



Best Practices in Green Parking Design for North Texas

JACOBS®

Nicole Hayes, PE, LEED AP, ENV SP
Geoffrey Reiner, AIA, NCARB, LEED AP

Who We Are



Nicole Hayes | Design Director
Civil Engineering | Fort Worth



Geoff Reiner | Director of
Sustainability | Central Region

Safety Moment

“When you're in a parking lot, you need to be hyper-vigilant to the risks surrounding you – just because speeds are lower doesn't mean you are safe.”

– Deborah A.P. Hersman, President and CEO of the National Safety Council

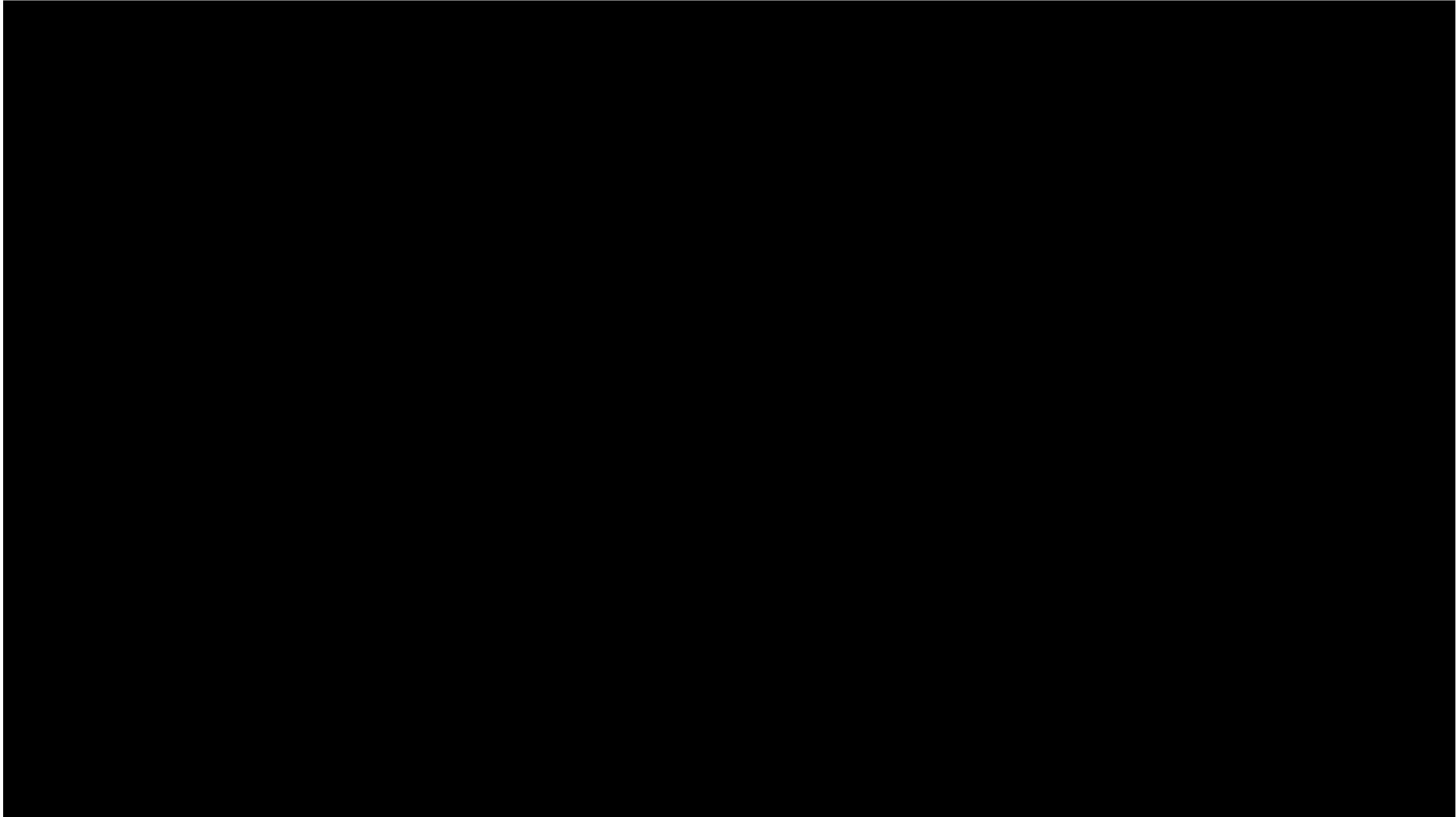


Current Climate

Current Climate

It is estimated in America, there are **eight parking spots** for every car, covering up to **30% of our cities**, and collectively taking up as much space as the state of West Virginia.

Source: Vox, *The High Cost of Free Parking*, July 19, 2017



https://youtu.be/Akm7ik-H_7U

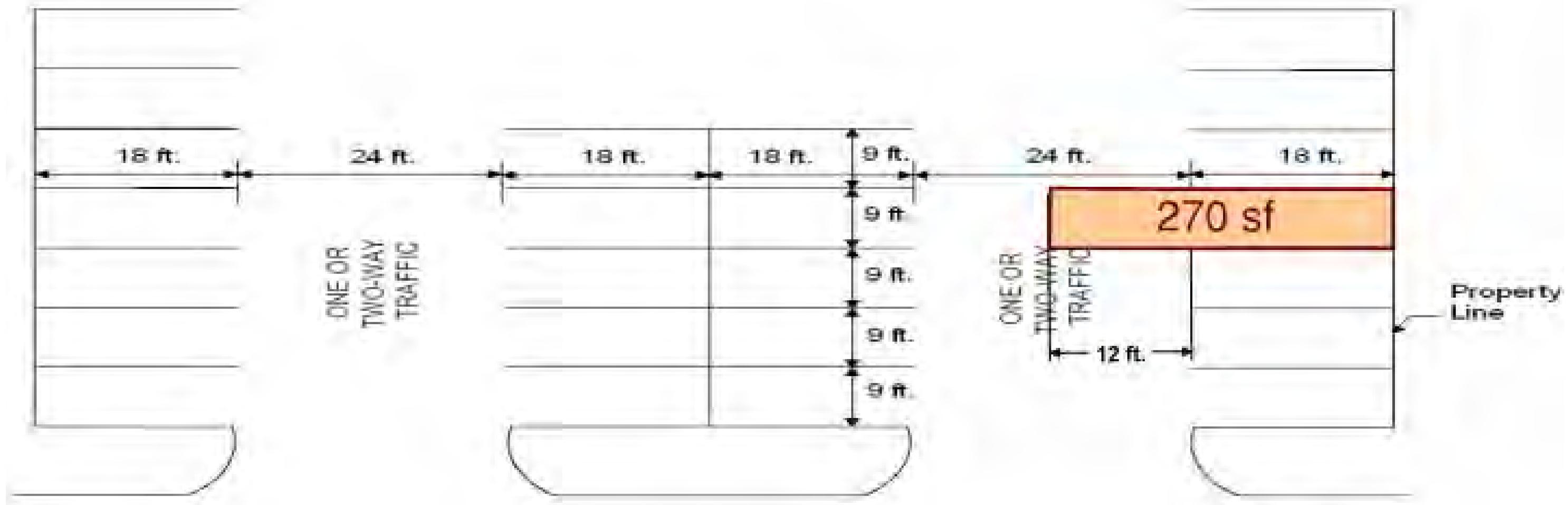
Current Climate

Typical North Texas parking ordinance calls for **one off-street parking space per 330 SF** (FTA, etc.) for a commercial office building.

Typical NTX Parking Ordinance

The maximum number of parking spaces shall not exceed **125% of the minimum parking requirement.**

Each parking space requires 270 SQFT,
which includes half of the two-way aisle



http://newbraunfels.elaws.us/code/coor_ptii_ch144_artv_sec144-5.1 Illustration 4. 90-Degree Layout

Local Parking Requirements

City	No of Spaces	Per (SQFT)	Per 10,000 SQFT	SQFT Parking per 10,000 SQFT Office	% Parking SQFT of Office SQFT
Westlake	1	300	33.33	9000.00	90%
Rockwall	1	300	33.33	9000.00	90%
Richardson	1	300	33.33	9000.00	90%
Dallas	1	330	30.30	8181.82	82%
Frisco	1	350	28.57	7714.29	77%
Arlington	2.5	1000	25.00	6750.00	68%
Fort Worth	2.5	1000	25.00	6750.00	68%
Grand Prairie	1	325	30.77	8307.69	83%
Keller	1	350	28.57	7714.29	77%

Form-Based Districts

Panther Island – Fort Worth, TX

Off-Street Parking

- There is no off-street parking requirement in the Panther Island District
- Shared, structured parking facilities are strongly encouraged
- Locate surface parking, individual garages, and large parking garages to reduce their visual impact



Sustainability Certifications

LEED

Strategies for water efficiency, energy efficiency, local and recycled materials, sustainable site design and indoor quality for occupants.

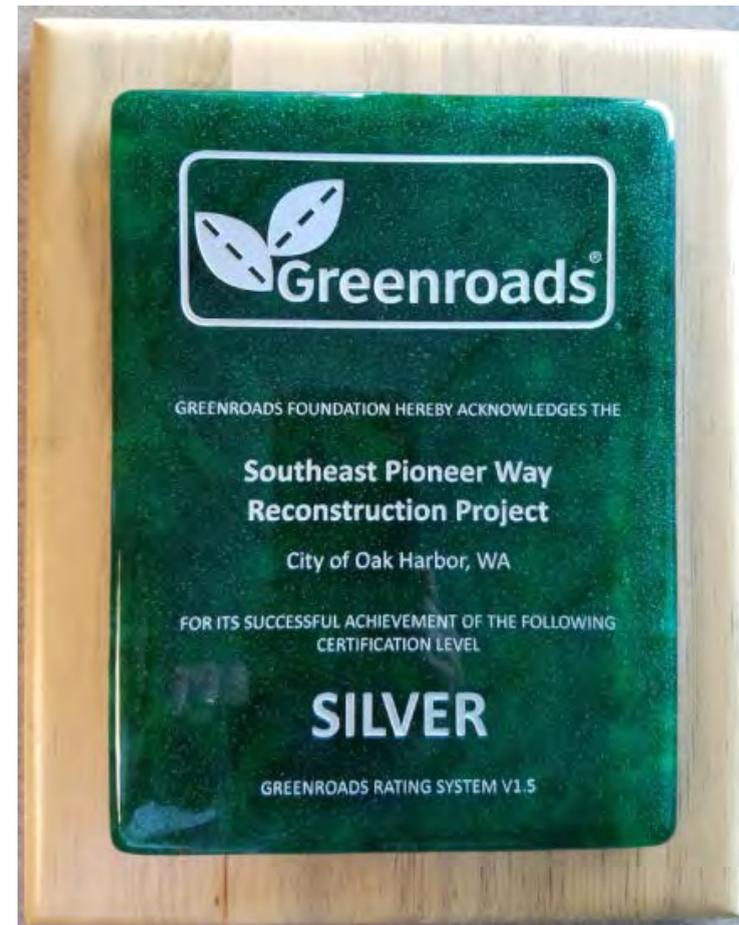
LEED – Justification

- 3rd party verification of compliance with Owners objectives
- Provides a marketable achievement for public or private development
- Design to industry standard sustainable initiatives
- The plaque



Do certification standards exist for roads and parking?

YES!



Available Road/Infrastructure Certifications

Greenroads



A project rating system for roads and bridges administered by [Greenroads.org](https://www.greenroads.org)

Rated Strategies

- Noise pollution
- Low Impact Development
 - Water Runoff
 - Habitat Restoration
- Multi-modal Accessibility
- Material efficiency
 - Construction Waste
 - Recycling
 - Pavement Design
 - Pavement Maintenance

Bagby Street Reconstruction



Greenroads v2 Project Checklist

Project Name * [] City, State/Province, Country [] Project Manager []

Project Budget (million USD) [] Current Status []

Target Score: 0 []

Requirements: No []

Email []

SEND [] Print []

Project Requirements	Materials & Design
PR-1 Ecological Impact Analysis	MD-1 Preservation & Reuse
PR-2 Energy & Carbon Footprint	MD-2 Recycled & Recovered Content
PR-3 Low Impact Development	MD-3 Environmental Product Declarations
PR-4 Social Impact Analysis	MD-4 Health Product Declarations
PR-5 Community Engagement	MD-5 Local Materials
PR-6 Lifecycle Cost Analysis	MD-6 Long-Life Design
PR-7 Quality Control	
PR-8 Pollution Prevention	
PR-9 Waste Management	
PR-10 Noise & Glare Control	
PR-11 Utility Conflict Analysis	
PR-12 Asset Management	

Environment & Water [] Utilities & Controls []

Available Road/Infrastructure Certifications

Envision



Developed in
collaboration between
Harvard and the
Institute for Sustainable
Infrastructure

Parksmart Certifications

Parksmart was created in 2015 incorporating the International Parking Institute's Green Garage Certification

Levels of Achievement based on age

- Newly designed or recently completed garages can be certified to the Gold Silver or Bronze level
- Older garages (over two years complete) can achieve a Pioneer certification



Parksmart Strategy Categories

- Green Parking Operational Cost
- Reduce Environmental Impact
- Increase Energy Efficiency
- Promote Alternative Modes of Transportation
- Diversify Mobility Options
- Create Stronger Community Relationships



Parksmart Certifications

Costs (varies by project):

Fee	Amount
Registration	\$250
Certification	\$6,500
Parksmart Certification Standard - PDF	\$149 (member price is \$99)
Parksmart Certification Standard - Hard Copy	\$219 (member price is \$169)
MIR (if applicable)	\$220
Appeal (if applicable)	\$500

As of May 16, 2016. Fees are subject to change.



Sustainability Certifications

- The present and future is: certifications for public approval of development
- Review the system most applicable
- Demand that the designers are considering all strategies for the implementation of your project
- Get on the boat fast, early adoption will provide most notoriety for cost

JACOBS®