits and points per LEED sections. Depending on project access, one can attach team members, view attempted credits or click credits to display template.

**design construction** = Marked Complete = Needs Attention  
 = Not Marked Complete = Credit Assigned To You

**39 Points Documented** **Points Available: 69**

Points	Section	Credit	Description	Assigned To	Status	Possible Points
10	Sustainable Sites	Prerequisite 1	Construction Activity Pollution Prevention	Project Engineer #1	Earned	14
1	SS	Credit 1	Site Selection	Project Engineer #1	Earned	1
1	SS	Credit 2	Development Density & Community Connectivity	Project Engineer #1	Earned	1
	SS	Credit 3	Brownfield Redevelopment		Not Attempted	1
1	SS	Credit 4.1	Alternative Transportation: Public Transportation Access	MEP Coordinator	Earned	1
1	SS	Credit 4.2	Alternative Transportation: Bicycle Storage & Changing Rooms	Project Engineer #1	Earned	1
1	SS	Credit 4.3	Alternative Transportation: Low-Emitting & Fuel Efficient Vehicles	Project Engineer #1	Earned	1
1	SS	Credit 4.4	Alternative Transportation: Parking Capacity	Project Engineer #1	Earned	1
	SS	Credit 5.1	Site Development: Protect or Restore Habitat		Not Attempted	1
1	SS	Credit 5.2	Site Development: Maximize Open Space	Project Engineer #1	Earned	1
	SS	Credit 6.1	Stormwater Management: Quantity Control		Not Attempted	1
1	SS	Credit 6.2	Stormwater Management: Quality Control	Project Engineer #1	Earned	1
	SS	Credit 7.1	Heat Island Effect: Non-Roof		Not Attempted	1
1	SS	Credit 7.2	Heat Island Effect: Roof	Project Engineer #1	Earned	1
1	SS	Credit 8	Light Pollution Reduction	Electrical Engineer	Earned	1

2	Water Efficiency	Possible Points: 5
	WE Credit 1.1-1.2 Water Efficient Landscaping	Not Attempted 2
	WE Credit 2 Innovative Wastewater Technologies	Not Attempted 1
2	WE Credit 3.1-3.2 Water Use Reduction	★ MEP Coordinator Earned 2
8	Energy & Atmosphere	Possible Points: 17
Yes	EA Prerequisite 1 Fundamental Commissioning of the Building Energy Systems	★ MEP Coordinator Earned 0
Yes	EA Prerequisite 2 Minimum Energy Performance	Mechanical Contractor Earned 0
Yes	EA Prerequisite 3 Fundamental Refrigerant Management	★ MEP Coordinator Earned 0
6	EA Credit 1 Optimize Energy Performance	Mechanical Contractor Earned 10
1	EA Credit 2 On-Site Renewable Energy	★ MEP Coordinator Earned 3
	EA Credit 3 Enhanced Commissioning	Not Attempted 1
1	EA Credit 4 Enhanced Refrigerant Management	Mechanical Contractor Earned 1
	EA Credit 5 Measurement & Verification	Not Attempted 1
	EA Credit 6 Green Power	Not Attempted 1
4	Materials & Resources	Possible Points: 13
Yes	MR Prerequisite 1 Storage & Collection of Recyclables	Project Engineer #1 Earned 0
	MR Credit 1.1-1.2 Building Reuse	Not Attempted 2
	MR Credit 1.3 Building Reuse, Non-Structural	Not Attempted 1
2	MR Credit 2 Construction Waste Management	Project Engineer #1 Earned 2
	MR Credit 3 Resource Reuse	Not Attempted 2
2	MR Credit 4 Recycled Content	Project Engineer #1 Earned 2
	MR Credit 5 Regional Materials	Not Attempted 2
	MR Credit 6 Rapidly Renewable Materials	Not Attempted 1
	MR Credit 7 Certified Wood	Not Attempted 1
11	Indoor Environmental Quality	Possible Points: 15
Yes	EQ Prerequisite 1 Minimum IAQ Performance	Mechanical Contractor Earned 0
Yes	EQ Prerequisite 2 Environmental Tobacco Smoke (ETS) Control	★ MEP Coordinator Earned 0
1	EQ Credit 1 Outdoor Air Delivery Monitoring	Mechanical Contractor Earned 1
1	EQ Credit 2 Increased Ventilation	Mechanical Contractor Earned 1
1	EQ Credit 3.1 Construction IAQ Management Plan: During Construction	Project Engineer #1 Earned 1
1	EQ Credit 3.2 Construction IAQ Management Plan: Before Occupancy	★ MEP Coordinator Earned 1
1	EQ Credit 4.1 Low-Emitting Materials: Adhesives & Sealants	Project Engineer #1 Earned 1
1	EQ Credit 4.2 Low-Emitting Materials: Paints & Coatings	Project Engineer #1 Earned 1
1	EQ Credit 4.3 Low-Emitting Materials: Carpet Systems	Project Engineer #1 Earned 1
	EQ Credit 4.4 Low-Emitting Materials: Composite Wood & Agrifiber	Not Attempted 1
	EQ Credit 5 Indoor Chemical & Pollutant Source Control	Not Attempted 1
1	EQ Credit 6.1 Controllability of Systems: Lighting	Electrical Engineer Earned 1
1	EQ Credit 6.2 Controllability of Systems: Thermal Comfort	Mechanical Contractor Earned 1
1	EQ Credit 7.1 Thermal Comfort: Design	Mechanical Contractor Earned 1
1	EQ Credit 7.2 Thermal Comfort: Verification	Project Engineer #1 Earned 1
	EQ Credit 8.1 Daylighting & Views: Daylight 75% of Spaces	Not Attempted 1